

Resonating with Nature: Mexican Electronic Artists' Tribute to Pre-Columbian Heritage

Cynthia P. Villagomez Oviedo

Guanajuato University
Guanajuato, Mexico
oviedo@ugto.mx

Abstract

We delve into the social circumstances that have influenced contemporary electronic art, the rejection of foreign stereotypes, and how the involvement of culture has gained importance. Mexican electronic artists have drawn upon pre-Columbian Mexican cultures as a means to communicate environmental and social concerns. These cultures held a profound respect for the natural environment, prompting reflection on art and its vast potential to generate insights into pressing social issues.

Keywords

Electronic Art, Emotions, Pre-Hispanic Mexico, Indigenous Cosmogony, Environment.

Introduction

The electronic works of art in Mexico have made use of Mexican indigenous cosmology, either because the artist themselves belongs to an indigenous community or because their work is aligned with specific ethnic groups. More than 500 years after the Spanish colonization, 68 indigenous groups have survived in our country, showcasing their resilience and millennia-old wisdom through their harmonious relationship with the environment, the preservation of many of their beliefs, and their customs. This article addresses, on one hand, the characteristics of electronic art as a branch of contemporary art, and four works by Mexican electronic artists, most of which are created by female artists who belong to indigenous communities or identify with them. Some of these works are interactive, others are created collectively with indigenous groups, and some take a critical stance on environmental issues and the abuse of natural resources. The article also analyzes how national identity is expressed through the elicitation of emotions among the audience, artistic works, and ancestral cultures, establishing strong connections that enable the transmission of the messages the artist wishes to convey.

Contemporary and Electronic Art

Furthermore, in the present day, the use of technology in art has become an increasingly common form of artistic expression in Mexico. This is the case even though technologically more advanced countries may have more exhibition spaces due to their greater infrastructure dedicated to art, science,

and technology. Mexican artists have found ways to create independently and sometimes with subsidies. They have explored creation using obsolete technologies they've constructed themselves and have acquired knowledge through both in-person and remote scientific communities. It is emphasized that artists create with what is available to them, and the originality of ideas is remarkable, whether one works in a high-tech laboratory or sources resources from a technological waste dump. [1].

According to Dr. Pau Alsina, it can be stated that electronic art involves, on the one hand, those forms of communication and information that develop thanks to electronic and digital technologies, and on the other hand, art created using new media characterized by interactivity, computation, and connectivity [2]. In the future, other media will emerge that will redefine the characteristics of the field of electronic art, which belongs to contemporary art and, therefore, is not exempt from its evolution.

However, electronic art is a branch of contemporary art, meaning it falls under the umbrella concept that encompasses various other forms of art. Therefore, it is not exempt from certain considerations, such as the historical record of the evolution of art being primarily focused on European and later American art. Authors like Terry Smith and Cuauhtémoc Medina have reflected on this, pointing out the need to rebalance the power dynamics within the art field, where Western dominance has prevailed. These authors suggest that it is through the development of art theory and criticism from the periphery - meaning from regions and minorities that have not been traditionally considered - that intervention in the heart of contemporary culture becomes possible, allowing for the reclamation of the field in our times. In terms of artistic works, these same authors mention that contemporary art has moved away from the aesthetic alienation of foreign models by integrating art within culture. This integration enables the emergence of art shaped by local idiosyncrasies [3]. The artistic developments addressed in this article fall within the category of art that integrates local culture.

Apart from the points mentioned earlier, it's important to acknowledge Terry Smith's perspective on external influences affecting contemporary art. These forces include: Early globalization, driven by economic factors rather than free trade, and its impact on cultural distinctions. Global inequalities, with a desire for dominance by states and the corresponding quest for liberation by oppressed groups (this is reflected in issues like migration, poverty, and wealth

concentration). And the global information space, marked by a common visual language, leading to the emergence of digital culture and the exploration of various digital art forms and technologies. [4].

Ancient Cultures in Mexican Electronic Art

Within the previously described framework of electronic art, this research places special emphasis on ancient cultures and their role in the creative processes of electronic artists. It is inferred that there is a relationship between contemporary art and its context. According to Terry Smith [5], contemporary art takes into account social interactions and the social context for its production. In other words, it draws from human relationships rather than developing solely in a symbolic, independent, and private space, as was characteristic of modern art. This will become evident in the artistic works analyzed in this article.

Furthermore, it is possible to observe that the incorporation of indigenous knowledge and cosmology into art serves various purposes. One of these is to reinforce artistic statements or discourses that appeal to the respect for the environment held by indigenous peoples. This is evident in artistic works addressing environmental themes that establish connections between indigenous knowledge and the current context. There are also works that seek to raise visibility for indigenous cultures that continue to exist to this day, with the aim of integrating them into the contemporary social landscape and granting them the same rights as the rest of the population.

Regarding how the cultures we analyze in this research, it is noteworthy that their perspectives have led them to hold deep respect for animals, plants, and even everyday objects. They consider their habitat as important as human beings themselves. Everything that surrounded them was believed to possess life. In some way or another, everything had a soul or spirit.

However, as mentioned earlier, the embrace of local contexts is a characteristic of contemporary art [6]. It was in the mid-1990s when Mexican electronic artists began to develop artistic works focused on ancestral cultures. Some did so because they belonged to indigenous groups, while others were driven by their conception of and respect for nature, which these cultures profess. Mexican electronic artists have dedicated a significant portion of their artistic production to environmental themes [7]. This is why they have found a source of resources and inspiration in the cultures of pre-Hispanic Mexico.

In the present day, some indigenous groups have withstood the test of time by preserving their territories and customs. Their culture and traditions have endured through the centuries with adaptations and changes. This resilience is exemplified by groups like the Nahuas and Otomies in central Mexico, the Mayas in the south, and the Wixarikas in the central-west, among many others. Their survival is a testament to their resilience, especially during critical periods in history, such as the Spanish Conquest of Mexico in 1521, which aimed to exterminate indigenous groups that resisted,

and the Mexican War of Independence from Spanish colonial rule, to name a few.

In this way, the works of Mexican electronic artists demonstrate a profound respect for indigenous communities, both due to their commitment to environmental preservation and their recognition of being an integral part of the roots of contemporary Mexico.

The role of Cultural Identity and Emotions

Currently, one of the factors that unites the population in Mexico is cultural heritage. Despite the discrimination faced by indigenous peoples due to inequality and lack of opportunities, cultural roots are an intrinsic part of the Mexican people's identity. They take pride in the advancements of some of their civilizations, such as the Nahuas and Maya, among others. Because of this, the preservation and recovery of the heritage of ancestral cultures evoke strong opinions, especially when historical heritage is taken out of the country, when archaeological sites are not respected, or when indigenous customs and traditions are not honored.

Furthermore, in the face of the serious global environmental crisis, the lack of effective public policies, and a lack of citizen awareness, artists who use technology in Mexico have taken it upon themselves to create artistic developments that link the ancestral knowledge of pre-Hispanic cultures with environmental issues. They do this by making a call from cultural aspects that shape the national identity. Therefore, the processes of artistic creation draw on factors such as ancestral cultures, which provide identity elements to the works and, as a result, evoke emotions in those who engage with them.

Linked to the above, according to studies conducted for this research, evoking autobiographical memories is one of the most effective ways to establish connections between a work of electronic art and the emotions of the participant. These types of works, often referred to as developments due to their complexity, usually require active participation from the audience for the artwork to unfold (clicking, touching, speaking, moving, pulling, etc.). In technological art, the audience determines the artistic work, in other words, they complete it. Consequently, a work can have various appearances and can induce various emotions in people who interact with it.

In this regard, the role of emotion induction is fundamental for effective communication processes. According to researchers Fakhrhosseini and Myoungsoon [8]: imagination, movies, sound, music, images, certain passages of reading and writing, bodily experiences, virtual reality, feedback, self-referential statements, social interaction, physiological manipulations, motivated performance tasks, and combined techniques are ways to induce different emotions. The same authors agree that autobiographical memory is one of the most powerful tools for eliciting emotions. Emotions undoubtedly can lead to reflection and awareness about the content of various messages because they bring forth past events in our minds, making it more likely that stimuli and information received will endure in memory.

While indigenous thought itself is not part of the majority of the audience's autobiographical memories, except for Mexicans who belong to or are closely associated with indigenous groups currently inhabiting the country, it's worth noting that due to the size of the population and its geographical distribution, interaction with different indigenous groups and the *mestizo* population is very common in Mexico. It can be inferred that when a cultural and identity connection is established between the artistic work and the audience, emotions are elicited. Therefore, if emotions are involved in appreciating an artistic work, the likelihood that the message of the work will persist in the participant's mind is high, as has been the case in traditional art, particularly in painting, sculpture, and engraving. This underscores the importance of incorporating local and identity-related factors in the creative processes.

In line with the above, artists who are direct descendants of indigenous groups or who incorporate ancestral knowledge into their artistic work have the opportunity to create emotional connections with the audience, especially if they integrate local cultural elements. In this way, there is a high likelihood of touching the audience's emotional chords and contributing to the message's lasting impact. Regarding this, electronic artist Iván Abreu comments that his goal is for people to preserve the artistic piece and the social or political aspects he wishes to highlight as an artist in their memory, thereby generating long-term reflection [9].

Certainly, the above is not an absolute requirement for successfully conveying messages in all cases or for all technological artistic developments to connect effectively with the audience. However, it represents an important methodological reference that can be used by artists who work with technology and have a genuine interest in ancestral cultures.

The Wixarika culture in the artwork *Tsinamekuta*

In relation to artistic work within Mexican electronic art linked to ancestral cultures, several examples of Mexican electronic art with an interest in specific indigenous groups were found in the course of observations and interviews conducted for this research. Of particular interest was the retrospective exhibition *To Gaze with our Mountain Eyes* (exhibited in the Museo Arte e Historia de Guanajuato March-June 2023) by the artist Marcela Armas (Durango, 1976), as it serves as a clear example of how artworks can influence the behavior of attendees at an electronic art exhibition and explore indigenous cosmogony. The exhibition in question consisted of 16 works by the Mexican artist, showcasing the artist's central theme, which is the environment, as well as various forms of pollution.

In this exhibition, a particular focus of the current research was "Tsinamekuta" (2016-2021), an interpretation and ritual rewriting of the magnetic field of a mineral sample. This piece revisits the connection between the ancestral culture of the Wixaritari, the sacred, and the devastation of the environment—primarily caused by foreign mining companies in Mexico. In terms of artistic development, the artist takes a stance against extractivism (the exploitation of large volumes of natural resources), which is exemplified in the

work through the situation on Cerro del Fraile, a mountain located in the Mexican state of San Luis Potosí. For 150 years, a mining company has exploited this copper and pyrrhotite-rich mountain. Cerro del Fraile is an ancient ceremonial center for the Wixaritari indigenous people, known to them as Tsinamekuta or the house of rain in the Wirikuta language. To this day, they continue to make pilgrimages and perform rituals in the region, showing ancestral respect for the mountain. In contrast, the mining companies have exploited the mountain with no regard for its significance. [10].

The Wixarika or Huichol culture inhabits the states of Jalisco, Nayarit and in Zacatecas and Durango. The mythology of the Wixarika people includes various narratives that explain how the gods emerged from the sea and journeyed to the eastern mountains, where they founded their towns. By the 16th century, their territory extended further, and the process of evangelization in these communities began after 1722. Around 1850, the evangelizers completed the construction of Catholic temples and destroyed their main *callihuey* or pre-Hispanic ceremonial centers. [11]

As a result of these historical influences, the authority of the Wixarika people is a combination of their pre-Hispanic organization and the system imposed by missionaries. It is led by a Council of Elders (*kawiterutsixi*), consisting of prominent individuals, often shamans—individuals with supernatural powers.

Regarding their religion, which helps in understanding Marcela Armas's artwork, a key aspect is the belief in an association between corn, deer, and peyote (cactus plant whose ingestion produces hallucinogenic and narcotic effects). Corn and deer represent vital sustenance, while peyote is seen as a means to transcend this world and establish communication with the gods, who are considered ancestors. Therefore, mythology holds a central place in the life of the Wixarika culture.

Through the mythical narratives uttered by the singer during ceremonies, a dialogue is established with the gods, and what transpired in sacred time is reenacted. [...] Their songs establish a model of social norms to follow, including various ritual responsibilities and the symbolic explanation of natural phenomena and everything that occurs in the earthly realm. [12].

The aforementioned is intimately connected to the work *Tsinamekuta* because it incorporates elements of Wixarika culture, such as their cosmogony and their way of interpreting the surrounding reality through songs and ceremonial rituals.

Over the course of five years, artist Marcela Armas engaged in dialogues with the Wixarika community, during which she developed the artistic project *Tsinamekuta*, comprised of several elements: *Cromagnetometer*: An instrument that reads the magnetic field and an analogous instrument for listening to the same field. These instruments allow the magnetic emanations from pyrrhotite to be expressed; *Beadork*: A three-dimensional map of the magnetic field of pyrrhotite, made with plaster and colorful beads using the traditional Wixarika artisanal technique; *Digital*

Photographic Prints; Pen and Watercolor Drawings; HD Video: A 13:38-minute HD video recording of a Wixárika ceremony, featuring the artist and the activation of an electronic device interpreting an acoustic instrument based on the magnetic field reading of pyrrhotite [13].

These elements come together to create the multi-dimensional artistic project *Tsinamekuta*.



Fig. 1. Marcela Armas, *Tsinamekuta* (2016-2021), HD video recording of a ceremonial event with Wixárika community. ©Marcela Armas.

In an interview conducted for this research with one of the exhibition hall custodians at MAHG [14], regarding the exhibition attendees, she commented that people left with positive remarks because, as she put it, "...people like it when the environment is cared for." Specifically, in the room where the artwork *Tsinamekuta* was located, she noted about the audience: "...as soon as they enter, they calm down, they become tranquil." She also mentioned that in the previous rooms, visitors walked with a steady or sometimes slower pace. However, she observed that when they entered the room with the *Tsinamekuta* artwork, they stopped to observe more closely.

The above observation is attributed to the dim lighting in the room with black walls, several drawings and photographs on the walls, a beadwork representing the magnetic field of pyrrhotite, two instruments on the floor, and in the background, the audio of the sonorous reading of pyrrhotite's magnetism and the video of the ceremony conducted by the Wixarika family in collaboration with the artist played. A significant part of the video featured a captivating, almost hypnotic ritual chant. Marcela Armas commented on this setup, mentioning that they designed an exclusive space for the entire artwork due to its theme, wanting to create an intimate space that fostered proximity with the exhibited objects and instruments. This setup also allowed the audience to sit within the room and watch the complete video. The artist believed that the exhibition design was appropriate because it enabled the audience, upon entering the room, to transition into a more contemplative state of mind [15]. Furthermore, the enactment of a sacred ritual in a large-format video projection carries a strong aesthetic and emotional impact.

The Mayan culture in the artwork *Yuca_Tech made by hand*

The Mayan culture was one of the most advanced in pre-Columbian Mexico for its time, thanks to its various

achievements in technology and science, among others. As stated, "they invented the only complete writing system in pre-Columbian America and developed their own knowledge in artistic, architectural, mathematical, astronomical, and ecological matters. They are also credited with the invention of zero" [16]. The Maya people constructed civic and ceremonial centers around which they built semi-dispersed dwellings. It is believed that these centers gradually disappeared due to conflicts among lineages, as in, conflicts among different social classes or hierarchies [17].

The Spaniards first encountered Yucatán in 1517 but didn't fully conquer it until 1546. However, due to their mistreatment, abuse, and oppression, they triggered various Mayan uprisings that spanned over a hundred years. The abuse persisted throughout the colonial period, later compounded by land dispossession, which further destabilized Mayan communities and ultimately led to the well-known Caste War in 1847. This was a significant social movement that had far-reaching impacts on political-territorial, social, economic, and cultural aspects, including the organization of traditional community authorities [18]. Regarding their worldview or cosmovisión, it should be noted that...

Their worldview is closely intertwined with the cultivation of maize. As such, there are several representations and rituals linked to this activity. These rituals include: Petitions to Kanan K'aax, the guardian of the forests, to clear the land for planting. Offerings to the guardians of the wind, fire, and earth before burning the fallen weeds. Requests for forgiveness from the owner of wild animals for any killed during the burn. Ceremonies to Yum K'aax, seeking protection for the cornfield from animal damage. The cha'a Chak ceremony, calling for rain. [19].

In the present day, as in other indigenous communities, the descendants of the ancient Maya in Yucatán engage in collective work, which strengthens social bonds within the community. This collective work may involve preparing food for patron saint festivals, dances, regional fairs, or participating in cultural projects, such as the one initiated by the artist Amor Muñoz in the community of Sisal, Yucatán. Additionally, the Maya community traditionally crafts various products, including stone carvings, as their ancestors did, and items made from natural fibers like cotton blouses, hammock weaving, jipi palm hats, hipiles, embroidered bags, and more [20].

Electronic artist Amor Muñoz saw this as an opportunity to create a project that combined Maya craft traditions, solar technology, and solutions to various community needs. This led to the artistic Project *Yuca_Tech made by hand*, (2014-2019). It's worth mentioning that in an interview for this research [21], the artist mentioned that establishing contact with a community to work with them took longer than expected due to the indigenous Maya people's initial reluctance to trust *mestizo* or half-blood people. She attributed this to previous experiences where various professionals had approached them and exploited their knowledge for personal gain, causing harm to the communities.

Artist Amor Muñoz (Mexico City, 1979) works with textiles, drawing, sound, and experimental electronics. In *Yuca_Tech made by hand*, the artist collaborated with a community of indigenous Maya women, connecting their traditional textile work with henequen (a sacred plant in their culture), the creation of technological devices with low and high-tech solar cells, and the *do-it-yourself* culture.

The Maya women who participated in the workshop offered by the artist found inspiration in their own needs, resulting in the creation of various artistic-technological pieces. These included photovoltaic textile artifacts and some light-based pieces using technological materials and henequen fibers, all crafted through their traditional artisanal processes [22].

In this workshop, the artist collaborated with eight women from the Maya Workshop. In an interview for this research [23], she mentioned that the Maya women displayed a tremendous capacity for wonder, which facilitated the teaching and learning process. She stated, "They saw conductive threads as something almost magical, and they were very enthusiastic, bringing things to the workshop to transform them. The acquisition of knowledge was also easy for them." The artist noted that they worked in the workshop twice a week for four to five hours over six months. During this time, they created final pieces that operated on solar energy, as well as pieces designed to improve the community's daily life.

Throughout this process, the women learned to fabricate their own technology, and, according to the artist, they formed an emotional bond with the technological objects. Some of the objects they created included solar textile panels and everyday items with LED lights powered by solar energy, such as sandals, hats, solar bags for electricity storage, and more.



Fig. 2. Amor Muñoz, *Yuca_tech* (2014-2019). Henequen textile with photovoltaic cells. ©Amor Muñoz.

The Otomi culture in the artwork *Huipil Defense*

Electronic artist Daris Rubio (Jacala de Ledezma, Hgo., 1990) is a descendant of the Otomí culture. Her grandparents were Otomí from the state of Hidalgo. Her artwork *Huipil Defense* (2015) resonates with her cultural background. In this context, studying the background of artists, in this case, Daris Rubio, is interesting because it shapes their areas of interest and influences their artistic creative processes [24].

Regarding the artist's context, the artistic qualities of the Otomí people are evident in their textile work, embroidery, and the poetry of their ancestors. It is precisely in the pre-Columbian Otomí poetry that the scholar of Mexican indigenous peoples, Fernando Benítez, noted, "There is great humility in these verses, a serene acceptance that constitutes the essential traits of the Otomí character. Their existential philosophy is expressed through a mysterious and delicate laconism" [25]. For example. —In the dewdrop, the sun shines: the dewdrop dries up. In my eyes, mine, you shine: I, I live. [26].

According to Fernando Benítez, in ancient times, the Otomí people inhabited inhospitable and desert areas where only agaves, cacti, and thorny shrubs grew. At that time, neither their neighboring Toltecs nor Chichimecs desired their lands, which likely contributed to their survival. The Otomí people thrived amidst high cultures and hostile neighbors. On the edge of the ancient desert where they resided, there were ruins of the city of Tula, where the civilizing deity Quetzalcóatl dwelled. Tula was one of the most important centers of Toltec culture and, according to Benítez, "the deepest enigma of Mesoamerican history" [27].

On the other hand, the Aztecs were a dominant people who harassed, ridiculed, and forced the Otomí people to pay tribute. For this reason, when the Spanish arrived to conquer Mexico in 1521, some Otomí people joined them to fight against Aztec oppression. However, others migrated to the mountains. Paradoxically, those whom the Aztecs deemed incapable and unprepared bore witness to the "splendor and downfall of Teotihuacán, Tula, and the Mexican empire... of illustrious civilizations." The Otomí people, who had been enslaved by the victors, including the Spanish, survived by clinging to their language, their ethnic characteristics, and their desert [28]. This demonstrates the resilience that characterizes the Otomí people to this day.

Additionally, today, the Otomí indigenous people are primarily located in the states of Veracruz, Hidalgo, and the State of Mexico. They maintain strong pre-Hispanic and Catholic beliefs in their religious practices, including the veneration of the deceased, dreams, and legends. [29].

As for the work of the artist Daris Rubio, she currently resides in her hometown of La Palma, municipality of Jacala de Ledezma, in the state of Hidalgo. La Palma is a community with approximately six hundred residents nestled in the Sierra Madre Oriental. It retains the tranquility provided by the hills, the sound of springs where water originates, and the flow of the Amajac River. Her work shares with the public the experience of a life free from the hustle and bustle of large cities, as seen in *Huipil Defense*.

Regarding her artwork *Huipil Defense*, in an interview conducted for this research [30], the artist mentioned that she returned to La Palma after studying arts in Mexico City and experiencing a kidnapping. Following this traumatic event and as a form of relaxation therapy, the artist decided to revisit the traditional embroidery techniques taught to her by her mother and grandmother.

The artwork *Huipil Defense* by Daris Rubio is composed of a system mounted on a traditional indigenous garment

called a "huipil" (handmade, each community has its own embroidery techniques and motifs). This system is activated by the wearer's stress signals, serving as a warning to the user to relax. When a sensor inside the huipil detects a high heart rate, it triggers audio and visual signals.

For Daris Rubio, it's important that traditions, customs, and practices are preserved, which is why her work reflects the Otomi cosmogony, their language, their land, and everything that binds them as a people. She also believes that there should be a commitment on the part of those who wear huipiles or any indigenous clothing to know which community they belong to, what it symbolizes, how and when it's worn. This is to prevent cultural appropriation, which, in the words of the artist, "...causes a lot of harm. It erases the meaning that all of this has for us" [31].

An important characteristic of the artist's work is her preference for creating projects in collaboration and within the community. She frequently shares her project progress and prototypes with other community members, who are often amazed by her technological and artistic applications [32]. Daris Rubio builds community creative processes by working with indigenous women, engineers, and scientists. Together, they create robots, electronic garments, bioreactors, and videos that delve into various social and environmental issues in her locality.

In the case of *Huipil Defense*, she incorporates traditional huipils and electronic devices, thus connecting the customs and traditions of the Otomi culture to Mexican electronic art. The Otomi people have a long-standing tradition of embroidering and wearing these garments, both as a cultural practice and as a means of communication. In the case of *Huipil Defense*, it involves the communication of the garment with its wearer.



Fig. 3. Daris Rubio, *Huipil Defense* (2015). ©Daris Rubio.

The Nahua culture in the artwork *Quetzalcoatl*

On the other hand, the artistic work of Fernando Palma (Milpa Alta, 1957) fuses the cosmogony of indigenous people, specifically between the Nahuatl culture and technology. In addition to the connection with Nahuatl thought and artistic experience, his work carries a remembrance of the cultural roots of ancient Mexico, as well as a commemoration of Pre-Columbian Mexico in the present, celebrating its traditions and identity.

According to an interview conducted with the artist Fernando Palma for this research [33], his family roots can be traced to the Nahuatl people in the State of Mexico, who are

part of the larger Nahuatl family with an ancient history dating back approximately 45 to 47 centuries [34].

Regarding the origins of the Nahuatl culture, it is believed that they were originally part of the Chichimec hunter-gatherer families who chose to settle in the southern region of present-day Mexico City between the 12th and 13th centuries. They became tributaries to the Mexica people, providing goods and labor, and later, they were subjected to the rule of the Spanish Crown during the conquest of Mexico. During this period, Milpa Alta, where the Nahuatl culture has a strong presence, was largely self-governed by the indigenous people, and they had relatively limited contact with the Spanish colonizers [35].

The Nahuatl culture had a rich and complex system of beliefs and practices, with a strong emphasis on deities, rituals, and cosmology.

There exists a mystical and inseparable relationship with their land, a geographic space considered as an exclusive area for vital and cultural development. In the region, there are caves and mountains that are regarded as divine by the inhabitants. The elders visit these sacred sites to pray for the well-being of their community, family, or themselves. [36].

This connection to the land and these sacred natural features reflects the deep spiritual and cultural ties of the Nahuatl people to their environment.

The Nahuatl people are known for their festive spirit, collectively organizing around seven hundred celebrations each year. Most of these festivities are dedicated to saints, maize, and some involve pilgrimages. All these celebrations demonstrate a collective organization, with tasks and responsibilities distributed among the community members, reaffirming their group identity.

It's worth noting that many of these celebrations have their origins in pre-Hispanic practices, and they often revolve around the agricultural calendar, including rituals for requesting rain, blessing seeds, harvesting, and more. There are also celebrations associated with the life cycle, from the first *temazcal* bath of a newborn to the Day of the Dead.

Intriguingly, the Nahuatl people hold beliefs related to diseases that reflect their magical thinking. For instance, one of the most dangerous illnesses for the Nahuas is the loss of the soul. To cure this, a shaman calls out loudly to summon the soul back to its place [37]. These beliefs and practices highlight the rich cultural and spiritual heritage of the Nahuatl people.

Fernando Palma's work has been inspired by the imagery and cosmogony of the Nahuatl people. His piece titled *Quetzalcóatl* (2016) is a mixed-media installation representing the feathered serpent deity, Quetzalcóatl. The artwork is a motorized sculpture made from cardboard, a worker's boot, heirloom corn cobs, and dyed leaves harvested from the lands of the artist, in Milpa Alta.

This artwork reflects his deep connection to the Nahuatl culture and their reverence for nature and their traditional beliefs. The use of materials from his own land further emphasizes the link between his art and the environment, as

well as the cultural and spiritual significance of Quetzalcóatl in Nahuatl cosmogony.

In this artwork, the artist highlights the fact that Mexico currently imports half of the maize it consumes from the United States, while traditional Mexican heirloom corn is becoming a threatened rarity due to genetically modified corn. The erratic movements of the severed body of the serpent in the sculpture symbolize the enormous amounts of energy wasted by the disorderly society in which we live.

Fernando Palma's *Quetzalcóatl* serves as a commentary on various pressing issues, including the dependence on imported food, the potential loss of traditional agriculture and biodiversity due to genetically modified crops, and the unsustainable use of energy in modern society. It's a powerful and thought-provoking piece that reflects on both environmental and cultural concerns.



Fig. 4. *Quetzalcóatl* (2016), Fernando Palma Rodríguez. ©Fernando Palma.

Conclusions

A review has been conducted of the realm of contemporary art, as well as electronic art, which in Mexico is often focused on local cultures. Additionally, relevant aspects of ancient Mexican cultures and their connection to technology-based art have been mentioned. We have then gone on to analyze several works of Mexican electronic art and their ties to ancestral roots. Briefly, the importance of understanding emotions for effective communication of messages conveyed in electronic art has also been emphasized.

A brief overview has been provided of the economic, political, and social circumstances that have influenced contemporary art, including the rejection of foreign stereotypes and the growing importance of local culture in art. These factors illustrate its use as a resource in the creation of artworks that respond to local needs. With this reflection in mind, the present research was directed towards the search for Mexican electronic art that aligns with these principles. The research identified various artistic proposals that draw from pre-Columbian Mexican cultures as a means to communicate environmental and social concerns.

Therefore, establishing and showcasing the connections between art utilizing technology in recent decades and the significance of pre-Columbian Mexican cultures, as well as the representation of national identity in electronic art, has been an integral part of this research.

Furthermore, the richness of the national culture, encompassing a wide diversity of indigenous cultures, has allowed electronic artists to approach their creative processes from the various perspectives that their cultures have provided.

On one hand, there are works that draw from the ancient Mexicans' respect for nature, emphasizing the importance of plants like maize or henequen as foundational elements in cultures such as the Nahua or Maya. This includes the traditional Otomí *huipil* garment as a defense against adverse environments and the values of respect for the environment found in the Wixarika and other ancestral Mexican peoples. The artworks and artistic developments discussed here are evidence of the countless possibilities within indigenous cosmology and its relationship with environmental aspects as inexhaustible sources of creativity and as a means of subsistence in the face of climate emergencies. Both serve as viable ways to establish emotional connections between the artist and the audience of the artworks.

It's clear that in pre-Columbian Mexico and even within the indigenous cultures that have persisted to this day, there was a deep respect and reverence for the natural environment. For these groups, objects, animals, plants, celestial bodies, and humans coexisted with equal significance and in harmony. If this mindset had been carried forward to the present day, it might have helped mitigate to some extent the environmental catastrophe facing us at both the national and global levels.

Undoubtedly, it is encouraging and commendable to witness the efforts of electronic artists to promote these ancestral principles of life. They seek to convey a message of preserving indigenous traditions and the care and conservation of the environment through elements that contribute to the identity of Mexicans. These efforts not only celebrate and pay homage to indigenous cultures but also advocate for a more sustainable and environmentally conscious society.

Reflection on diverse ways of thinking is necessary, and it's valid to contribute to raising awareness about significant collective issues through art, such as the preservation of the cultures of the indigenous peoples of these lands and the environment, as the artists analyzed in this research do.

New lines of research and future reflections will be possible based on the present text, such as the importance of electronic media/devices in the mentioned artworks, as well as the emotional connections established between the artist and the audience, and the specific culture and philosophy that underlie the profound respect for nature among Mexican indigenous peoples.

Finally, the ancient Mexicans believed in eras or "suns," where a new era brought a fresh beginning with new gods, essentially a new humanity [38]. Perhaps this could be the start of that moment, and we may be on the cusp of a time of change, a return to our roots, and a heightened social awareness about the essential balance that must prevail on the planet. For within this balance lies the existence of all living beings and the future generations to come.

Author Biography

Cynthia Villagomez is a professor and researcher at Guanajuato University, she is the author of nine books, several book chapters, and articles about Electronic Art, Design, and Creation. Her Ph.D. thesis on Mexican Digital Art was awarded by Universidad Politecnica de Valencia, Spain. She has been a member of the Mexican National Research System of CONAHCYT since 2017. She is currently pursuing a second doctorate in aesthetic theories.

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