

Creolizing Technological Mediation

*Indigenous video making
in Southwest Mexico*

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CREOLIZING TECHNOLOGICAL MEDIATION

Indigenous video making in Southwest Mexico

A Master Thesis

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para ese despiadado pero hermoso caos que llamamos México

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Summary

Towards the end of the 20th century, the Mexican government began promoting a national identity grounded on 'neoliberal multiculturalism'. Since then, the state applauds and showcases folkloric expressions (e.g. traditional garments or dances) from its population's many indigenous groups. But simultaneously, it systematically marginalizes their systems of knowledge, communal practices, and close relation to the land, coercing them into a national project towards modernization. In response, indigenous communities have persistently fought for their political autonomy and self-determination. Amidst this conflict, media technologies have become crucial instruments of defense. In particular, video cameras were initially transferred from the cities to the mountain ranges of Southwest Mexico through federal programs that planned for indigenous individuals to produce audiovisual evidence of Mexico's folkloric diversity. But these artifacts were in turn appropriated to expose the injustices perpetrated by the state.

This thesis examines the impact of video making practices in the evolution of Mexico's indigenous struggles. The analysis develops a fruitful dialogue between global history and postphenomenological philosophy. Using the former to trace the paths that cameras and indigenous users have followed in a broad spatiotemporal dimension, the latter reaches its potential to explain how the convergence of these historical paths translate into technologically mediated action. Drawing from the insights offered by the previous analysis, this thesis finally suggests ways in which future philosophical inquiries can be situated within a historical process in which technologies and users come together in sociopolitical contexts with unequally distributed power.

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Introduction

“The other face of what *we* Mexicans are is about to be revealed,” announced T.V. host Mardonio Carballo in the opening of a special episode of *...de Raíz Luna*. “We have invited some friends, *compañeros*, that have made of the *glass eye* their way of looking at the universe.”¹ Airing on national television in 2013, Carballo’s program hosted the work of ten indigenous video makers in Mexico. The first guest was Zapotec video maker, Juan José García, whom by the time of this T.V. production, had been producing videos in the Zapotec Sierra of Oaxaca, México for about 20 years. This long career turned García into a well-known activist and promoter of *video indígena* in his community. “In this society in which the massive media show a pretty image of Mexico with colorful cultures, *video indígena* is showing crude realities in a dignified way,” he explained in the opening interview of the half-hour episode, “what we want to tell through these videos are historical issues, historical injustices against the indigenous *pueblos*.”²

After the interview finalized, the program was followed by García’s ten-minute documentary *Historias Verdaderas*³ (True Stories). The short film serves as García’s justification of the existence of *video indígena* itself. Several Mixe, Zapotec, Nahua, and Tzeltal video makers speak in this documentary about their work. “From where are we going to raise the dead so they can teach us again this knowledge?” asks Cristiano Manzano to the camera, suggesting, while he peels a pile of raw cobs with his bare hands, that the wisdom of the elder could be preserved through video. “Through the camera lens, a lot of things can be seen that cannot be seen with the naked eye,” asserts Fabiola Garbacio, after reflecting how her videos and those made by her *compañeros* have helped her situate her own culture among the plurality of cultures around her.

Since the 1980s, portable video cameras have played a significant role in the integration and mobilization of different indigenous communities across Southwest México. These local developments are embedded in a broader global movement of indigenous video making⁴. The appropriation of increasingly cheap and accessible video cameras by indigenous actors most frequently takes place amidst political tensions with hegemonic nation states that delimit the territories in which indigenous communities are established. Recurrent topics in indigenous video productions are the filmmakers’ experiences of marginalization, as well as the

¹ *...de Raíz Luna*, “Juan José García,” coordinated by Mardonio Carballo, aired 2013, on Canal 22, <https://youtu.be/Kq0kty1B808>, my translation.

² *Ibid*, my translation.

³ *Historias Verdaderas*, directed by Juan José García (Mexico: Ojo de Agua Comunicación, 2002). <https://youtu.be/Kq0kty1B808?t=9m10s>, my translation.

⁴ For a comprehensive overview of these developments, see *Global Indigenous Media* edited by Pamela Wilson and Michelle Stuart (Duke University Press: 2008).

preservation of their communities' practices, their close relation to the land and natural resources, their knowledge, traditions, and customs.

Video technologies are no neutral instruments. As they are appropriated to aid the indigenous peoples' struggle, cameras have an impact on how the world is experienced through them. In their use, cameras influence video makers' practices while mediating their access to 'crude realities,' as García describes their situation. On a broader scale, the introduction and use of video cameras in these communities has a significant political impact. It brings about new ways to represent indigenous communities' cultural values, vindicate dignified identities, and defend the communities' cultural, economic, and political rights.

This thesis examines how the practices of video making are influencing the ways in which indigenous filmmakers and their communities enact their struggles. This topic has become of increasing interest to media anthropologists, social scientists, and filmmakers. They too have argued that this activity is reshaping how indigenous peoples relate within their community and to the rest of the world⁵. The aim of this research is to incorporate in these discussions the theoretical and analytical tools provided by a global history of technology and philosophical postphenomenology. The methodology of this thesis can be described as bridging a historical and a philosophical perspective. The former allows the elaboration of a detailed historical narrative of how video cameras and their users travel through space and time and meet each other towards the end of the 20th century in Southwest Mexico, amidst an ongoing political conflict. The philosophical perspective distinguishes how, in this complex setting, the close interactions between video cameras and users are translated into new experiences and practices in the world.

More concretely, the philosophical perspective will be developed with a postphenomenological approach. This framework examines the constitutive role that artifacts have in transforming its users' experiences and practices. Being a philosophical tool that focuses on the interaction between concrete technologies and specific users, postphenomenology urges us to situate our philosophical analysis in the particular context in which the human-technology relation occurs. In the case concerning this study, situating the practices of filming in its context presents some challenges. First, the sociopolitical environment in which indigenous video makers exert their practices can only be understood through the historical complexity of the native *pueblos*' struggles in Mexico through the years. Ihde has already stressed that postphenomenological analyses need to rely "heavily upon 'histories' with close attention paid to the practices not only of those that have traditionally fit into a Eurocentric master narrative but those that belong to many cultures and traditions."⁶ In addition to their Eurocentrism, standard narratives of the history of technology are often too focused on accounts of invention and innovation. But a historical account of video cameras in Southwest México must trace how this artifact has traveled across different regions of the globe beyond its period of invention and early diffusion in society.

⁵ Ibid.

⁶ Don Ihde, *Postphenomenology and Technoscience* (SUNNY Press: 2009).

The historical perspective proposed here addresses these challenges by turning to an alternative to innovation-centrism. Tracing ‘old technologies’ as they move across different regions of the world, historian David Edgerton has found these artifacts are appropriated and used in unique ways by their new set of users⁷. Technologies become *creole* as they meet the needs and desires of their new sociomaterial environment. Building upon this notion, a historical process of *creolization* is outlined as creating a unique technopolitical culture in which cameras, video makers, and the sociomaterial environment in which they are immersed interact and change in relation to each other.

A detailed narrative of indigenous video making as a process of creolization finally provides a solid grounding for a postphenomenological analysis. This joint approach lends justice to the complex historical reality of which human-technology relations are a part. Following these steps goes beyond suggesting that because the subjects are in a specific historical context, they have a certain condition that will consequently shape how they use a technology. The technopolitical culture that results from creolization is not to be seen merely as the background information with which we can then understand human-technology relations. Rather, creolization is the active process in which technological mediation is caught up. The human-technology relation itself changes through time along with its evolving environment; this relation, too, becomes creolized.

Though this thesis maintains that both humans and technologies are always intertwined and mutate in relation to one another, the structure of my analysis consists in disentangling them to discuss the complexities of their agencies. Thus, the first chapter offers a historical narrative which is mostly centered in the agency of human actors caught in the political struggles between the indigenous communities and the federal government since the Mexican Revolution. How indigenous video makers approach the camera is examined, through which it becomes clear that specific practices are well-received by the community, while others are not as successful. The second chapter will turn to the video camera itself, developing a postphenomenological analysis that discusses how the material and technical capabilities of the artifact enable particular human-technology relations. This analysis unveils how cameras mediate the video makers’ perceptual access to the world, influences their practices, and offers new possibilities for conceiving and expressing ideas and emotions through audiovisual productions. Moreover, the video camera becomes a symbol of social, political, and cultural meaning. My third and final chapter ties the approaches developed in the first two chapters together. I discuss how the agencies of both video makers and the cameras become entangled in a creolizing process that unfolds through space and time. Lastly, this thesis concludes with a few suggestions on how future analyses of human-technology relations can follow this historical-philosophical approach and argues for the approach’s added value to our understanding of the political impact of the use of technologies.

⁷ David Edgerton, “Creole technologies and global histories: rethinking how things travel in space and time,” *History of Science and Technology* 1 (2007): 75-112.

Chapter I

Towards a Social Struggle Media

1.1 Introduction

The first half of this chapter will consist in elaborating a refined definition of ‘creolization’ as a historical process. David Edgerton’s notion of *creole* technologies will be the starting point. However, the analysis delves way deeper into the sociotechnical process from which these *creole* technologies emerge. The process of creolization should be understood from the outset in the broadest sense. It is a process in which cultural values, social and individual practices, available materials, and artifacts, they all continuously interact and coshape each other through time. However, this current chapter will place a special focus on human and social agency within this intricate process.

Thus, in the second half of the chapter, a description of the political environment in which indigenous communities and the Mexican state interact will be outlined. This political environment, taking place in Southwest Mexico, observes the introduction of video cameras at the end of 20th century. This phenomenon will be traced mostly through Erica Wortham’s ethnographic research. Delving into the experiences of different video collectives that emerged in the region will demonstrate which approaches to video cameras were ‘successful’, in the sense that their presence was embraced and valued by the indigenous communities. Reading these events through the refined understanding of creolization elaborated on the first half of the chapter unveils that, while video makers and their communities recognize the foreign nature of these objects, they consciously appropriate them to achieve further self-determination and autonomy from the nation-state. What could be seen as a threat to their authenticity evolves in time to become a tool with which indigenous identities can be strengthened.

1.2 ‘Creole’ technologies

David Edgerton is part of a generation of historians who, by the turn of the 21st century, have been challenging the exclusivity that grand narratives of the history of technology have given to the stages of technological invention and innovation¹. These narratives seldom recognize the constitutive role of repair, maintenance, and other forms of ‘technology-in-use’ beyond their stages of early adoption and diffusion in societies. Conflating what could be a broader

¹ See, for instance: Patrick McCray, “It’s not all lightbulbs,” *AEON Magazine*, October 12, 2016, <https://aeon.co/essays/most-of-the-time-innovators-don-t-move-fast-and-break-things>.

notion of ‘technology’ with limited accounts of invention and innovation, argues Edgerton, leaves out the evolving nature of technologies in relation to the diversity of contexts in which they are used. Thus, to consider how technologies are mobilized through long periods of time and across different geographies is crucial to attain an accurate understanding of the history of technology, which in turn, provides guidance on how technologies will continue to be mobilized and evolve in the future.²

To show how different artifacts and devices mutate along different temporalities and geographies, Edgerton provides several examples of what in a standard account of history of technology would be dismissed as ‘old’ technologies. In his own accounts, ‘old’ technologies prove to be relevant long past the time where they were introduced to a particular society. Corrugated iron is one of Edgerton’s recurrent examples. This material, also known as galvanized iron or tin roofing, “spread around the world to areas of British army operation as transportable housing” in the 19th century.³ Conceived first to offer white settlers a temporary shelter in colonized countries, this material was later taken up by locals and used to quickly expand shanty towns or slums. Its use became so widely spread that by the end of the 20th century corrugated iron turned into a key material for the expansion of many poor megacities such as Ibadan, now housing around 3 million people. Its “cheapness, lightness, ease of use, and long life made it an ubiquitous material in the poor world in a way it never had been in the rich world.”⁴

When Edgerton traces the transfer of technologies to what he labels the ‘poor world’⁵, he shows that new approaches to such technologies emerge. Subsequently, these technologies continue to change in relation to their new sociomaterial environment, creating what Edgerton defines as “Creole technologies”⁶. The term *creole* helps him invoke a phenomenon of hybridization which has been perhaps more widely explored in the fields of linguistics and arts. *Creole* languages or *creole* art are unique outcomes of a combination of foreign influences, often brought by colonizers, and the already established local values and traditions of the land. To Edgerton, *creole* confers something that is “derived from, but different to, the originating case”⁷. He exemplifies this with the creole horses of the Americas, which “originating from beasts brought by the Spanish and the Portuguese conquistadores, entered a horseless world, yet became different from the horses of the Old World.”⁸ “The most straightforward sense of creole technology,” maintains Edgerton, “is that the basic imported technology got a new lease of life in the poor world.”⁹

Edgerton stresses that the ‘poor world’ is “a distinctive technological world,” not merely a world that is *derived* from technologies of the ‘rich world.’¹⁰ Thus, to understand the seldom recognized technologies of the poor world, we need to go beyond an account of what

² David Edgerton, *The Shock of the Old: Technology and global history since 1990* (Profile books, 2011).

³ Ibid.

⁴ Ibid, 97.

⁵ In “Creole technologies: Rethinking how things travel in space and time,” Edgerton defines ‘poor world’ as “that majority of places in the world, where the great majority of the population are and have been, by the standards of western Europe and north America, very poor,” 85.

⁶ Edgerton, “Creole technologies: Rethinking how things travel in space and time,” 101.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid, 102.

¹⁰ Ibid, 94.

they *lack* in comparison with the infrastructures and materials taken for granted in a ‘rich world’. We need, rather, to recognize what distinctive uses and variations are created in the new sociomaterial environment in which a technology enters. Despite his intentions, Edgerton is still dependent on demarcating different technological worlds between ‘rich’ and ‘poor,’ before he can define technologies as creole. But how far can this demarcation take us if we want to understand the complexity of creole technologies? To label the alternative contexts where creole technologies emerge as ‘poor worlds’ prompts us to conceptualize them from the outset as lacking something that the ‘rich world’ already has. I propose that if we want to avoid conceiving of these new technological worlds in terms of what they lack and rather see them for what they have, we should not characterize them based on their amount of wealth.

1.3 Creolization before the ‘creole’

Diving into the processes from which creole technologies emerge, we find more than the outcome of a simple bricolage. That is, creole technologies are more than adaptations based on limited materials or resources in the surroundings. The emergence of something creole entails a hybridization, a combination of cultural influences, available materials, or environmental conditions. The characterization of each of these factors allows us to describe how they converge to constitute a distinctive, new hybrid. Thus, for analytical purposes, it is helpful to appreciate such factors as independent, to some extent, from each other, as if they were existing as some sort of heterogeneous substances about to mix. Edgerton, as discussed before, has relied on ‘rich’ and ‘poor’, or ‘western’ and ‘non-western’ at times, to describe how these worlds then come together. But the different contents that come to be mixed in a new substance can be more accurately described along the lines of postcolonial literature. We can incline towards descriptive accounts of the sociocultural hybridization initiated by the projects of colonization, and with some considerations, these accounts can be expanded in the context of modern technologies.

A good example of such approach can be found in the categorizations that Francois Bar et al. propose for the appropriation of technologies in Latin America. As part of the various sociotechnical processes they describe, Bar. et al introduce a refined definition of ‘creolization’¹¹. Based on the writings of the mulatto poet Édouard Glissant, they describe creolization as a process in which the constitution of new identities, cultural expressions, and approaches to technology are rooted in an inner struggle that acknowledges the presence of the foreign other, often the *conquistador*, but that it strives to find its own uniqueness and differentiate itself from such foreign influence. “We know the other is within us and affects how we evolve and the bulk of our conceptions and the development of our sensibility,”¹² writes Glissant, before explaining that such struggle generates a rather unpredictable process that cannot be understood as the simple combination of two substances. According to Glissant, creolization “is only exemplified by its processes and certainly not by the ‘contents’

¹¹ Francois Bar, Matthew Weber and Francis Pisani, “Mobile technology appropriation in a distant mirror: Baroquization, creolization and cannibalism,” *New Media and Society* 18, no. 4 (2016): 617-636.

¹² Édouard Glissant, *Poetics of Reflection* (The University of Michigan Press, 1990), 27.

on which these operate.” Consequently, to grasp the ‘creole’ requires a continuous tracing of the multiple relations established between all factors involved, “the mutual mutations generated by this interplay of relations,” as the poet writes.¹³ Glissant’s ideas suggest we steer away from describing ‘creole’ identities in isolation and focus on the process of creolization itself.

By grounding Glissant’s description of creolization in processes of technological appropriation, Bar et al. allocate great value in the struggles for self-determination that the users in alternative contexts encounter when a foreign technology is introduced and they begin to mutate along with it. These alternative contexts, in which levels of wealth or poverty need not be entirely dismissed, are perhaps best described as hosting a cultural and political confrontation. This confrontation, prompted most of the time by violent projects of colonization, surely occurs along with asymmetries of power in a continuous contest for cultural and political hegemony. It is partly in the struggle of those who undergo a process of creolization where the potential to explain the “mutual mutations” that shape creole technologies lies.

Bar et al. see creolization as a sociotechnical process that unfolds in Latin America and from which the new set of users initiate technological innovations of the artifacts they appropriate. But the present research seeks to move beyond the limitations of innovation-centrism by building on Edgerton’s concern with ‘technology-in-use’ through time. Thus, the present analysis seeks a deeper understanding of the mobilization, integration, and use of video cameras in Southwest Mexico as a historically situated phenomenon. My approach to explicate such phenomenon is, per Glissant’s suggestion, to turn to the process of creolization itself: tracing a historical unfolding in which technology, users, practices, and political struggles converge.

After all these previous considerations, the following analysis understands creolization as *that continuous process in which foreign technologies, local users, and the sociomaterial environment with unequally distributed power where these coincide all become coshaped in their interrelations, leading to the emergence of a unique technopolitical culture.*

1.4 From ‘indigenismo’ to indigenous autonomy

The question now is whether the previously offered definition of creolization will be useful to understand the changes that video cameras in use effect on the indigenous communities in Southwest México. To answer such a question, it is crucial to situate such technological use in the context of the prevailing struggles arising from the convergence of a plurality of cultures within México, a multiethnic state with thriving indigenous communities that actively try to accommodate their own ways of living within the boundaries, and under the Constitution of the nation-state. First exploring in detail these political developments, I can later turn to analyze the role that the introduction, adoption and increasing use of video cameras by

¹³ Ibid, 89.

indigenous communities towards the end of the 20th century played in the evolution of these political tensions.

The most straightforward definition of the ‘indigenous’ (*indígena* in Spanish) is *that* which is native to a land. *That* being knowledge, peoples, practices, experiences, customs, or cultural influences which emanate prior to the (post-)colonial efforts for political hegemony. But while the indigenous is always rooted in the past, it continues to evolve in relation to current political conditions. According to Marisol de la Cadena, the term *indígena* was first introduced as “an administrative category imposed on native peoples in the nineteenth century”. It was “designed to separate European from non-European, from a European perspective”¹⁴. However, the term was later appropriated self-consciously in Latin America by communities who wanted to assert their autonomy and distinctiveness against the mainstream national politics and cultural identity. Erica Wortham notes that the term is not short of limitations since, as an umbrella term, it has to encompass a great diversity of ethnicities and cultures that may be far from similar. However, she argues that the label has proven helpful for creating a common front against dominant state policies that threatened their collective existence.¹⁵ With that definition in mind, I will continue to speak about the ‘indigenous’ communities that aggregate in the Southwest region of México (Map 1.1).

Over time, the Mexican state has responded with different approaches to the political tensions with its indigenous population. The first approach emerged after the Mexican Revolution, in 1917, when the state became dedicated to building a national identity that relied on a unified notion of the Mexican *mestizo*, that is, the outcome of the mixing of the European colonizer and the peoples native to the land. This project tried to incorporate the indigenous people since the beginning, but it was based on the notion that these communities should assimilate to the state’s drive toward modernization and collaborate in the achievement of a single set of economic, political, and cultural goals. These ideas resonated with the UN’s Indigenous and Tribal Populations Convention of 1957 (C107), which assumed that ‘assimilation’ to modernization was the best way to grant indigenous peoples a better future. In México, these ideas were adopted and promoted by anthropologist Manuel Gamio in 1916. Gamio’s approach dismissed indigenous practices and value systems, such as communal work or decision-making, that were most strikingly different to those deemed as the modern “Mexican” way of way of living. While Gamio recognized the value of indigenous cultural expressions such as art and dances, he entirely disregarded the significance of their customs and traditions enacted in their own ways of living. Thus, Wortham notes that “to belong, indigenous people had to be peasants, and as a result their culture was relegated to folklore,

¹⁴ Erica Cusi Wortham, *Indigenous Media in Mexico* (Duke University Press, 2013), 39, iBook.

¹⁵ *Ibid*, 40.



Map 1.1 - Mexico's Southwest is one of the regions with densest indigenous population

split off from social and political organization”¹⁶. This trend of thought, now known as *indigenismo* became the common discourse in Mexican anthropology and was eventually institutionalized and put into practice with the formation of the Instituto Nacional Indigenista (INI) in 1948. The institution prompted policies and practices that would not only integrate indigenous communities to the rest of the country but also initiate “a process through which mestizo identity [was] defined as the redeemer and promoter of development.”¹⁷

The international acceptance of assimilationist policies such as *indigenismo* met its expiration date within a couple of decades. By the 1980s, several NGOs and scholars were increasingly interested in understanding the alternative ways of living of thriving indigenous communities which from their own side, were interested in communicating their struggles. Signed in 1989, the UN’s Indigenous and Tribal Peoples Convention of 1989 (C169) revisited the outdated assimilationist approach and moved towards recognizing the social, political, and economic rights of indigenous peoples from a multicultural standpoint¹⁸. Following this international trend as well as being under a wave of criticism from a new generation of Mexican anthropologists, the Mexican state was pressured to update its own assimilationist policies. The goal could no longer be to merge the indigenous with an overarching national identity of the *mestizo* but to cherish and celebrate the distinctiveness of their ways of living. These developments took place during the administration of former president Carlos Salinas de Gortari (1988-1994). It was during his term that the INI switched its goal from assimilating the indigenous into 'the modern' to instead granting these communities spaces and platforms in which they could capture and promote the particularities of their own culture. Along these lines, the INI devised programs to transfer radio and video technologies to indigenous

¹⁶ Ibid, 35.

¹⁷ Emiko Saldívar quoted in Wortham, *Indigenous Media in Mexico*, 111.

¹⁸ Wortham, *Indigenous Media in Mexico*, 70.

individuals, while offering training in the use of such technologies through several workshops across the country.

Despite the INI's apparent intention to celebrate and recognize the indigenous ways of living, Wortham notes that this approach was carefully steered towards further folklorizing their cultures and stripping those cultures of their political power¹⁹. While the Salinas administration sought to portray to the international eyes a nation that was proud of its multiculturalism, it was internally advancing reforms that opened most of the lands where native people resided to be exploited by multinational corporations, a premeditated move towards the North American Free Trade Agreement to be signed at the end of his term. The tensions that arose from these political events detonated in 1994 with the uprising of the Zapatista Army of National Liberation (EZLN), an armed movement of civil resistance against the state's dismissal of indigenous' political rights. This uprising led to the defunding of most INI programs. The institution started slowly to fade away.

Over twenty-four years, the relationship between the Mexican State and indigenous communities has not gotten any less complicated. A less-belligerent Zapatista group continues to uphold their traditions in 'taken' land while gaining local and global acknowledgment and support. This has led the Mexican state to allow continuous dialogues with the movement and commit to safeguarding indigenous' rights under the terms of the Zapatista movement. However, the original treaties that were redacted based on previous dialogues have never been signed. Instead, the following administrations continued to sign watered-down versions which were deprived of any potential for a structural change that would accommodate the goals of the Zapatistas²⁰.

The INI met its demise during the administration of President Vicente Fox, in 2006. The institution was replaced by the National Commission for the Development of Indigenous Peoples (CDI). Founded from an apparent multicultural stance, the practices behind this institution have been accused of promoting *neoindigenismo*, "a new form of an old assimilationist policy with a neoliberal bent"²¹. Despite the ongoing struggles with the state, and partly because of the efforts of the thriving Zapatistas, indigenous communities in México continue to gain acknowledgment around the globe and their stories are shared through global platforms of communication. Video technologies seem to play a constitutive role in these groups' pursuit of self-determination and have helped them achieve further political recognition.

1.5 Indigenous video making in Southwest Mexico

When indigenous individuals started using video cameras to film their experiences in the region, their particular approaches provoked a range of reactions from the rest of the community members. By looking closer at the activities of several indigenous video collectives,

¹⁹ Ibid, 89.

²⁰ Ibid, 74.

²¹ Ibid, 76.

the following analysis illustrates how specific approaches to video making can become embedded in the community life and continue to thrive within that new context, while other approaches are more prone to recede with time. Video makers who explicitly used the camera in benefit of the community (e.g. to record and safeguard indigenous traditions and knowledge, or to expose systematic injustices) found their recording practices were accepted and cherished by the community. On the other hand, when the camera was used in rather experimental ways to satisfy the creative desires of video makers and these failed to communicate how recording practices could bring value to the community life, the camera was perceived by the community as an overly-foreign object which did not fit into the indigenous way of life.

1.5.1 K-Xhon Video-Cine Zapoteca

Following Wortham's ethnographic research on Indigenous media in México, the first productions of indigenous video in the country can be traced back to the early 1980s. Back then, an indigenous collective named K-Xhon was committed to fix disputes and strengthen the communication between different indigenous communities in the Sierra Norte in the state of Oaxaca. The urban-based collective was composed of members who had first moved out of the Cajonos village (Map 1.2) to get education in the city since "being educated outside your community was seen as the best way of getting ahead."²² Most K-Xhon members admitted that they had begun their social activism with the mentality of helping the community progress towards modernization as well. However, the 1968 student massacre in Mexico City led them to reconsider the legitimacy of the nation-state's structures. Eventually, they committed themselves to unlearn what they had learned in the city about their own communities, as they recognized how their external education was "creating a cycle of dependency"²³ from these communities to the state, instead of promoting their autonomy.

After projects such as monthly newsletters and organizing joint petitions for the creation of roads between the communities, K-Xhon turned to the use of visual media. They started out with photographic cameras, building photomurals that they would then take to different indigenous communities in the Zapotec Sierra. Shortly after, a colleague from the city loaned the members a Betamax camera (Figure 1.1). They started experimenting with the technology and distributing their productions locally. Quickly, video became their main activity, leading them to change the collective name to 'K-Xhon Video-Cine Zapoteca.'

Maintaining a strong stance against the federal government, K-Xhon never sought recognition by any state-sponsored institution. Their autonomy and independence was the utmost priority. Thus, K-Xhon avoided the redaction of any communication proposals for state funding or assistance from NGOs. They "often used the lack of financing as a measure of their independence."²⁴ In an interview with Wortham, K-Xhon member Fernando Vázquez justified this decision as a way to produce video "without any intent of manipulating the

²² Ibid, 218.

²³ Ibid.

²⁴ Ibid, 264.

image”, what he described as “taping in a whimsical manner”²⁵. This conscious attitude from the K-Xhon’s members led them to assert that they had produced video with their own unique way of seeing, Vázquez explains:

“[P]erhaps it was not having technical cinematographic training that permitted us to totally develop our own language ... without intentions, in the sense that we did not have intentions as artists, as directors. We were not working for the masses or for the critics, or for awards, not even for expression; we were just having fun, totally committed without any intent to manipulate the image.”²⁶

Wortham suggests that Vázquez’ ‘own language’ was translated into ways of using the camera in *Danza de los Coloquios*, one of the K-Xhon’s projects she had the chance to see during her stay in Oaxaca. She notes:

“[T]he program is based on a rather unremarkable sequence of the fiesta —philharmonic bands, dances, fireworks—the loose camera work and lack of direct interviews or voice-over lend an unpretentious quality to the tape. It is not that the camera seems “not perceivable,” which is another way they describe what their way of seeing looks like, but that the camera work is less than deliberate.”²⁷



Map 2.2 - Cajonos and Tamazulapam del Espíritu Santo, two indigenous villages in the state of Oaxaca

²⁵ Ibid, 220.

²⁶ Ibid, 278.

²⁷ Fernando Vázquez quoted in Wortham, *Indigenous Media in Mexico*, 278.



Figure 1.1 - An early version (1983) of a Sony Betamax camera BMC-100

By omitting commonplace practices in video making such as interviewing attendants, doing voice-overs, or building a narrative with carefully arranged sequences, K-Xhon's members distanced themselves from the 'technical cinematographic' language that they had ran across while they studied in the city. They asserted, through their practices with the technology, their distinctiveness.

1.5.2 Ojo de Agua Comunicación

The last three active years of K-Xhon overlapped with the beginning of the INI's *Transference of Audiovisual Media to Indigenous Communities and Organizations* program (TMA). K-Xhon members have claimed, in fact, that the idea of video Zapoteca was stolen from them by governmental agencies²⁸. The TMA program could well have been inspired by K-Xhon's activity in the Zapotec Sierra, which coincided with the state's commitment to multiculturalism after the revision of the U.N.'s C169. Whatever the main reasons for the program to emerge, the outcome of the initiative was four extended workshops in which 85 Indigenous individuals were trained to use video cameras, and received VHS cameras as donations from the INI.

The workshop trainers were mostly mestizos or even international filmmakers with a sense of accountability to balance out the power relations between the state and the indigenous communities. The influence that the trainers had while advocating specific approaches to the camera in indigenous participants is of special relevance. Wortham noticed that the trainers propagated the idea that indigenous filmmakers could use the camera to reproduce their experiences. Hence, the camera was portrayed uncritically as an "electronic mirror"²⁹. This view of technology as a transparent, neutral tool did not account for the ways in which the users' experiences were actively reshaped by every decision during the practice of filming. The

²⁸ In a conversation with Wortham, TMA program organizers denied to have known of the K-Xhon project before the creation of the workshops.

²⁹ Wortham, *Indigenous Media in México*, 186.

perspective of the ‘electronic mirror’³⁰ disregarded how the video camera entailed limitations to which aspects of an experience could be filmed, or under which conditions the artifact could be used. Furthermore, it remained undiscussed how the using the camera could change the environment in which the video maker exerted its practices.

After completing the four workshops, the participants returned to their communities equipped with VHS cameras (Figure 1.2). The workshops catalyzed the creation of indigenous video collectives across the region. One of the attendants was the now well-known Zapotec video maker Juan José García³¹. After he decided to pursue a career in video making, García continued to work closely with the TMA trainers in one of the four INI’s *Centro de Video Indígena* (CVI), based in Oaxaca city (Map 1.2). In these CVI offices, indigenous and non-indigenous video makers would store the video equipment and work in the post-production of their projects. The CVI activities were entirely sponsored by the state, but the group started looking for ways to gain more independence. García and his non-Indigenous colleagues, such as Italian filmmaker Guillermo Monteforte, began building a completely independent collective called Ojo de Agua Comunicación. This was, at least in part, a response to the decrease in federal funding for the INI programs³².

By 1999, when the funding for the CVI completely ended, García and his colleagues had already switched to Ojo de Agua to produce videos without any institutional constraints from the INI, and working with their own resources. Ojo de Agua Comunicación was not only producing its own videos, it became the first indigenous platform that invited other indigenous video makers from different communities across the region to produce videos with them. Nowadays, García continues to run Ojo de Agua. He has become the ‘go-to’ video maker for several scholars and journalists to understand the history and future of indigenous video in Mexico. In interviews on local and national television, García asserts that cameras are essential means for bringing visibility to the struggles of native peoples. This political position towards the use of the camera, which he calls *comunicación de lucha*, (social struggle media)³³ gives the communities a chance to expose to the outer world the injustices committed by the Mexican state, but it also helps build an alternative, self-representation of indigenous peoples, which has been framed and exposed on national and international media by the hands of foreigners since the Mexican Revolution. Against video productions made by non-indigenous filmmakers, García asserts that “while *video indígena* is mostly concerned with social questions, on most occasions, the non-indigenous video or the independent video is concerned with [the visual] form, with the [film] contest ... *video indígena* is anxious to show the world what is hiding in massive communication media.”³⁴

³⁰ Though Wortham uses this ‘electronic mirror’ metaphor to criticize the workshop trainer’s stance of the video camera as faithfully *reflecting* indigenous experiences, one could argue further that the metaphor itself overlooks how mirrors, too, do not show ‘the world as it is’ to the user, but a distorted and influenced image.

³¹ Erica Cusi Wortham, “Between the state and Indigenous Autonomy: Unpacking Indigenous Video in Mexico,” *American Anthropologist* 106, no. 2 (June 2004): 363-368.

³² Ibid.

³³ Wortham, *Indigenous Media in México*, 162.

³⁴ ...de Raíz Luna, “Juan José García,” coordinated by Mardonio Carballo, aired 2013, on Canal 22, <https://youtu.be/Kq0kty1B808>, my translation.



Figure 1.2 - A still from "Historias Verdaderas" showing filmmaker Juan José García using a VHS camera

Having built a career as an activist for indigenous rights, and gaining acknowledgment in national and international media, García's experience as an indigenous video maker is one of acceptance from his community. According to his own account, when recording as an indigenous video maker, you are "just another person from the community with a machine stuck to your shoulder."³⁵ Wortham identifies such situations where video making practices easily find a place within their environment as achieving intimacy and embeddedness within the community.³⁶ But she notes how the video making's embeddedness in the indigenous community as recounted by García cannot be so easily spotted in other projects that also emerged after the INI's TMA. Looking at the case of 'Radio y Video TAMIX' unveils a different reception to video cameras from another indigenous community.

1.5.3 Radio y Video TAMIX

Genaro, Hermenegildo, and Efraín Rojas, from the Mixe community in Tamazulapam del Espíritu Santo (Map 1.2), also received formative training during the TMA workshops. While the Rojas family's productions gained appreciation at International film festivals, their video making activities were deemed as suspicious by the locals and were not recognized as part of the communal work from which the whole community benefited.

Tensions began to surface when the collective started filming the *Tequio*, a form of communal labor which is considered a crucial part of community life in Tamazulapam. Obligatory for all community members, *Tequio* is usually concerned with food production or

³⁵ Wortham, "Between the state and Indigenous Autonomy: Unpacking Indigenous Video in Mexico," 365.

³⁶ Ibid.

house construction. Recording and making videos was an activity that was not seen as communal work, thus “Hermenegildo and Efraín were continually told by *comuneros*, or landowners, to put the camera down and pick up a hoe, or in other words, to do ‘real work’.”³⁷ To further complicate things, TAMIX frequently received funding from federal institutions and international foundations. But the community could not see where this money was going. The lack of transparency with which the collective handled its finances in the community created a sense of general distrust in their activities.

According to TAMIX founders, video technologies lacked ‘embeddedness’ in the community because local inhabitants could not see how video production could help them. They could not perceive an immediate, tangible benefit from having their lives filmed, and instead, saw how the Rojas family kept receiving money from the footage showing the community’s everyday life. That has led Hermenegildo to assert that the community itself was lacking “awareness of social struggle,” but it can also be seen as a reaction to the particularities of TAMIX work, which was not explicitly a ‘social struggle media,’ like what Ojo de Agua promoted. Instead, TAMIX wanted to use cameras as “an artistic, creative medium for expressing your *locuras* [crazy ideas],” as Guillermo disclosed in an interview with Wortham³⁸. These crazy ideas included, for instance, live broadcasting on local Television from a random building in the community, to which kids would respond by running around looking for the exact spot where the video was being shot. These more experimental and recreational uses of the camera within the community allowed members of TAMIX to move farther away from the conceptualization of video cameras as ‘electronic mirrors’ of indigenous experiences. Instead, they opted for a more artistic approach to the technologies in order to disrupt the local environment.

To Wortham, the TAMIX projects allowed for “the emergence of contemporary identity that asserted that it was okay to be Mixe and know how to use a camera better than a pickax.”³⁹ Deriving from the creative intentions of the Rojas family, TAMIX’s productions became quite appealing for the global audience of film festivals. However, since these individual expressions remained somewhat divorced from the community’s immediate needs, the camera was seen as a threat to the traditions of communal labor by most locals.

1.5.4 Chiapas Media Project

A fourth indigenous video project relevant for this analysis emerged with an entirely different intention than that of INI’s TMA. The Chiapas Media Project (CMP) was a program designed by the North American filmmaker Alexandra Halkin, who had learned of the Zapatista movement through their constant efforts to get coverage in global media outlets. “In addition to guns,” reflects Halkin, “the media were always an important part of the Zapatista ‘arsenal’.”⁴⁰

³⁷ Ibid, 366.

³⁸ Ibid.

³⁹ Wortham, *Indigenous Media in México*, 340.

⁴⁰ Alexandra Halkin, “Outside the Autonomous Lens: Zapatistas and Autonomous Videomaking,” In *Global Indigenous Media*, eds. Pamela Wilson and Michelle Stuart (Duke University Press, 2007), 164.

Halkin traveled to Chiapas (Map 1.1) in 1995 to shoot a documentary of the ongoing Zapatista struggles. But once there, many in the communities began approaching her, interested to learn how to use her Hi8 camera⁴¹ (Figure 1.3). By that time, Zapatistas were already being given plenty of time in front of video cameras' lenses in productions carried out by 'outsiders'. But while these tended to focus their attention on the militarization and violence of the region, the locals were trying to portray themselves "as survivors involved in the next level of the struggle and resistance to neo-colonialism/globalization,"⁴² which required them to share their own side of the political struggle. Thus, after her first long-term stay in Chiapas, Halkin designed a program in which the people she had met in the field could access video technologies. She sought funding and grants from media collectives and organizations from both Mexico and the United States.

Zapatistas video makers quickly found great value in video cameras. The community saw the artifact as an instrument that could propel what they considered a much-needed revolution. They became aware, for instance, of how using the camera would change the behavior of potential aggressors who visited the communities⁴³. Francisco Vázques, the then



Figure 1.3 - A participant of the Chiapas Media Project holding a Hi8 camera

coordinator of the CMP project, shares an occasion in which an elder in an autonomous Zapatista community compared the video camera with a machete: "Video can be used as a

⁴¹ Ibid.

⁴² Ibid, 162.

⁴³ See, for instance "The land belongs to those who work it," a short film of a dialogue between Zapatistas and government representatives who make a surprise visit to the community: <https://vimeo.com/45615376>.

weapon to defend oneself or as an instrument of construction or creation,” ‘Paco’ explained.⁴⁴ The anthropologist Axel Köhler has reflected in such assertions: “In many ways, the machete helps to produce and reproduce life, while video facilitates and potentializes communication. With the machete, you do not produce art, which is something that the indigenous peasants do not intend to produce with the camera or video.”⁴⁵

Through the use of the camera, Zapatistas continued to determine their identities, away from representations made of them in terms of war and the militarization of the region. In contrast to the skepticism with which the TAMIX’s activities were received in Tamazulapam, the community of Zapatistas video makers gave the technology a crucial role in protecting indigenous’ rights and helping their culture flourish. As such, video making practices found a similar value to that one of communal labor for the entire community.

Looking at these different video collectives and projects in retrospective, we can see how video cameras were seen as threatening to distance the video makers from the ‘indigenous,’ on the one hand, and allow a new form of indigenous self-determination on the other. Thus, even though video cameras are objects that were previously foreign to the context of indigenous communities, Wortham concludes that “indigenous video, as practice, is an expression or assertion of self-determination. Gaining access to the means of audiovisual communication is an accomplishment, a victory, in the process of securing control over lives long determined and represented by other.”⁴⁶

For indigenous video makers in Southwest México, recording something with the camera entails a practice of subverting the marginalization in which they have been long immersed. Using the video camera helps them further conceptualize and enact their indigenous identity. The video camera then takes the place of the pickaxe, the hoe, or the machete that are so significant for communal labor. Its use becomes valuable to the community to the extent that it can facilitate the formation of dignified identities and to the extent that changing the asymmetries in power relations with the state is prioritized over the adoption of video cameras as an entertainment tool or a way to continue *folklorizing* cultural expressions.

Some of the collectives discussed in this chapter, such as K-Xhon and TAMIX, are no longer active. However, both Ojo de Agua de Comunicación and the Chiapas Media Project continue to produce and promote indigenous videos in the region. Furthermore, the number of video collectives and indigenous projects of video production continues to grow exponentially as video cameras become increasingly accessible, portable, and cheap. The Internet has opened ever more channels through which indigenous video productions can be shared across the globe. Even productions that date back to the 1990s can be found in digital platforms like YouTube, Vimeo, or Facebook! The content of these videos are critically discussed within the local communities, but also across the world as they are distributed and screened at international Indigenous Film Festivals. The use of video cameras by indigenous

⁴⁴ Quoted in Axel Köhler, “Nuestros antepasados no tenían cámaras,” *Revista Chilena de antropología visual* (2014), http://www.rchav.cl/2004_4_ame10_kohler.html, my translation.

⁴⁵ Köhler, “Nuestros antepasados no tenían cámaras,” my translation.

⁴⁶ Wortham, *Indigenous Media in Mexico*, 82.

peoples continues to reshape how they represent themselves to enact a struggle for autonomy, to self-determine their identities, and fight for the protection of their rights.

1.6 Conclusion

This chapter began by exploring Edgerton's goal of broadening the global history of technology beyond teleologically tinged accounts of invention, innovation, and diffusion. Edgerton focused on how artifacts mobilized across different regions of the world, finding "a new lease of life" that they did not have in the context in which they were initially introduced. Adopting his concern with technologies-in-use across different geographies and temporalities, I challenged his approach to understanding how technologies become Creole by rejecting the demarcation between the 'rich' and the 'poor' technological worlds. Instead, I adopted Bar et al's conception of a creolization process as one of several ways in which technologies become appropriated in new contexts. Their conception of creolization is rooted in Glissant's depiction of an inner struggle of seeking self-determination despite conscious awareness of the inevitable influences of a foreign 'other'.

Using this perspective of creolization, I examined how video cameras were adopted and put into use by indigenous video makers towards the end of the 20th century. The video makers' practices of filming were situated within the ongoing political tensions between the Mexican state and the indigenous communities that live in the southwest region of the country. Video cameras, which were transferred from the city to the localities of indigenous video makers, were surely perceived by the community as foreign artifacts that overtly represented an 'influence' of the 'other'. However, the different practices that video makers enacted with the technologies influenced the way in which communities reacted to their presence. In the most successful projects of indigenous video production, the camera was seen as a tool for defense and creation, and video making was seen as a kind of communal labor. Video cameras were used for their perceived potential to emancipate the communities from political oppression and marginalization. These unique uses in its new sociomaterial environment led the camera to become creolized.

Chapter II

Mediated visions of autonomy

2.1 Introduction

Portable video cameras, commonly known as camcorders, are electronic devices that capture sound and motion picture of the user's immediate surroundings. The audiovisual data recorded is then processed by the apparatus and stored in different formats, from video cassettes in earlier versions to flash memory drives nowadays. What is stored can later be reproduced in a variety of media like televisions, computers, or even smartphones. But storing audiovisual content to be reproduced in the future is not the only thing a video camera does. Beyond performing this instrumental task, video cameras reshape how their users experience and interpret the very things they are recording.

The idea that no technology is neutral in its use is at the core of contemporary philosophy of technology. Artifacts are more than mere tools with which humans can achieve a specific task. Their use reshapes humans' access and understanding of the world. Consequently, they influence the way in which individuals and societies are shaped in time. Contemporary philosophers of technology have aimed at understanding these implications by focusing their reflections on how humans' experiences and practices are reshaped by the use of concrete technologies in specific contexts of use. This philosophical stance, commonly referred to as postphenomenology, can help develop our reflections at two levels. The first one focuses on how the experiences of individual users are reshaped by technological use. The second aims at explaining the impact of technology at a broader cultural scale. By conducting an analysis of indigenous video making which covers both levels, this chapter will critically explore the potential of postphenomenology to illustrate the video camera's agency in a process of sociotechnical creolization.

The chapter begins by situating the emergence of postphenomenology in the history of philosophy. It then turns to explain the framework's fundamental concepts that allow the outlining of human-technology relations' structures and explain the role of culture in these relations. Using these concepts, Section 2.4 develops an analysis of the close interactions between video makers and their cameras during the practice of recording. Section 2.5 will zoom out from these close interactions to discuss the broader impact of video making practices at a cultural level. Towards the end, this chapter offers some reflections on how further philosophical developments can help the postphenomenological approach to grasp the 'political' impact of video making practices.

2.2 A brief history of Mediation Theory

The roots of postphenomenology can be traced back to the philosophical work of philosopher Edmund Husserl in the late 19th century¹. Husserl's phenomenological approach was aimed at describing how the world was disclosed to humans through their experiences. Phenomenology sought to overcome the Cartesian subject-object dichotomy that conceived "human beings" as inhabiting a "world," and attempted to understand them independently from each other. Phenomenology held that humans and the world were constituted only in their relations to each other. Thus, human consciousness could not be described in isolation, but only as consciousness-of-something. On the other hand, objects in the world could not be conceived as objects-in-themselves but only as they were revealed to humans. This ever-present interrelation that constitutes everything there *is* was coined by Husserl as "intentionality". It is the ontological basis of phenomenological philosophy and it emphasizes how it is the relation between humans and the world that constitutes them in the first place, a relation that may be represented with the following notation:

I – world

The first philosopher to adopt a phenomenological perspective to speak about technology was Martin Heidegger². To Heidegger, modern technology led the way in which the world was revealed to human beings. This particular disclosing of the world through Technology³ was dictating humans to see the world as a "standing reserve", a pool of resources that they could store for manipulation and consumption at convenience. While Heidegger listed particular artifacts and how they shaped human experience, these analyses were merely heuristic tools to show his greater point: that in the era of modern technology, humans were bound to this particular interpretation of the world⁴. Heidegger's inquiries into tools and artifacts stemmed from a desire to understand what the 'essence' of Technology was. Though he has been labeled by Don Ihde as the "founder of contemporary philosophy of technology,"⁵ Ihde has sought to move away from an essentialist and deterministic view of technology and has looked into the details of how the diversity of artifacts, tools, and devices that humans use on a daily basis reshape their practices. Thus, within a phenomenological approach, Ihde introduced a framework with which to analyze concrete technological artifacts and their effects on their users. It is by distancing philosophical inquiry from an overarching conception of Technology as an unstoppable force subjugating humans to perceive the world in a certain way, and by steering the analysis to concrete artifacts in use, that the (post)phenomenological approach emerged in the philosophy of technology. In such a framework, technologies *mediate* how the world is disclosed to humans. The 'I – world' ontological interrelation is enacted through an artifact in use, in a structure that can be depicted as follows:

¹ Don Ihde, "What is postphenomenology?" in *Postphenomenology and Technoscience* (Albany: SUNY, 2009), 5-23.

² Peter-Paul Verbeek, "Don Ihde: The Technological Lifeworld," in *American Philosophy of Technology: The empirical turn*, ed. Hans Achterhuis (Indiana University Press, 2001).

³ Technology written with a capital 'T' refers to how classical philosophers of technology conceived it as an overarching and deterministic phenomenon.

⁴ Verbeek, "Don Ihde: The Technological Lifeworld," 122.

⁵ Don Ihde, *Technology and the Lifeworld* (Indiana University Press, 1990), 21.

I – technology – world

To speak about *technological mediation*, then, is to refer to that process in which artifacts in use mediate its users' experiences and practices. "Mediation theory" is another common way to refer to the group of concepts and methodologies used to analyze technological mediation from a postphenomenological perspective.

It is important to stress the ontological implications of this particular reading of technologies-in-use. For as much as phenomenological thought attempted to overcome the subject-object dichotomy, Mediation theory appears to position technologies *between* these very entities, conceptually isolating them from one another. Peter-Paul Verbeek has addressed this problem, emphasizing that the 'humans' and 'world' that Ihde speaks about are not to be understood as the preceding entities which then relate to each other through technological mediation. Stressing the relational ontology of postphenomenology, Verbeek maintains that it is from their interrelation that humans and the world are constituted.⁶ Technological mediation, then, must not be conceived as the process in which previously isolated 'humans' and 'world' come together, but as the process in which their very interrelation is reshaped. Unfortunately, explains Verbeek, "there is no way that we can speak about this interrelation without making use of the words 'subject' and 'object,' or 'humans' and 'world.'"⁷ Thus, even though these terms will continue to appear throughout the analysis, these must be understood as "the products of technological mediation, and not just the poles between which the mediation plays itself out."⁸

2.3 Levels of mediation: Micro- and Macropерceptions

The postphenomenological framework allows elaborating analyses of the impact of technological mediation in two different levels. First, it can zero in the close interactions between individuals and artifacts. At such individual level, each artifact is seen as reducing or magnifying specific bodily perceptions such as seeing or hearing. These sensory perceptions are called by Ihde *microperceptions*.

Following this terminology, how technological mediation reshapes an individual's access to the world will be referred in here as mediation in a *microperceptual* level.

For each bodily perception that individuals have, Ihde argues there is a hermeneutic exercise that makes sense of these sensory inputs and gives them a broader meaning within its cultural context. This unavoidable act of interpretation is what Ihde calls *macropерception*. Zooming out on these individual human-technology relations, the mediation that occurs on a cultural level will be referred to as one of a *macropерceptual* level.

While micro- and macropерception can be analytically distinguished as the levels in which the world is accessed by humans, they never occur separately. Both levels of perception are always intertwined in human experience⁹. The same can be said about technological

⁶ Verbeek, "Don Ihde: The Technological Lifeworld," 131.

⁷ Ibid, 130.

⁸ Ibid, 131.

⁹ Ibid, 124.

mediation. While an artifact may reshape an individual's experiences and practices, it unavoidably does so within a cultural framework that is, in turn, also reshaped.

2.3.1 Multistability

It is precisely this twofold understanding of perception and mediation that allows Ihde to de-essentialize technology. As much as technological artifacts may shape the way in which humans relate to the world, such artifacts always receive their identities within the cultural contexts in which they are being used. Following phenomenological notation, artifacts also have an intentionality, they are always “technologies-in-order-to...”¹⁰ and their uses vary in different contexts. This ambiguity of how technologies can be used, Verbeek clarifies, must not be taken as a feature of artifacts alone. It is a result of the entanglements between humans, technologies, and the context in which they are used¹¹.

The concept that attempts to describe the many variations with which artifacts can be interpreted and used is called by Ihde “multistability”¹². The term seeks to evoke the multiple ways in which artifacts can achieve a given *stability* in their use¹³. Ihde introduces this concept by using examples like the Necker cube (Fig. 2.1), an image widely used in psychology to examine gestalt switches. Ihde describes the Necker cube as an “ambiguous perceptual object” where two different top faces can be identified, hence the same image allows two different interpretations¹⁴. Once the viewer is familiarized with both perspectives, (s)he can easily switch between these two gestalts or *stabilities*. But beyond these two initial perceptions, other variations may be actively derived. Ihde proposes to see the Necker cube as a two-dimensional insect whose six legs are touching the outlines of a hole, suggesting a more active, rather than passive, role of perception. He lastly argues that “such multistability also may be seen in human-technology relations and even more strongly in the complexities of technology-culture gestalts”¹⁵.

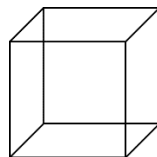


Figure 2.1 The Necker Cube

The concept of multistability does not only suggest that technologies can be approached in various ways by each user, but also that these variations in technological use are contingent on the cultural context in which these uses occur. Thus, to acknowledge this characteristic of

¹⁰ Peter-Paul Verbeek, *What Things Do* (Penn State Press, 2005), 136.

¹¹ Ibid, 117.

¹² Ihde, *Technology and the Lifeworld*, 144.

¹³ Verbeek, *What Things Do*, 136.

¹⁴ Ihde, *Technology and the Lifeworld*, 145.

¹⁵ Ibid, 146.

human-technology relations is to undertake the relevance of situating postphenomenological readings of technological mediation within the cultural context in which it occurs.

2.3.2 Affordances

In contrast to the ‘gestalt switches’ that Ihde’s readers may experience when looking at the Necker Cube, Kyle Whyte has noted that to identify the multistability of technologies in use in our analyses, we must “perform thought experiments of the possible stabilities” of which we might not have firsthand experience¹⁶. However, these possibilities are not infinite. As Robert Rosenberger and Verbeek notice, “the notion of multistability simultaneously points to the fact that the materiality of the device constrains the potential relations to only certain uses and meanings.”¹⁷ This materiality, which can be characterized by the device’s design features and material properties, can be an entry point to identify the range of ways in which users can approach a given technology. These features of an artifact can be referred to as its *affordances*, previously defined by Ian Hutchby as *that* which constrains the ways in which technologies can be interpreted and employed by its users.¹⁸ Hutchby’s definition echoes Rosenberger and Verbeek’s notion of materiality’s constraints. However, it is perhaps more fruitful to conceive affordances not only in terms of what they constrain from the artifact’s user but also in terms of what they allow him/her to do.

Reflecting on the video camera’s affordances can become the starting point to examine technological mediation at a micropereceptual level. From such position, the structure of the relations between video maker and camera can be described and examined in further detail. Whatever practices are identified as emerging through these set of relations can then be situated within their cultural context for the variations or ‘stabilities’ of use to become more apparent. These steps will be followed in the next two sections. In section 2.3, the postphenomenological analysis is framed from a rather individual perspective, focusing on how a video maker interacts with the camera during the practice of recording. In section 2.4, how these interactions can be understood in a broader cultural scale will be discussed.

2.4 The Human-Technology Continuum

Ihde proposes a categorization to structure the perceptual relations that humans can have with different technologies¹⁹. This analysis will cover the three different relations within this categorization that are present in video making practices. I introduce them in the same order that Ihde did, as they gradually move along what he calls the “human-technology continuum”.²⁰

¹⁶ Kyle Powys Whyte, “What is Multistability? A Theory of the Keystone Concept of Postphenomenological Research,” in *Technoscience and Postphenomenology*, ed. Jan Kyrre Berg O. Friis and Robert P. Crease (Lexington Books, 2015), 74.

¹⁷ Robert Rosenberger and Peter-Paul Verbeek, “A Field Guide to Postphenomenology,” in *Postphenomenological Investigations: Essays on human-technology relations*, eds. Robert Rosenberger and Peter-Paul Verbeek (Lexington Books, 2015), 25-26.

¹⁸ Ian Hutchby, “Technologies, Texts and Affordances,” *Sociology* 35, no. 2 (2001): 441–456.

¹⁹ Ihde, *Technology and the Lifeworld*, 26.

²⁰ *Ibid*, 84.

2.4.1 Embodiment relation

At one end of the human-technology continuum, Ihde identifies “relations that incorporate the use of artifacts or technologies that we *experience as taken into our very bodily experience*”²¹. In this relation, the technology becomes embodied by the user as it mediates the body’s sensory perceptions. The attention of the user is directed to a phenomenon in the world, except that this phenomenon is experienced *through* the artifact. Technologies that are embodied present themselves as a “quasi-I” to the user and withdraw from his/her awareness.²² Thus, Ihde argues that for artifacts to be successfully embodied they need to achieve *transparency* during its use²³. The simplest example of an embodiment relation is the use of eyeglasses. As long as they are not broken, wearers of eyeglasses eventually retreat to the background of their conscious awareness that the clearness of the images they are seeing is only possible because of the presence of the technology. The structure of embodiment relations can be characterized with the following diagram:

$$(I - \text{technology}) \rightarrow \text{world}$$

Let us now examine whether camcorders can become embodied by indigenous video makers. In the reflections of Zapotec Juan José García’s experience of video making, he asserts indigenous video is loaded with intimacy. “Watching the video you enter into that family, into the community and the community sees you as the same,”²⁴ he describes. According to García, this intimacy is achievable because as an indigenous video maker, “[you] are not a stranger, but just another person from the community with a machine stuck to your shoulder that is an extension of your body that permits you to tape what you want.”²⁵ García sees the intimacy and familiarity that he transfers to his video productions as constitutive of the *comunalidad* lived in the Zapotec Sierra, a sense of collectivity among the members of the community. Such intimacy does not only retain the crucial value of communal work within the indigenous way of living, as discussed in Chapter 1, it further discloses García’s close relation between his body and the camera. In his conception of the ‘machine’ as an extension of his body, he signals the video camera becoming a “quasi-I,” implying the familiarity and intimacy with the environment is extended in this machine-body assemblage:

$$(I - \text{video camera}) \rightarrow \text{world}$$

To explore this embodiment relation, we may follow García’s words closely and ask, if he conceives the machine as an extension of his body, what part or function of the body is being extended during the practice of recording? Describing how video makers ‘see’ the world while recording can provide an answer to this question. In what follows, I describe how the camera constrains visual perceptions in specific ways, while it also allows new ways of visualizing objects in the world.

²¹ Ihde, *Postphenomenology and Technoscience*, 42.

²² Verbeek, *What things do*, 127.

²³ Ibid, 126.

²⁴ Quoted in Erica Cusi Wortham, “Between the state and Indigenous Autonomy: Unpacking Indigenous Video in Mexico,” *American Anthropologist* 106, no. 2 (June 2004): 363-368.

²⁵ Ibid.

To reflect first about the constraints that the video camera poses to seeing, think of how while recording, the eyes are most frequently focused on the video camera's viewfinder. Optical viewfinders in early versions of camcorders are reversed telescopes of the camera lens that are accessed by the user by drawing one eye near a small slot on the camera. In most recent versions, camcorders come with electronic viewfinders in the form of LCD screens. In both cases, if the video maker wants to preview what is being recorded, (s)he must access the world through technologically mediated vision.

What can be seen through the viewfinder changes depending on it being optical or electronic. In optical viewfinders, the lighting and coloring of the image remain closer to the objects seen without mediation. What lies between the human eye and the objects in the world are simply an arrangement of glasses that only slightly manipulate the captured object's shape, coloring, or lighting due to their curvature. However, since the user's face is so close to the apparatus, every visual that does not make it to the camera's framing fades into the background and disappears from the user's immediate experience. Using the electronic viewfinder means the apparatus may remain further away from the user's face. However, what is seen on the screen is closer to how the video looks once it is stored in a medium format. This real-time digitalization of the captured images performs a significant reduction of the visual's inputs. As powerful as the camera's lens and sensors can be, and as 'realistic' as videos can get, the light, depth of field, sharpness, and coloring are all being digitalized and modified from what an unmediated eye can see.

Regardless of the viewfinder being optical or digital, when the user's eye is fixated on it, the camera lens mediates his/her sight. The field of vision is reduced to what is framed of the environment. I use the word *reduced* because such framing cannot capture what both human eyes could see at once with unmediated vision. Furthermore, some objects might be impossible to capture as desired, as they can be in too dark or too bright lighting for the camera sensors to distinguish the objects, for instance. The camera can thus pose a further constraint to what can be seen through the viewfinder.

Despite these listed constraints, I have suggested that a mediated vision with the camera also allows the emergence of new ways of seeing. Most portable camcorders offer, for instance, the possibility to zoom in and out, allowing the user to look closely at objects that might be far away from his/her current position. In some instances, when the body is incapable of reaching a desired object to be recorded, perhaps because it is too close to the ground, inside a hole, or on top of a shelf, the user might extend the arms to allow the camcorder to reach these further spaces. The user might even rest the camera on a surface and pick it up at will, thus detaching his/her body from the immediacy of mediated vision. Such extended vision will be, for the video maker, deferred in time. But it remains for him or her a way to access visually what is unreachable by the unaided eyes. The decisions that camera users make while recording, how they move or how they move the apparatus, allows them to actively *see* through the artifact.

When Fernando Vázquez, a video maker of the collective Video Cine Zapoteca K-Xhon explained his use of the camera to Erica Wortham, he described the experimentation with the technology as an attempt to move away from more conventional ways of taping: "We

put the camera wherever we felt like it. We'd get inside a corral, on top of its fence, under it or to the side, whatever we felt like doing in that moment. 'I like this!' and we'd tape it, period. Those are the kinds of things that started marking, we still say it, our own way of seeing."²⁶ After watching one of K-Xhon's productions, Wortham described this type of camera work as "less than deliberate."²⁷ The portability and versatility of the VHS cameras that were being used then by the collective played a big role in developing such a distinct 'way of seeing'.

In the accounts of García and Vázquez, there is an implied *transparency* of a camera that withdraws to the background while it mediates vision. But such implied transparency is, at best, only temporary in the user's experience. Video cameras sometimes require their complex mechanisms to be attended by its operators. Perhaps objects in the frame aren't focused as desired, which will require the operator to rotate the lens' focus ring or change the camera settings. If the video maker is highly familiarized with handling such mechanisms, we may grant that these actions are performed seamlessly without constituting an obstacle to seeing the world *through* the camera while the technology remains withdrawn from the user's attention. But when the user must turn his/her conscious awareness to the camera's mechanisms in order to change the visual output desired, we begin to move away from the end of the human-technology continuum where the analysis started.

2.4.2 Hermeneutic relation

There is a second way in which Ihde distinguishes that technologies mediate the user's experience of the world. Instead of extending bodily perceptions, artifacts offer a referent to a phenomenon in the world which must then be interpreted. Ihde calls it a *hermeneutic* relation, echoing the history of hermeneutics as a tool for textual interpretation. Ihde extends hermeneutics to the context of technologies, arguing there are "special modes of action and perception" in technological mediation which are "analogous to the reading process."²⁸

Simple examples of this human-technology relation are many measuring devices. A car speedometer, for instance, mediates the experiences of velocity while the user is driving. The measurement of the velocity displayed on the dashboard can be read, leading the user to 'know' the speed at which she is moving. Similarly, a thermometer offers a referent to a given temperature, its reading refers the user to a phenomenon in the world, the weather condition. In hermeneutic relations, technologies in use offer humans a way to access the world in a structure that can be formalized with the following diagram:

$$I \rightarrow (\text{technology} - \text{world})$$

Hermeneutic relations move along the human-technology continuum, as technologies begin to emerge as an 'object' to the user, meaning they become the object of microperception²⁹.

²⁶ Erica Cusi Wortham, *Indigenous Media in México*, (Duke University Press: 2013), 277, iBook.

²⁷ Fernando Vázquez quoted in Wortham, *Indigenous Media in Mexico*, 278.

²⁸ Ihde, *Technology and the Lifeworld*, 80.

²⁹ Ibid, 86.

However, what the users perceive of these technologies still refers to something ‘out there’ in the world. Thus, in hermeneutical relations, a “*referential* transparency”³⁰ is still said to be achieved. While users may not access the world directly *through* the artifact, they access the world *by means of* it.³¹

Depending on their particular design, artifacts can build representations of phenomena in the world that can either hold a strong resemblance to what the ‘naked-eye’ would see, or conversely, build representations by performing a “high-contrast”³² transformation of such phenomena. For the video camera users, the visualizations perceived through the viewfinder maintain a strong similarity to the objects being captured. This similarity can be described as having a “representational isomorphism,”³³ which means the technological mediation offers a transformation of “low contrast” to phenomena of the world. But however isomorphic these visual representations are, they are still being read and interpreted in specific ways by the video maker. If we follow Ihde’s account of how perception is constituted, sensory inputs are always accompanied by an interpretative exercise, extending experience into its macroperceptual dimension. Thus, every technology that mediates the senses has a hermeneutic aspect to it. Through this line of reasoning, the camera does not only reshape how video makers see but also how they interpret these mediated ways of seeing.

I suggest that recording with a video camera offers its users visual referents of the world, akin to Vilém Flusser’s argument in *The gesture of photographing*³⁴. According to Flusser, taking a photograph is an act of capturing, in ensemble with the camera, an idea as an image. He describes the act of taking a photograph in three steps. First, the photographer has the goal of capturing something, an ‘object’, which leads him to make an observation of that object through the camera. Second, this ‘photographer-camera’ ensemble initiates an unavoidable process of manipulation of the object. The photographer might move his body to emphasize what he desires to capture in the frame, though the camera, too, might require the body to be positioned in a particular way. The lens might be catching a glare that ruins the shot, for instance, requiring the photographer to change the camera’s angle in order to reduce that glare. As the photographer-camera moves, the framing of the object changes, how it is visually conceived is transformed. Finally, there is a period in which the photographer will critically assess whether (s)he succeeded in framing or conceiving the visual representation of the object as desired. Then the steps would be repeated for a new photograph.

To Flusser, this description of photographing was a way of arguing that taking photographs could be a way of philosophizing; that is, a way of thinking and reflecting about the world. Philosophers, Flusser tell us, also have ‘objects’ or ‘concepts’ to conceive in their work. They frame these objects as they unavoidably manipulate their conception from their own perspectives. And finally, they assess critically whether they were able to capture their concepts correctly. Note that I do not wish to use Flusser’s argument to suggest that using a

³⁰ Ibid, 82.

³¹ Verbeek, *What Things Do*, 126.

³² Ibid, 131.

³³ Ibid, 81.

³⁴ Vilém Flusser, “The gesture of photographing,” *Journal of Visual Culture* 10, no. 3 (2011): 279-293.

camera produces a pictorial representation for the photographer's audience, but rather, that the photographer him/herself is conceiving a pictorial representation of an 'idea' or a 'concept' in the world while (s)he is in the process of taking the picture.

Certainly, taking photographs does not necessarily entail such a methodical process. Portable, digital cameras that are sometimes even attached to smartphones nowadays allow its users to take multiple pictures in rapid succession without much attention, or without a strong intention that is analogous to making a philosophical claim about the world. Nevertheless, Flusser's description of the practice of photography illustrates how a camera operator can consciously use this apparatus to convey an idea or feeling with a picture.

To extend Flusser's reflections of photographing to recording may need some elaboration, for which I build upon his argument following his three steps of photographing. First, video makers can also initiate the recording with a goal in mind, which leads them to observe their environment and think of the best way to frame such goal with the camera. Second, when they press the camera button to start recording, not only is their initial position an active manipulation of the framing, but manipulation continues to be enacted as the video camera is in use. The 'video camera-operator' ensemble may follow an object in motion or stay static as objects move within and outside the frame. Again, these are decisions that are enacted not by the operator or the camera in isolation, but by the ensemble. Lastly, the video maker must assess if the shot was successful in capturing the idea, emotion, or concept intended.

Let me now offer a concrete example. Filoteo Gómez is a Mixe video maker who recorded the process of *panela*³⁵ production in his community in Quetzaltepec, Oaxaca for the film *Dulce Convivencia* (Sweet gathering)³⁶. In a conversation with the scholar Laura C. Smith, he disclosed that his intention was to "record a common practice of working together in a peaceful and productive manner."³⁷ During the shooting, Gómez followed two different families who were producing *panela*. While one group was using a wooden sugar press, the other was using a metal mill to grind up the cane and plastic containers to let the cane juice cool and solidify. However, Smith notes that the metal mill and plastic containers are nowhere to be seen in the video sequences. Rather, Gómez focused his shots on the processes being made by the wooden sugar press. Smith argues this choice is made, as in many other indigenous videos, to excise machines and plastic from the vision of a sustainable culture and community. This is not meant to suggest that the use of a metal mill is unauthentic from an indigenous standpoint, or that it can somehow threaten their autonomy, but merely that for Gómez, the collectivity of his community was best visually conceived and portrayed by leaving these metal and plastics implements outside of the framing.

The alleged referential transparency that may arise with a hermeneutic relation must not be taken for granted. Users must be acquainted with how to operate a video camera to be able to actively translate their framings into concepts or feelings. From her ethnographic

³⁵ A sort of unrefined sugar produced by boiling and evaporating sugar cane juice that is typically used in Latin America.

³⁶ *Dulce Convivencia*, directed by Filoteo Gómez (Mexico: 2004). <http://www.isuma.tv/viii-festival-internacional-de-cine-y-video-de-los-pueblos-ind%C3%ADgenas-m%C3%A9xico-2006/dulce-convivencia>.

³⁷ Laura C. Smith, "Decolonizing Hybridity: indigenous video, knowledge, and diffraction," *Cultural Geographies* 19, no. 3 (2012): 329-348.

research, Wortham shared an account of Guillermo Monteforte, one of the trainers of the INI's *Transference of Audiovisual Media to Indigenous Communities and Organizations* workshops in 1989. While Monteforte was going through the footage that the workshop participants had made with the video camera, he ran into a sequence of abstract shots, "a surprising, elegant mix of natural textures —wood, zacate, tree bark, sky, and a close-up of ants." By that time, Monteforte and his other colleagues were hoping they had found the emergence of an "indigenous visual proposal." But they later found out that the young man behind the camera had not figured out how to zoom out³⁸. Such accidents begin to suggest that, while a video camera could well retreat to the background of the user's conscious awareness while it is mediating his/her interrelation with the world, this transparency cannot be permanent. This sophisticated technology often demands attention to itself and not to the phenomena that the video maker aims to record, leading us to the other end of the human-technology continuum.

2.4.3 Alterity relation

Ihde has identified a third type of relation in which technologies are no longer 'transparent' in human experience. In alterity relations, technologies draw attention to themselves and present to the users as a 'quasi-other' to which users relate³⁹. This type of relation can be described with the following diagram:

$$I \rightarrow \text{technology} (- \text{world})$$

Instead of mediating the experience that a user can have to phenomena in the world, the technology becomes the phenomenon towards which users direct their experience. Similarly, the video camera is an artifact that users often interact with, as they need to be constantly maintained and kept in suitable conditions. For instance, video cameras are usually powered by battery, which means the video makers need to remember frequently how much time remains available to record with the apparatus before they need to recharge it again. The presence of electrical outlets is of great importance, yet, in the context of indigenous video making, such presence cannot be taken for granted. Alexandra Halkin has mentioned, for instance, how one of the first workshops of the Chiapas Media Project initiative had to be constantly interrupted because community leaders could not guarantee consistent electricity or voltage⁴⁰.

There is also the issue of limited storage capacity, which is highly dependent on the version of the camcorder. Analog camcorders such as S-VHS require tapes who store from one up to twelve hours of footage. What can be stored in digital camcorders varies depending on the memory disks being used, but they usually range within the same amount of hours. These technical features also reshape the practice of recording. Video makers must take over priorities of what to record and when. Other environmental aspects may make the user aware of the camera. Recording under the rain is impractical, for instance, as most video cameras

³⁸ Wortham, *Indigenous Media in Mexico*, 188.

³⁹ Ibid.

⁴⁰ Alexandra Halkin, "Outside the indigenous lens: Zapatistas and autonomous videomaking," In *Global Indigenous Media*, eds. Pamela Wilson and Michelle Stuart (Duke University Press, 2007), 168.

need to be protected from water⁴¹. Users need to be aware of how the weather and harsh environments can interrupt the video production. Lastly, we must acknowledge that these are relatively expensive technologies that are not as ubiquitous in the indigenous communities in Southwest México as they may be in other parts of the world. They cannot be replaced as easily, thus they require of users to protect the equipment from harsh handling during its transportation. It also requires the users to keep them in constant supervision to avoid the devices being stolen or lost.

When we consider the camera at this end of human-technology relations, the artifact does not *mediate* phenomena in the world, but they are something video makers must relate to. It is during these moments, whether because they need to be protected from harsh weather, aggressive handling, or simply because their complex mechanisms need to be dealt with, that the video camera reveals itself as a “quasi-other” to the user.

Distinguishing the three types of human-technology relations in Ihde’s continuum is useful to describe how technologies amplify or reduce our sensory perceptions or how they can unveil aspects of the world that remain disclosed without technological mediation. However, in practice, when we look closely at the interactions between video makers and cameras we discover that these types of relations can be present simultaneously. Ihde argues that “[t]he movement from embodiment relations to hermeneutic ones can be very gradual,” as some technologies “may be used simultaneously both as something *through* which one experiences and as something *to* which one relates”⁴². There seems to be a slightly less gradual movement towards alterity relations, where artifacts are no longer said to be transparent, but appear to the users as the focus of their attention. Besides describing the forms of technological mediation that occur during the practices of video making, the analysis provided above has also provided an account of how these movements along the human-technology continuum occur.

2.5 Sedimented struggles and symbolic video cameras

Having laid out the relational structures between individuals and video cameras in use, the next step is to situate these relations in their cultural context and identify how this context directs particular ‘stabilities’ of use and becomes itself mediated. I want to address this challenge from two fronts. The first one is exploring how the concept of ‘sedimentation’ as defined by Robert Rosenberger can be built upon to understand the pre-perceptive conditions that lead video makers to approach cameras in particular ways. The second is to challenge the notion of ‘transparency’ in technological mediation and bring to the fore the cultural and political visibility of video cameras in use.

⁴¹ More recent versions of digital camcorders are waterproof, but there are I have no record that these models have reached the hands of indigenous video makers in Southwest México.

⁴² Ihde, *Technology and the Lifeworld*, 93.

2.5.1 Sedimentation as a pre-perceptive condition for technology use

Following Ihde's formulation of perception, sensory inputs are followed by an act of interpretation that occurs in a broader cultural context and turns into a macroperception. To explain how this transition from micro- to macroperception occurs, Robert Rosenberger's definition of *sedimentation* can be useful. According to Rosenberger, phenomenological tradition has used the concept of sedimentation to express the "past experiences settled in one's mind which actively contextualize present experience."⁴³ Focused on the thoughts that a user has when he/she is approaching a technology, "sedimentation provides the pre-perceptive context"⁴⁴ which enables the actual perceptions to occur with immediate meaningfulness. Rosenberger uses this concept to point out the "force of habit" in humans that direct their relations to technologies. To stress the relevance of these preconditions as crucial to understanding technological mediation, he offers the example of reading a fMRI. Staring at a fMRI will lead to an entirely different experience for someone that has been trained to make sense of what the variations in these images represent, and for a person who has not received any guidance or instruction on how to read them.

The concept of 'sedimentation' as described by Rosenberger offers a pathway to explore the pre-perceptive conditions with which indigenous video makers make sense of the mediated vision. These conditions may include, for instance, the TMA's training that suggested the camera could be conceived as an 'electronic mirror' that reproduces daily experiences, or contrastingly, as tools for creation with which revolution can be enacted. The insights from the historical reading of indigenous video making can take us much further than understanding sedimentation as 'a force of habit.' Through creolization, indigenous video makers' pre-perceptive conditions can be understood as that strong inner struggle between rejecting a foreign artifact and using it to achieve autonomy and authenticity. Extending the notion of sedimentation to García's conception of indigenous video making as 'social struggle media', for instance, refers to the conditions of marginalization and oppression in the community he was born and raised in.

Sedimentation in this profound sense can describe the stability of use that arises when indigenous individuals use the cameras to build audiovisual representations of dignified indigenous identities that are shared within and outside the community and reshape how indigenous peoples' needs and demands are communicated.

2.5.2 The issue with 'transparency'

Beyond the instrumental ways in which cameras can help build audiovisual narratives of indigenous' self-determination and struggle for autonomy, there is an additional aspect in which video making can be recognized as exerting a cultural and political impact. In this section, I explore the symbolism that video cameras have within the context in which they are

⁴³ Rosenberger and Verbeek, "A Field Guide to Postphenomenology," 25.

⁴⁴ Ibid.

used by challenging the notion of transparency that artifacts are said to achieve while they mediate video makers' access to the world.

In the three levels distinguished in the human-technology continuum, the alleged *transparency* (or lack thereof) that the artifact achieves in relation to the user's perspective seems to be crucial to establish a specific human-technology relation. In embodiment relations, artifacts are said to become fully transparent as users access the world *through* them. In hermeneutic relations, artifacts achieve a referential transparency, as the world is read *by means of* it. Lastly, in alterity relations, it is the lack of transparency which leads the user to relate *to* the artifact itself.

Rosenberger has argued that this problematic idea of transparency must be conceived only as "one of many potential ways that technological mediation shapes the contours of a user's overall experience." Thus, he suggests we move forward by suggesting users have a broader "field of awareness," whose composition is continuously reorganized during the use of technologies⁴⁵. In such field, he argues, it is more accurate to understand technological mediation as bringing certain experiences at the fore, while other experiences are partially faded into the background. Rosenberger offers several examples, such as how watching a movie in the cinema, or looking through a microscope puts specific content "positively forward" (e.g. the story of the movie, or the substance being examined, respectively) while the setting that makes this content be experienced achieves a degree of opaqueness. While the notion of a "field of awareness" starts to suggest the user's perceptual field is much more complex than merely directing its full attention to a single artifact or phenomenon, Rosenberger's examples only reinforces notions of transparency while the technology functions properly and fails to account for the technology's different kinds of visibility.

Yoni Van Den Eede has made a thorough critique of the notion of 'transparency' in technological mediation⁴⁶. His concern is that when philosophical analyses focus in the 'transparency' of the technologies from a functional viewpoint (e.g. a camera becomes transparent while mediating the video maker's vision of the world), they disregard the social aspects *around* the technology that remain opaque even during the technology's use. Drawing on Andrew Feenberg's "Critical Theory of Technology," Van Den Eede asserts that "technology cannot simply be explained by its functional aspects; "efficiency" alone does not account for its history and effects."⁴⁷ He is interested in highlighting the social negotiations and "struggles over social values" that are held during the design and use of a technology. To Van Den Eede, these aspects constitute the technology's *context* which "eludes what one would normally call the technology from a functional viewpoint, but anyway defines what the technology *is*."⁴⁸ For him, to consider the opacity of the technology's context has relevant political implications because it visibilizes the "social history" within which "individual actors

⁴⁵ Ibid, 23.

⁴⁶ Van Den Eede's critique is not only directed to postphenomenology, but also to classic phenomenology, Actor-Network Theory, and other ethnographical, psychological and sociological perspectives. In this work, however, I will focus on his comments about the concept of *transparency* within the postphenomenological framework.

⁴⁷ Yoni Van Den Eede, "In Between Us: On the Transparency and Opacity of Technological Mediation," *Foundations of Science* 16, no. 2 (May 2011): 153.

⁴⁸ Ibid, 154.

or interest groups can modify the technologies.”⁴⁹ Thus, according to Van Den Eede, to grant a *transparency in use* is at odds with leaving its context in opacity. He lastly calls for the development of a “double vision,” in which both transparencies in *use* and opacity of *context* can be theorized⁵⁰.

Verbeek has responded to this argument by stating that users, indeed, can experience transparency of use while still being aware of the opacity of context. He asserts that “human beings can have a *relation* to the mediation rather than merely being immersed in it⁵¹” That is, “users avoid being mere ‘objects’ of mediation” by deliberately “appropriating a technology by using it in a specific way” and thus “co-construct[ing] their mediated subjectivity.”⁵² Yet, from an analytical standpoint, it remains unclear how to proceed in building such a ‘double vision’ for our theoretical analysis.

Rosenberger’s conceptualization of a user’s “field of awareness” can be further developed to accommodate both (1) the functional transparency of technological mediation and (2) the visibility of the artifact as a political and social object. This ‘double vision’ can help us understand the broader political and cultural role of cameras in indigenous video making, granting the camera a degree of transparency when it allows video makers to see the world *through* and *by means of* it, and still acknowledging how the cameras’ context remains opaque to these same video makers.

To achieve this double vision, I want to recur to Brian Larkin, who developed a similar discussion in terms of the ‘invisibility’ that is often granted to infrastructure in the literature of science and technology studies⁵³. Responding to claims that when infrastructures work smoothly in the background, they remain invisible for those who depend on it, Larkin argues that this invisibility “is only one and at the extreme edge of a range of visibilities that move from unseen to grand spectacles and everything in between.”⁵⁴ This means that beyond their technical function, infrastructures become cultural phenomena that have a symbolic meaning for the community. This *visibility*, or opacity, of infrastructure does not point to the technology’s function, but to what Larkin calls its *poetics*. It is characterized by its aesthetics, a mode in which “form is loosened from technical function”⁵⁵.

To incorporate Larkin’s *poetics* into the postphenomenological discussion, we can recur to Ihde’s analogy of users’ hermeneutic *reading* of technologies. So far, we have discussed how the reading a technology looks at referents of a given phenomenon in the world. But beyond this functional reading of the technology’s “text,” there is a second way in which artifacts may be read. Poetics in speech is full of metaphors that convey symbolic meanings and find its value on the aesthetic form. Larkin explains: “[w]hat distinguishes the poetics is when a speech act is organized according to the material qualities of the signifier itself rather than to its referential meaning.”⁵⁶ Similarly, a hermeneutic reading of a technology can be

⁴⁹ Ibid, 153.

⁵⁰ Ibid, 157.

⁵¹ Peter-Paul Verbeek, “Expanding Mediation Theory,” *Foundations of Science* 17, no. 3. (2012): 395.

⁵² Ibid, 394.

⁵³ Brian Larkin, “The politics and poetics of infrastructure,” *Annual Review of Anthropology* 42, (August 2013): 327-343.

⁵⁴ Ibid, 336.

⁵⁵ Ibid.

⁵⁶ Ibid, 334.

directed to the material qualities of the artifact itself. Artifacts can also convey such symbolic meanings beyond their function if what we read is its poetics.

Just as a functional reading of technology must be situated in a specific context, a poetic reading must also be contextualized. The symbolic meaning that a video camera may have for a professional actor, for instance, will not be the same for an indigenous video maker. Drawing from the insights developed thus far, the video camera could either become a symbol of activism and service to the community, instead of becoming a symbolic threat to indigenous ways of living. Acknowledging the opacity of the cameras' context, even when they are being used, highlights how video makers actively engage in mediation, co-constructing the mediated subjectivity from where they enact their indigenous struggles.

2.6 Conclusion

By adopting a postphenomenological stance, this chapter examined the role of video cameras in mediating indigenous' struggles. Parting from a reflection on the video camera's affordances, this an analysis of the structures of human-technology relations between video makers and their cameras was developed. In an embodiment relation, cameras were found to mediate the visual inputs of video makers. A hermeneutic relation is established as video makers conceive, in an ensemble with the camera, audiovisual representations of their struggles and sovereign identities. In alterity relations, technologies reveal themselves as 'quasi-others,' reminding users they are dealing with complex artifacts that need to be protected, maintained and dealt with.

Turning to technological mediation on a cultural level, I suggested that to position the role of video cameras in a broader cultural and political dimension we may extend the notion of 'sedimentation.' As it currently offers a way to think of the pre-perceptive conditions of each user when approaching a technology in terms of past experiences and habits, this term can be strengthened by recognizing the complex political background in which users are immersed. Lastly, I presented some current critiques to the notion of 'transparency' within the postphenomenological tradition and offered Larkin's notion of the poetics of technologies as a path to develop a double hermeneutic reading of artifacts: as referents to phenomena in the world, an as culturally symbolic poetics.

Chapter III

Spatiotemporality in Technological Mediation

3.1 Introduction

This thesis started out with the question of how the introduction, appropriation, and use of video cameras in the indigenous communities of Southwest México was influencing their political struggles. I suggested this could be answered by employing both global history of technology and postphenomenological philosophy. Thus, in the first chapter, I adopted a historical perspective that looks at creolization as the process in which video cameras are introduced to indigenous communities and mutate in relation to, and along its new environment. This mutation, I have argued, is deeply rooted in the ongoing political conflicts between the Mexican state and indigenous communities. While attempting to characterize the particularities of human agency in creolization, video makers were found to use the artifact to defend themselves from oppression and marginalization. Later, in chapter two, I turned to examine the agency of video cameras by looking at how these artifacts *mediate* the video makers' access to the world in the practice of recording. The video camera constrains and magnifies the visual inputs of video makers in specific ways. These artifacts allow their users to visually frame ideas and sentiments about indigenous identities, but they also require at times to be attended and maintained in optimal conditions.

In this chapter, I would like to bring these historical and philosophical perspectives together and characterize how human and nonhuman agencies coshape each other through time and across spatial dimensions. To achieve this, the first section of this chapter outlines an ontology of becoming along the lines of Andrew Pickering's notion of a temporal *dance of agency*. The following section will use this notion to define creolization as a particular historical process of becoming, hosting an intermingling of humans and technologies that occurs within asymmetries of power and results in a unique technopolitical culture. To ground this analysis in the particular case followed throughout the thesis, I reflect on how human and nonhuman agents come together in a creolizing dance of agency during the practice of indigenous video making.

The last section of this chapter will take a slightly theoretical turn. My goal is to reflect on the role of spatiotemporality in our current postphenomenological readings of human-technology relations. Furthermore, I suggest how we can tighten the role of spatiotemporality in future philosophical analyses. This last suggestion takes the form of a list of three concepts that stem from Pickering's 'dance of agency': (a) path-dependency (b) goal formations, and (c) open-endedness. With some work, these three concepts can be further fleshed-out to situate human-technology relations in a broader spatiotemporal dimension, situate the phenomenon

of technological mediation in historical processes of becoming, and further elucidating their political impact.

3.2 The Dance of Agency

To introduce the key notion of spatiotemporality within this chapter, an ontology of becoming will be outlined. I have found the simplest and most compelling characterization of such an ontology that justly accounts for the agency of social, material, and conceptual elements of the world to be present in the work of Andrew Pickering. I thus present Pickering's reading of the world in which human and non-human agents become intertwined and co-shape each other in a continuous *dance of agency* that unfolds across space and through time. Pickering summarizes this understanding of the world with the help of Gilles Deleuze's distinction between *being* and *becoming*:

“Imagine a set of entities. Imagine each of them sporting endlessly, changing their nature open-endedly, first this way then that, in indefinite spaces of possibility. Imagine that subsets of these sportings occasionally come into alignment and reciprocally sustain or interactively stabilize one another, forming a new entity that sports anew. Imagine that the original entities formed in the same way, so that all entities are assemblages.”¹

If we would take a picture of these entities at any given point in time, what we would get is a picture of *being*, entities appear to be stabilized in their relations with other entities. But we could also see this image as a frozen picture of *becoming*, an image that does not necessarily determine how these entities will look in the future. “The state of the set of entities at any given time”, tells us Pickering, “is a function both of the initial set of entities (*relativity; situatedness*) and of the temporal path taken by them up to that time (*path-dependence*).”² When projected into the future we may see the *temporal emergence* of new entities, and when tracing their past paths, we see their *historicity*.

To put this in more concrete terms, Pickering presents evolutionary biology as an example. The *entities*, in this case, are biological species that mutate over time in their relations with other species and their environment. Bees and orchids, for instance, have a symbiotic dependence. They both evolve in their relation to each other, assembling into a bee-orchid entity. Darwinian evolution is a simple way to conceptualize the *historicity* of species. But similar couplings can be conceived between animate and inanimate entities. Humans and their societies have evolved in conjunction with the material agency of their environment, “[w]inds, storms, droughts, floods, heat and cold – all of these engage with our bodies as well as with our minds”.³

¹ Andrew, Pickering, “On becoming: Imagination, Metaphysics and the Mangle,” In *Chasing Technoscience*, eds. Don Ihde and Evan Selinger (Indiana University Press, 2003), 97.

² Ibid.

³ Andrew Pickering, *The Mangle of Practice* (The University of Chicago Press, 1995), 6.

Deriving this ontological reading of the world from his analysis of scientific practice, Pickering conceives artifacts as “machinic captures of material agency,”⁴ they are modeled by humans for specific intents, but once they emerge, their material agency co-shapes humans and societies as well. The steam engine, for instance, was crucial in shaping industrial towns and social classes in the 18th century. “[H]uman and material agency are reciprocally and emergently intertwined,”⁵ explains Pickering. However, he rejects the idea of an absolute symmetry or equivalence between the agency of humans and nonhumans. The particularity of human agency takes the form of a *goal-oriented* practice, a projection of intentions into the future. He is careful to clarify that these human goals are not immutable, they become *tuned* when they encounter material agency, which leads to new forms of these goals emerging in time. Another way to conceive this ‘tuning’ is to think of the artifacts’ affordances and how they constrain or allow certain uses despite the users’ predisposed goals. This ‘give and take’, between humans and materials in the dance of agency is a struggle that “takes the form of a *dialectic of resistance and accommodation*.”⁶

It is crucial to land this dance of agency in the sociomaterial environment in which it occurs. Indeed, Pickering has tried recently to address the role of the environment in the dance of agency. He has used the example of the costly efforts that city planners and engineers have made to control the flow of the Mississippi River. One of the biggest rivers in North America, the Mississippi’s natural course originally ran through the now city of New Orleans. Thus, engineering projects have built control structures to steer the flow in a different direction and erected walls around the city to keep it from flooding. But the flow of the Mississippi river is persistent, and the structural work has been damaged time and time again, threatening to overrun New Orleans. Pickering uses this example to illustrate how despite the enormous efforts and persistent goals that a group of engineers or an entire society may have, these goals should be negotiated with the material agency of the environment instead of trying to subdue it⁷. In this example, humans (engineers, the citizens of New Orleans), artifacts (control structures and walls), and the environment (the region where the Mississippi River flows) come together in a spatiotemporal dance of agency.

Reading the world through Pickering’s ‘dance of agency’ helps us conceptualize the *historicity* and *temporal emergence* of assemblages of human and nonhuman entities. It pushes us to consider the stabilities of such assemblages always as temporal phenomena. Lastly, it highlights the *goal-oriented* nature of human agency. To Pickering, there is no general principle that provides a strict causal relation within this dialectic of resistance and accommodation. “The unity (temporary, fragile) of any given assemblage seems to lie in its specifics.”⁸ Thus, the dance of agency is inherently open-ended and unpredictable⁹. This may

⁴ Ibid, 7.

⁵ Ibid, 22.

⁶ Ibid.

⁷ Andrew Pickering, “New ontologies,” In *The Mangle in Practice: Science, Society and Becoming*, eds. Andrew Pickering and Keith Guzik (Duke University Press, 2008).

⁸ Pickering, “On becoming: Imagination, Metaphysics and the Mangle,” 97.

⁹ Pickering, *The Mangle of Practice*, 24.

appear as an obvious drawback to commit to such reading of the world. Pickering acknowledges such proposal may be “offensive to some deeply ingrained patterns of thought”¹⁰ that always look for explanations. Yet, to Pickering, this is not a matter of choice. He finds no “conceptual structures” or “abstract diagrams” that can capture a reductive view of the “workings behind the scenes” of the world. His approach is an attempt to steer us away from theories and draw us back to “the empirical world, the thick of things”¹¹ and analyze the particularities with which humans and nonhuman agents come together open-endedly. The dance of agency is thus not a concept that can help us anticipate the future with models or diagrams. Yet, it can allow us to reflect on the historicity of human-technology assemblages, reminding us that our mapping of the temporarily stabilized structures between human-technology relations should be taken as a frozen picture of a topology of the world that came to be through a particular historicity and that will continue to become and change in time.

3.3 Revisiting Creolization

During the first chapter, I defined creolization as *that continuous process in which foreign technologies, local users, and the sociomaterial environment with unequally distributed power where these coincide all become coshaped in their interrelations, leading to the emergence of a unique technopolitical culture* (page 9). In this section, I want to revisit this concept and explain in further detail its dynamics of *becoming* as a spatiotemporal dance of agency. I will then examine indigenous video making with this fleshed out characterization of creolization, aided by the insights obtained in the two previous chapters.

Bar et al.’s reading of creolization as a sociotechnical process described how those who appropriated a technology that had been introduced from outside their locality were hosting an inner struggle that led them to use such technology in a unique way. Such emphasis was made through an interpretation of Édouard Glissant’s writings on the creolization of language. A pioneer in postcolonial literature, Glissant describes creolization as a process in which the unavoidable influence of a foreign ‘other’ (the *conquistador*) was appropriated by locals, and mutated to result in unique cultural formations. To Glissant, creolization could not be seen as a mere miscegenation of two cultural ‘substances,’ (i.e. the foreign and the native) because the results of these cultural intermingling were complex and unpredictable.¹²

This led Glissant to suggest that to understand creolization one had to look at the process unfolding through time instead of trying to describe that which emerges out of creolization as a new, yet static identity: “We propose neither Being nor its models. We are not prompted solely by the defining of our identities but by their relation to everything possible

¹⁰ Ibid.

¹¹ Casper Bruun Jensen, “Interview with Andrew Pickering,” In *Chasing Technoscience*, eds. Don Ihde and Evan Selinger (Indiana University Press, 2003): 91.

¹² Édouard Glissant, *Poetics of Relation* (The University of Michigan Press, 1990), 95.

as well - the mutual mutations generated by this interplay of relations.”¹³ Whatever identities and practices emerge from these interplays of relations are open-ended, they are always in the process of becoming. Creolization, then, is a temporal process in which mutual mutations occur along an ontology of becoming. Yet, it should be understood as a distinctive and particularly-located phenomenon. Its emergence is deeply political because it occurs amidst asymmetries of power which hinders the achievement of autonomous and self-determined identities of the oppressed. Emphasizing the role of this type of cultural and political conflict when understanding creolization as a historical process unveils why locals approach and appropriate foreign technologies in such particular ways.

The video cameras introduced to the indigenous communities of Southwest Mexico were foreign objects that were initially recognized as material legacies or influences of the ‘other’. Thus, users were faced with an inner predicament. They desired to excise that material form of the foreign ‘other,’ but ultimately appropriated and achieved evolving and unique identities. Thus, the video cameras found their place within this new environment and coupled with indigenous video makers in a dance of agency.

The formation of goals can be recognized as video makers appropriate these foreign artifacts with the specific purpose to amplify the voices of their communities in the political conflict with the Mexican state. These goals were formed also as a response to the INI’s intention to transfer video cameras for indigenous individuals to further *folklorize* their communities. This federal program promoted the recording of cultural expressions such as typical dances, or *fiestas*. Yet, video makers used cameras as political tools. Beyond their functional use, cameras were conceived by indigenous video makers as instruments of defense and creation, comparable to machetes or pickaxes.

The goal set to subvert the functional use of the camera can be identified in concrete examples. The first indigenous video collective in the region, K-Xhon, maintained an adamant attitude of rejecting grants and financing from any organization. They also taped in a “whimsical manner,”¹⁴ avoiding voice-overs or the arrangement of video sequences to form a narrative, both practices they had witnessed in the city. This distinctive relation to the ‘other’ was also translated in Zapotec filmmaker Juan José García’s conception of *comunicación de lucha* (social struggle media), a way of making video that, unlike the non-indigenous video, was uninterested in the visual form or the film contests and committed to represent injustices and ‘crude realities.’¹⁵

All these social goals met the contours of material agency. The video camera’s affordances tune indigenous video makers’ goals and intentions through time. Cameras become embodied by their users, constraining and allowing certain ways of seeing. These perceptions are then subjected to a hermeneutic reading of visual referents that then constitute notions of indigeneity, sovereignty, sustainability, et cetera. Lastly, cameras drive attention themselves, not only in alterity relations where users have to attend to their complex

¹³ Ibid, 89.

¹⁴ Erica Cusi Wortham, *Indigenous Media in Mexico* (Duke University Press: 2013), 220, iBook.

¹⁵ ...de Raíz Luna, “Juan José García,” coordinated by Mardonio Carballo, aired 2013, on Canal 22, <https://youtu.be/Kq0kty1B808>, my translation.

mechanisms and maintain them but also as they are perceived as cultural and political symbols of a historical struggle.

To summarize, video cameras were introduced to the indigenous communities in Southwest Mexico. They were initially received with suspicion as foreign artifacts that represented the ‘other,’ even more so when these artifacts were sponsored by the Mexican state. While the INI’s TMA workshops promoted the video camera’s use to expose folkloric expressions, indigenous users now employ the artifacts to strengthen their struggles for autonomy. Thus, the use of cameras within their localities thrives. The cameras’ affordances continue to coshape how their users conceive notions of indigeneity and communicate their needs and demands. Beyond their functional use, cameras are given a symbolic meaning, they are material representations of a cultural and political struggle.

From the first video collective that emerged during the 1980s to the current use of video cameras by Zapatistas and ever more indigenous communities in the region, video cameras have become instruments of defense and creation, gaining as much value in some communities as other tools used for communal labor, like machetes or pickaxes. Video makers and cameras continuously interrelate in the dance of agency unfolding in Southwest Mexico, leading to the emergence of a unique technopolitical culture in which video making is a cherished way of fighting for indigenous’ autonomy and rights.

3.4 ‘Historicity’ in Human-Technology Relations

Before concluding this thesis, I want to offer some concrete suggestions on how future postphenomenological analyses can situate human-technology relations within the historical processes of becoming they are embedded in. Following these suggestions would not only avoid philosophical inquiries to conform with *ahistorical* ‘subjects,’ detached from the complex and evolving sociomaterial environments that they are a part of. It would also underscore the political implications of technological mediation in contexts where asymmetries of power translate to conditions of oppression and marginalization.

My proposal is to recognize and reflect on three main characteristics that highlight the spatiotemporality of human-technology relations: (a) the path-dependence of humans and artifacts that interrelate in technological mediation, (b) the goal formations in social agency and their further *tuning* by material agency, and (c) the open-endedness of human-technology interactions. Before elaborating on this list, I must situate my suggestions in relation to the available literature.

This is surely not the first attempt to situate phenomenological readings of technology in use within a historical process. Heidegger himself argued that the way in which the world was disclosed to humans in the era of modern technology was a historical phenomenon¹⁶. But as he maintained an essentialist view of ‘Technology’ as an overarching, deterministic phenomenon, he could not have explained how specific concrete human-technology relations

¹⁶ Peter-Paul Verbeek, *What Things Do* (Penn State Press, 2005), 51.

unfold in specific sociomaterial environments through history. A more concrete phenomenological reading of the use of technologies within history can be found in Lissa Roberts' account of laboratory instruments changing the role of the body in the scientific practices of chemists such as Antoine-Laurent Lavoisier towards the closure of the 18th century¹⁷.

Within the postphenomenological tradition, Ihde has employed history to introduce his famous example of Galileo's telescope. Tracing the emergence and increasing accessibility of optical technologies, he situates Galileo's use of the telescope in the "technologically sophisticated lifeworld of the Renaissance."¹⁸ Ihde finds Galileo's use of the telescope as the sedimentation of modern science. He describes his analysis as "a historically sensitive look at the time of Galileo," which shows an "impressive array" of common technologies and available infrastructure that constituted the "common form of life" in which Galileo was immersed. Yet, he ends up arguing that "[t]his array ... is too complex to account immediately for the praxis that becomes concentrated in the birth of science." Thus, he argues he must "turn to a narrower field of analysis" that ultimately leads him to see Galileo's use of telescope as an "embodied vision".¹⁹

These early developments hint at the potential to bridge historical narratives with phenomenological reflections. Ihde's decision to turn to a narrower field of analysis before introducing his categorizations of human-technology relations should be critically reconsidered. Philosophical reflections of human-technology relations are ultimately isolated from their engagement with that complex array that constitutes their evolving sociomaterial environment. That array fades into the background and its influence in the *mutual mutations* with artifacts and technologies is disregarded. Thus, this narrowing down to isolated human-technology relations leads to the dehistoricization and depoliticization of the objects and subjects that become interrelated. As Mediation theory becomes an increasingly popular tool to understand the impact of technology use in society, concrete ways to situate human-technology relations in historical processes are yet to be developed.

3.4.1 Mediated Experiences and Historical Realities

Deriving from classical phenomenological thought, accounts of technological mediation do not aim at making claims of how the world actually *is*, but of how it is experienced by someone. 'Reality,' in postphenomenological discourse, is always "reality as disclosed by human beings,"²⁰ since both the human and the world are constituted only in their interrelation. Postphenomenological analyses then disavow to explain a metaphysical 'reality.' So, where do they fit in a metaphysical reading of the world as a historical dance of agency?

Postphenomenological inquires often begin by narrowing down to questions such as 'how does X technology mediate Y phenomenon?' in which the mediated phenomenon is

¹⁷ Lissa Roberts, "The death of the sensuous chemist: The New Chemistry and the transformation of Sensuous technology," *Studies in History and Philosophy of Science* 26, no. 4 (1995): 503-529.

¹⁸ Don Ihde, *Technology and the Lifeworld* (Indiana University Press, 1990), 58.

¹⁹ Ibid.

²⁰ Verbeek, *What Things Do*, 108.

ultimately experienced by *someone*. Yet, as this mediation translates into new *practices*, technology-user assemblages become engaged with the world through action, entering in negotiations with other phenomena occurring in the periphery. Thus, the claim here is not that the mediated experiences are disclosing the ‘real’ workings of the world for a given user, but that mediation always occurs within a sociomaterial environment that actively engages with the (I – technology) ensemble and mutates along with it. My intention is to zoom out from these close human-technology interactions by adopting a ‘bird-eye’ view perspective to understand how each human-technology assemblage emerges in a wider historical process that takes the shape of a spatiotemporal dance of agency.

Another way of conceiving this *situatedness* of technological mediation is to discuss it in terms of *agency*. At the outset, there seems to be a difference in how ‘agency’ is conceived in Pickering’s dance and the postphenomenological approach. While not directly addressing sociomaterial environments as the historical settings for specific human-technology interactions, the recent analysis on Active Technological Environments by Aydin et al. offers a relevant discussion.²¹ Some of their reflections in the material agency of the environment can be extrapolated to this inquiry.

Aydin et al. identify how in the *dance*, humans and materials are each attributed their own agencies which later engage and interact with each other leading to new practices. Contrastingly, “the postphenomenological approach does not attribute agency to material objects; it rather sees agency as the product of mediated relations between humans and world.” As such, it is conceived as a “hybrid agency” which contains humans and material elements.²² Aydin et al. recognize the limits of this approach when trying to account for the mediating role of “Technological Environments.” These technological forms are so deeply ingrained in the environment and merged with ‘world,’ that they are not directly experienced *per se*. Then, how to explain their agencies from a postphenomenological perspective?

I want to further suggest that the postphenomenological account of agency as only emerging through mediation will still problematic, even when the technology of our inquiry is not a “Technological Environment.” If maintained, this conception of agency fails to take into consideration the network of human and material agencies occurring in the periphery that come to actively engage and interact with the specific human-technology relation of our interest.

However, the hybrid agency of mediation is still valuable for understanding the action that emanates from human-technology relations. It should not be discarded. Rather, it needs to be situated in a broader interplay of agencies. Questions such as ‘How does X technology mediates Y phenomenon?’ can direct our attention on the mediation’s hybrid agency, but they should not disregard how this hybrid becomes engaged with other agencies in the environment. For instance, an initial inquiry such as ‘how do *video cameras* mediate *indigenous struggles for autonomy*?’ would traditionally aim at characterizing the specific form of agency that stems from the close interactions between indigenous video makers and the camera, looking

²¹ Ciano Aydin, Margoth González Woge, and Peter-Paul Verbeek, “Technological Environmentalism: Conceptualizing Technology as a Mediating Milieu,” *Philosophy & Technology* (2018): 1-18.

²² Ibid, 13.

perhaps at how this agency impacts the indigenous communities at a cultural scale. But the agencies of the Mexican state, the material environment of mountain ranges and fields in which these communities exert their video making practices, the infrastructure available, they are all engaged in the spatiotemporal dance of agency that hosts these mediated practices of video making.

3.4.2 The spatiotemporality list

In chapter 2, I showed Ihde's characterization of technological mediation with the diagram I–technology–world and made a remark of the ontological implications of this particular reading. While postphenomenology wants to overcome dualism between subject-object, such a diagram can throw us off. Thus, I offered Verbeek's clarification of how technologies should not be seen as being situated between 'humans' and the 'world.' Rather, humans and the world, 'subject' and 'object' *emerge* from their interrelation. The interrelation *precedes* 'subject' and 'object'. Yet, Verbeek explains that "there is no way to speak about this interrelation without making use of the words "subject" and "object," or "humans" and "world".²³ This explanation seems to beg the question. We can take it as an unfortunate hindrance of language. But if scrutinized further, how can we even conceive an interrelation among entities that do not yet exist? I see this difficulty as, first, exposing the temporal nature of technological mediation: there is an interrelation that *precedes* the *temporal emergence* of entities. We can tackle this problem by embedding postphenomenology's relational ontology within a process of becoming. If we shift from an ontology of *being* to one of *becoming*, we can conceive 'humans' and 'the world' not as entities that can only be grasped after they become interrelated, but as spatiotemporal objects that have followed specific paths through time. As these objects' paths cross and couple in technological mediation, they are further coshaped in relation to each other, and they evolve to become the 'humans' and the 'world' that we currently conceive as *emerging* from technological mediation.

(a) Path-dependence

My first suggestion is then to take into account the historicity of how the human-technology relation comes to be. This will entail a tracing of the spatiotemporal paths that artifacts and humans have followed before they couple in the technological mediation. How far back in time this tracing needs to be must be a decision taken by the person conducting the analysis. This spatiotemporal framing will depend partly on the question, artifact, or context that the analysis is directed to. Acknowledging the path-dependence of human-technology relations extends the commitment within postphenomenology to empirically ground its analyses. It undermines philosophical abstractions of isolated 'humans' and 'artifacts' by critically situating them in social, cultural and political environmental topographies where technological use comes to happen.

²³ Peter-Paul Verbeek, "Don Ihde: The Technological Lifeworld," In *American Philosophy of Technology: The empirical turn*, ed. Hans Achterhuis (Indiana University Press, 2001), 130.

This task can be performed, for instance, by putting together an evolving historical narrative within which specific human-technology relations emerge. In the present work, for instance, I have aimed at building such narrative by looking at indigenous video making as a process of creolization. Technologies were mobilized through time across different regions of the world. They entered the indigenous communities of Southwest Mexico and met indigenous users who were already enmeshed in a political conflict with the Mexican state.

(b) Goal formation

In that ongoing political conflict, it was easier to recognize the formation of highly heterogeneous social and political ‘goals’ of indigenous video makers. The intentions with which video makers approached and used the video cameras was a result of being immersed in a context with unequally distributed power. Conceiving indigenous filmmakers as historical subjects who picked up cameras and used them to subvert the oppression from the Mexican state elucidates how the use of the artifact was a political act.

My second suggestion then is to try and conceive these ‘goals’ as a crucial starting point of human agency in postphenomenological analyses. This could well be achieved by developing further the role of ‘sedimentation’ as a pre-perceptive condition of technology users of the analysis, as suggested in Section 2.5.1. However, these goals should not be seen as immutable. As they encounter material agency, whether from the technology’s affordances or the sociomaterial environment, these goals will be further tuned in time.

In such dialectic of resistance and accommodation, the formation and tuning of goals should also be understood in relation to the distribution of power between social groups and institutions. Just as in the case presented here the goals of camera use were formulated in response to a hegemonic nation-state, goal-setting can unveil the deepest political aspects of human-technology relations.

(c) Open-endedness

Lastly, the results of postphenomenological analyses should be understood as stabilized in a specific spatiotemporal position. The mapping of the structural relations between humans, technology, and the world needs to be presented as a picture of *being*, but it is a picture that will continue to change through time. Analyses may become outdated as the historical settings in which technological mediation occurs continues to evolve. Coming to terms with the fragility of human-technology relations as a result of the open-endedness and unpredictable nature of the dance of agency is perhaps the cost of bringing spatiotemporality onboard the postphenomenological approach. But the benefits of gaining a much deeper understanding of the political impact of the use of technologies are well worth it.

3.5 Conclusion

This chapter aimed at putting the concept of spatiotemporality at the center of the discussion of how video cameras and indigenous users interact in a process of creolization. After outlining Pickering's metaphysical reading of the world as a dance of agency, I revisited the concept of creolization as a particular spatiotemporal phenomenon that unfolds in an ontology of becoming. Aided by a historical account of the political conflict between indigenous communities and the Mexican state, and by a postphenomenological analysis of human-technology relations, both human and material agencies were brought together and their interactions were examined.

I have suggested three key concepts: (a) path-dependence, (b) goal-formation, and (c) open-endedness, that if addressed and examined in our postphenomenological analyses will unveil the role of spatiotemporality in human-technology relations. I believe this is especially useful when these analyses are situated in contexts of unequally distributed power where the use of technologies has deep political implications.

Conclusions

The goal of this thesis has been to examine the influence that video making practices have on the political struggles of indigenous communities in Southwest Mexico. This inquiry was addressed from two different perspectives: using a global history of technology and postphenomenology, which nevertheless ended up interacting and informing each other. Thus, this work can be read as developing a ‘historical-philosophical’ approach that can become especially valuable in contexts with entrenched asymmetries of power where the use of technologies has deep political implications. This last segment of my thesis will bring together, in chronological order, my findings during the development of this thesis.

When I found out indigenous individuals all across the world were producing films about their experiences, I was immediately full of questions. Why would these groups, that want to assert their autonomy and distance themselves from projects towards modernization, appropriate a foreign, sophisticated technology? And how did video cameras end up in those settings in the first place? Delving into the specific case of indigenous video making in Southwest Mexico, I came across Juan José García’s notion of ‘social struggle media,’ and realized video cameras were being used to enact indigenous’ struggles against the hegemonic Mexican state. Thus, my research was directed towards gaining an in-depth understanding of this sociotechnical phenomenon and its implications in a broader political picture.

Adopting David Edgerton’s historical approach of tracing technologies as they travel across space and through time was a useful first step. Erica Cusi Wortham’s ethnographic research that derived from her two-year stay in Oaxaca was the greatest resource I found to follow video cameras as they were transferred from the cities to the indigenous communities in the *Sierras* of Oaxaca and Chiapas. But Edgerton’s approach does more than accounting for the mobilization of technologies. His historical analysis unveils how materials and artifacts mutate across time in relation to the contexts where they are introduced. Focusing on ‘poor’ cities and regions of the world, he argued technologies entering these spaces and being used in different ways became *creole*. Edgerton’s work helped me conceive cameras as mutating in relation to this new context where indigenous communities’ were established. However, his demarcation between ‘rich’ and ‘poor’ technological worlds to explain how an artifact becomes *creole* quickly became problematic. I did not intend to claim that these aren’t accurate descriptions of the settings Edgerton himself examines. But I did identify that characterizing these heterogeneous worlds solely by their amount of wealth could not take us far enough to understand the intricate sociopolitical environment that leads indigenous video makers in Southwest Mexico to approach cameras in the particular way they do.

Bar et al. provided a brilliant way to understand the emergence of creole technologies in terms of the cultural and political struggles in which technologies' users are immersed. They went over the reflections of the creolization of language by postcolonial thinker and poet Édouard Glissant. They interpreted such reflections and extrapolated them to a sociotechnical process in which foreign artifacts are appropriated and used by locals in unique ways. This sociotechnical creolization, which Bar et al. identified as leading to technological innovation, I turned to explore and elaborate as a historical process. The refined concept of creolization that was derived from that enterprise became the backbone of this thesis. It finally helped me understand how indigenous communities, who are fed up with the idea of being assisted by the federal government and continuously reject *mestizo*'s practices and habits, found a way to use a foreign, sophisticated technology and strengthen, rather than weaken, their evolving indigenous identities.

I began the postphenomenological analysis of chapter two to examine how the close interactions between a video maker and his/her camera led to mediated practices in the world. The human-technology relations' analysis showed how cameras mediate vision and allow its users to visually frame and conceive ideas and sentiments. Cameras were also found as complex technologies that often demand attention to themselves, they need maintenance and special cares. These insights could all be identified in the own accounts that indigenous video makers offer from their experiences. Some video makers have asserted they developed an own 'way of seeing' with the camera. They also conceived the artifact as becoming an 'extension of their body.' Both claims suggested an embodied vision. Furthermore, what is framed through the camera is carefully chosen as they aim to visually convey notions of *indigeneity* and *comunalidad*, as it was the case during the recording of panela production in Filoteo Gómez's *Dulce Convivencia*.

But in addition to these insights, the close examination of the video maker-camera relation disclosed just how fragile is that proposal of artifacts achieving *transparency* during technological mediation. Cameras cannot remain transparent as they move along the human-technology continuum of embodiment, hermeneutic, and alterity relations. Furthermore, their visibility is somehow present even while they mediate phenomena of the world. This issue has been signaled by scholars within the postphenomenological tradition and still leaves room for much discussion. My contribution to tackling this issue was to introduce Brian Larkin's argument of the persistent visibility of a technology-in-use as its *poetics*. Thus, I concluded that besides the functional transparency that artifacts achieve while they exert their instrumental role, cameras remain visible as social, cultural, and political symbols. I suggested a hermeneutic reading of an artifact could be done at two levels: focusing on the referents it offers of phenomena in the world, and focusing on its poetics. In this research, this double reading of artifacts provided a wider understanding of how video makers' experiences and practices are shaped not only by the functional aspects of the video camera but also by the artifact's *context*. The camera does not only mediate visions of indigeneity, it also gains a symbolic meaning as a tool of defense and indigenous sovereignty.

By the time the historical and philosophical analyses of the two first chapters had been completed, I found it incredibly hard to conceive them in isolation. Yet, I wanted to offer a structured stream of arguments that could illustrate how these two perspectives inform each other. To achieve this, I identified two key processes that if outlined, would provide a clear account of that historical-philosophical interaction. The first one was how human and nonhuman agency become engaged in indigenous video making. The second was how this interaction of agencies extends through a spatiotemporal dimension. Pickering's ontology of becoming as a dance of agency provided a suitable starting point. The path-dependence of human and nonhuman 'entities,' the goal-formation, and open-endedness of this dance were all conceptualizations that fitted in the practices of indigenous video making quite organically. Thus, I turned one last time to characterize the process of creolization as a specific kind of dance: one that happens when local users appropriate a foreign technology amidst a struggle for self-determination. With this creolizing dance in mind, I offered a last account of how, from their particular historical paths, video makers and cameras encountered each other in a sociomaterial setting hosting a political conflict between indigenous communities and the Mexican state. Then, video makers approached the cameras with the goal to enact their struggles. These goals met the contours of the cameras' material agency and evolved over time.

Creolization as a historical process of becoming was found as embedding technological mediation. Human-technology relations in indigenous video making occur within a broader, active sociomaterial environment, leading to these very relations being creolized. I concluded those three fairly simple concepts with which Pickering had helped me grasp the spatiotemporality in *becoming* (path-dependence, goal-formation, open-endedness) could be much deeply examined in any postphenomenological analysis. Thus my final suggestion was that future philosophical inquiries should elaborate on how these three concepts play a role in the interactions between individuals and the artifacts they use. Surely, that 'spatiotemporality list' I offered is not yet comprehensive. But it can be the starting point to consider how technological mediation is situated in complex historical realities. In short, this work is meant to be taken as the first step towards developing a more thorough historical-postphenomenological approach. Such an approach can be especially valuable when technological use is happening in a heated political environment. I was lucky enough to be highly interested in the case of indigenous video making in Southwest Mexico that could so clearly help me make that point.

Lastly, I want to mention that it was particularly hard to realize I would end up backing Pickering's argument that open-endedness and unpredictability characterize the dance of agency in which we are all immersed in. After the numerous analyses developed throughout this work, I could not help but agree. It seems to me the world is too complex for any of our analyses to grasp the entirety of variables that come into play (or into a dance) and influence the phenomenon that we so eagerly wish to understand. I cannot blame Ihde for turning to 'a narrower field of analysis' when trying to sketch out technological mediation.

Yet, it is by engaging with the complexity of the world and not running away from it or recurring to further abstractions that we get closer to understand what is really going on. Plus, there is something relieving in coming to terms with the unpredictability of the dance of agency. The relief does not come from giving up on understanding the world's intricate workings. It comes from considering that when we find out we have failed at predicting something, or when we try too hard yet cannot understand why things behave in a certain way, it is because there is something else in that complex dance that is exerting an influence and that we are not taking into account. The relief is perhaps the thought that we can always keep tracing those threads further, we can keep looking deeper, at one more variable, from one more angle, and those delightful *aha!* moments will eventually arise. I would never advocate for scholars to give in to the unpredictability of the dance agency, call it a day, and spend the rest of their days retired in the Fiji Islands. There is still plenty to discover in 'the thick of things'. ♦

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