Original Article

An Antropofagia approach to AI and creativity: Lessons from Latin America to rethink collectivity, process and meaning in creative value

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Abstract
This paper provides a novel Latin American rooted 'Antropofagia' approach to creativity amid debates about the implications of creative work and image-generating Artificial Intelligence (AI). The article draws from this Indigenous cultural movement of symbolically cannibalizing colonial influences—absorbing them and turning them into something reflective of local communities' own identity and heritage. Our ethnographic fieldwork involving 18 Ecuadorean artists examined their perspectives about ownership, value, and creativity and the potential role of image-generating AI technologies in their creative process. Findings reveal three tensions along the lines of collectivity/individuality, process/product, and meaning/novelty. Eight perspectives inform our Antropofagia framework to approach AI and creativity: obfuscation, recognition, traditionalization, distinction, rejection, complementarity, resignation, and apathy. Our proposed Antropofagic technologies decenter normative views around creative extraction/exploitation by

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providing situated, historical, and applied guidelines to promote agency among artists and enable the local to inform the global, in this case emerging from the Ecuadorean cultural space.

Keywords
creativity, artificial intelligence, Latin America, decolonial, art, value

Introduction

Research and development of groundbreaking technologies have traditionally excluded the Majority World (Arora, 2019b). This is the case of generative Artificial Intelligence (AI) tools and their role in revolutionizing contemporary creative endeavors. The debates about image-generating AI have foregrounded normative framings and lines of questioning of AI and art, such as AI-generated art as 'real' art (Mazzone and Elgammal, 2019), issues of creative ownership in the face of new technologies (Eshraghian, 2020), individual authorship credit for AI-generated art (Epstein et al., 2020), and the risks of image-generating AI for artists (Jiang et al., 2023), as well as the challenges to maintaining human authenticity in the creative industries (Amankwah-Amoah et al., 2024), and the exploration of generative AI as a tool for creativity (Ivcevic and Grandinetti, 2024).

While across the board, artists are at risk of having their work appropriated and used by Generative AI technologies (Arte es Ética, 2023; Jiang et al., 2023), there are differences in terms of legacies and perspectives related to creativity and value that emerge when exploring Majority World artistic communities. These include collective perspectives of creativity among Indigenous groups (Calambás, 2014), piracy cultures (Castells and Cardoso, 2012) and Latin American art movements such as Antropofagia, which argues that to reach a true Indigenous artistic identity, it is necessary to absorb/consume/eat foreign culture and "transform it into a totem" (de Andrade, 1995: 68). Totem here refers to the process of taking in foreign cultural aspects, breaking them down, and integrating them into a new, collective identity—similar to how totems represent and unify diverse cultural beliefs or historical narratives in Indigenous traditions. In Antropofagia, the "totem" becomes a symbol of strength and identity that embodies both the influences it has consumed and the transformed essence of the culture that produced it.

In this paper, we propose the Antropofagia approach, a novel decolonial lens to creativity in a traditionally understudied region of the world to reflect, understand, and learn from the perspective of those who are systematically neglected in imagining AI tools. The goal is to assess aspects of creativity and value that emerge from underrepresented communities of artists to contribute to the current discussions about AI and creativity. Through an anthropological exploration of artists' communities in Ecuador who are affected by AI but in many cases are unaware of these technologies, we provide insights to help build more responsible and equitable AI designs and policies. Indigenous creative approaches here refer to the intended goal of Indigenous artistic practice as a means to affirm collective identities while ensuring their continuity and survival across time (Florescano, 2000). In relation to specific generative AI technologies, we will use the

term image-generating AI and generative AI interchangeably to refer to the different types of systems that exist in the market and are available for general use including text-to-image and image-to-image tools in line with Jiang et al.'s (2023) characterization of image-generating Artificial Intelligence technologies. Although the technology to generate high-quality images was developed ten years ago, since 2022 these technologies have become more widespread and accessible for the general public (Knight, 2023) prompting the debate on whether Generative Artificial Intelligence would replace certain human activities and occupations, including creative work (AltexSoft, 2023).

This critical exploration examines arguments about creativity and image-generating AI and questions current debates on ownership and copyright as the main frameworks for the protection of artists. We begin by reviewing the conceptualizations of creativity in the context of image-generating AI, followed by the main debates in the valuation of artistic creative work which have developed mostly in the Global North, and we critically shift between normative valuation notions of individualism, novelty and final product towards collectivism, meaning and process as alternative perspectives of value in creativity. We present our methodological approach, explaining the aspects that make Ecuador a suitable case to explore the perspectives and experiences of Majority World artists due to its rich cultural and artistic history and the characteristics of the communities of artists we explored in this project. We finally present our findings, which reveal fundamentally divergent perspectives of creativity and AI and we connect them with the principles of Antropofagic thought. We offer the Antropofagia approach as an operational framework for researchers, designers, and activists in translating decolonial insights into digital interventions for more inclusive AI systems.

Notions of value in creativity and technology

Since the inception of Artificial Intelligence, computer scientists and scholars have been interested in whether computers and AI could be creative, and in the last few years the development of improved generative AI tools that are accessible to the general public has reignited this conversation (Amankwah-Amoah et al., 2024; Baradaran, 2024; Cheng, 2022; Jiang et al., 2023; Mazzone and Elgammal, 2019). Conceptualizations of creativity have often relied on *novelty* to assess whether something is creative (Weisberg, 2015). The current debates on creativity and technology reflect a threefold normative focus emphasizing value based on individualism (versus collectivism); novelty (versus meaning); and final product (versus process) (Author, 2024). It is relevant to examine the potential of Majority World perspectives to enrich and expand these conversations. In the next sections we will explore how these conceptual perspectives of creativity fail to reflect Majority World creative legacies and practices.

To illustrate the tension between individuality and collectivity, we take Boden's (2004: 1) definition of creativity as "the ability to come up with ideas or artifacts that are new, surprising and valuable." Boden's definition is grounded in the notion of the conceptual space, defined as any disciplined form of thinking that is valued within a social group (2004: 4). This author describes the value of creativity as grounded in the individual (e.g., creativity happens when someone moves away from the [collective] conceptual space) rather than the collective (e.g., the conceptual space is maintained by the

group) (Boden, 2004). Jiang et al. (2023: 365) touch on the process and collective nature of artistic creativity when they define art as "a uniquely human endeavor connected specifically to human culture and experience" but their criticism of AI as exploitative emphasizes the need for individual recognition, reflecting the tensions between process/product and individuality/collectivity. Research on generative AI and creativity has also found that in its current form, generative AI "enhances individual creativity but reduces the collective diversity of novel content" (Doshi and Hauser, 2024: 1).

The centrality of creative products rather than processes, is typically perpetuated in the field of psychology as key to assess value in human creativity (Plucker and Beghetto, 2004) while considering aspects such as ability, process and the environment as mere resources and/or limitations that enable/constrain creativity. This perspective is supported in the field of design and technology, where for instance Manovich (2023) argues that the utility of the artifact for society is the main source of creative value for AI-generated outputs. He argues that generative AI tools create "genuinely new cultural artifacts with previously unseen content, aesthetics and styles" (Manovich, 2023: 6) emphasizing originality as another key factor in assessing value. Manovich's argument does not consider the process of creativity, in line with other media scholars who have privileged the outputs to assess the degree of creativity in AI (Boden, 2004; Weisberg, 2015). Recent explorations of the valuation of human-AI co-created works of art that consider the creative process, reveal that the perception of human, labor-intensive art products are valued as better than AI-human co-created art (Messer, 2024).

In relation to the focus on novelty rather than meaning, Manovich (2023:7) describes generative AI training processes and image generation as akin to DNA that enables "new meanings and visual concepts". Boden (2004) also emphasizes the importance of novelty and the element of surprise in considering technological outputs creative. Novelty has been central to definitions of creativity for decades and it is generally accepted as an important component of its definition (Boden, 2004; Weisberg, 2015). Novelty is one of the main considerations in copyright protection and law and current debates about the risks of generative AI for artists have centered on copyright as the main source of protection as reflected in courtroom cases (CourtListener, 2024) and in the development of legislation to regulate AI (European Parliament, 2023). It is well-established that copyright and intellectual property laws enable more dominant markets and large corporations to privatize cultural production, disproportionately affecting artists and cultural producers in the Majority World (Story et al., 2006) and benefiting mostly Western media industries who have made insufficient efforts to provide affordable media products to populations in the Global South (Arora, 2019b).

The focus on novelty to establish value —and to propose a pathway towards protection of artistic work in the training of AI systems through copyright— is contrary to Indigenous perspectives on creativity which aim to ensure the expansion and survival of Indigenous knowledge through art (Florescano, 2000); it also contradicts Latin American art movements which have generally focused on meaning, political action, and finding and promoting a uniquely Latin American artistic identity (Caro, 2022). The focus on novelty is not applicable to the reality of the region, characterized by widespread piracy cultures (Dent, 2020) in a context where copyright protection is often unattainable for artists.

The Antropofagia approach as a decolonial tool

In the case of Indigenous cultures and creativity, artisan work is intended to promote and perpetuate Indigenous identity, ensuring its transcendence across time (Calambás, 2014; Florescano, 2000). The relevance of meaning in Latin American perspectives on creativity is illustrated in the history of Latin American artistic cultures. Meaning was a core part of early twentieth century Latin American art movements, which were characterized by an emancipatory desire to locate Latin American identities and establish them away from academia and external (foreign) influences through highly political themes that still characterize Latin American art today (Caro, 2022). Among these, the Brazilian Antropofagia movement initiated in the late 1920s and revisited by artists throughout the twentieth century reflected nationalist traits and aimed at shaping Brazilian identity (de Andrade, 1995). Brazilian Antropofagists recognized the appropriation and resignification of foreign cultural products as intrinsic and necessary parts of Latin American artistic culture to locate Brazilian identity (de Andrade, 1995).

Moreover, Latin American consumption, production and commercialization of cultural products has been characterized by the appropriation, resignification and validation of copies in response to strict sets of intellectual property rules and reflected in the so-called piracy cultures (Castells and Cardoso, 2012; Dent, 2020). The prevalence of piracy in Latin American cultural consumption and production reflects the difficulty in accessing legitimate and branded cultural products in situations of economic precarity and it is also an emancipatory practice in the face of inaccessibility (Author, 2019b; Dent, 2020). Although some definitions of creativity mention individuals or groups as creative agents (Plucker and Beghetto, 2004), we consider collectivity beyond direct authorship to include cultural, temporal and spatial collectivities that are part of creative endeavors and ownership perspectives (Calambás, 2014; Martinez Estrella, 2024).

In embracing the Antropofagia model, we argue that the cultural artifact is creative and valuable to the extent to which it represents and expands the intended meaning by the artist in line with Indigenous perspectives of value in creative processes (Calambás, 2014; Martinez Estrella, 2024). Calambás (2014) explains this through the example of the tourist who purchases an Indigenous painting, and once it is on their wall, it becomes stagnant. She explains that the product has no meaning on its own without an understanding of what is behind its production. The goal of Indigenous art and creativity is not to generate a creative product but to transcend and promote deeper thought about the meaning of Indigenous culture and identity (Calambás, 2014; Martinez Estrella, 2024). Figure 1 presents our proposed Antropofagia model. This model entails an expansion of Indigenous cultures and knowledges to situate them in diverse contexts, conditions and capabilities, offering an inverted approach where the local can inform the global.

Methods

Ecuador is a country in South America with 17.6 million inhabitants of which 1.1 million are part of 14 Indigenous nationalities, who maintain and expand the native culture and crafts of the region (IWGIA, 2020) making it a suitable site to explore and understand
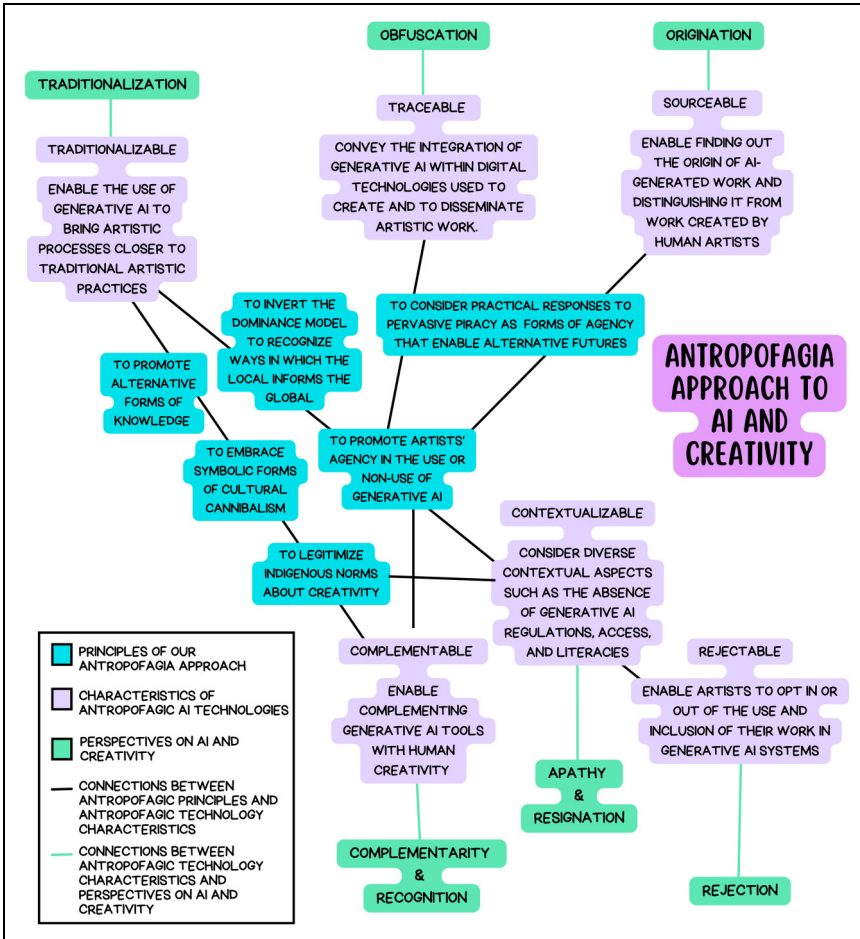
Figure 1. Antropofagia approach to AI and creativity: principles and characteristics of antropofagic AI technologies. Created by the authors.

creativity from a perspective that is decentered from the West. Moreover, the first author has close ties with the country as she was born and raised in Ecuador and most of her family still reside in the country. We carried out an ethnographic study in three different Ecuadorean cities: Quito, Loja, and Mindo. Quito is the capital city of Ecuador and in 1978 it was named Cultural Heritage of Humanity by UNESCO, due to the preservation of its historic center, one of the best in Latin America. Quito boasts a population of 2.8 million in its metropolitan area (Quito Cómo Vamos, 2022). The city of Loja is in the Southern region of Ecuador. It is known as the Music and Cultural Capital of Ecuador and has a population of around 284,000 as of 2022 (Municipio de Loja, 2023). The city is located near the Podocarpus National Park and Vilcabamaba, known as the "valley of longevity" due to the advanced age reached by its inhabitants. Finally, the

town of Mindo is in the Northern part of the country. It has 2953 inhabitants and it is one of the most biodiverse areas of the Andes in terms of butterfly and bird species, as such, it was designated as a priority region for bird conservation in Ecuador and Latin America in 1997 (Basantes, 2022).

In each of these field sites, the presence of arts and local crafts markets is relevant, and each provides a unique setting for art creation and/or commercialization in urban (Loja, Quito) and rural (Mindo) contexts, making them ideal field sites for our work in terms of different population sizes and contexts. We were able to access respondents in Quito through personal contacts and by visiting local art markets and the Mercado Artesanal in the La Mariscal neighborhood. In Loja, an art professor at the Universidad Técnica Particular de Loja served as a critical intermediary to local artists, art students, and designers. In Mindo, a resident served as a liaison to the main local artists in the region. This resulted in a snowballing of interviews, with artists recommending others which enabled our fieldwork (Figure 2).

Our observations and conversations included 18 artists. We carried out face-to-face in-depth interviews with 13 of them, including art students, one art professor, professional artists, graphic designers, and artisans, as part of participant observations of their educational, artistic, and commercial work. We also carried out one focus group with five art students. The study included artists and artisans across training levels (from no formal training to PhD); expertise (from four to 25 years of professional experience); age (from 18 to 62); ethnicity (mestizo and Indigenous), gender (13 male and five female participants), and socio-economic status. For all our participants, artistic work is their main occupation. Our fieldwork was done throughout the month of July 2023, and we carried out additional interviews on Zoom in a few cases when it was not possible to see the participants in person. The study assessed the perspectives of participants on art and creativity, ownership, originality, value, recognition, and their perception of digital
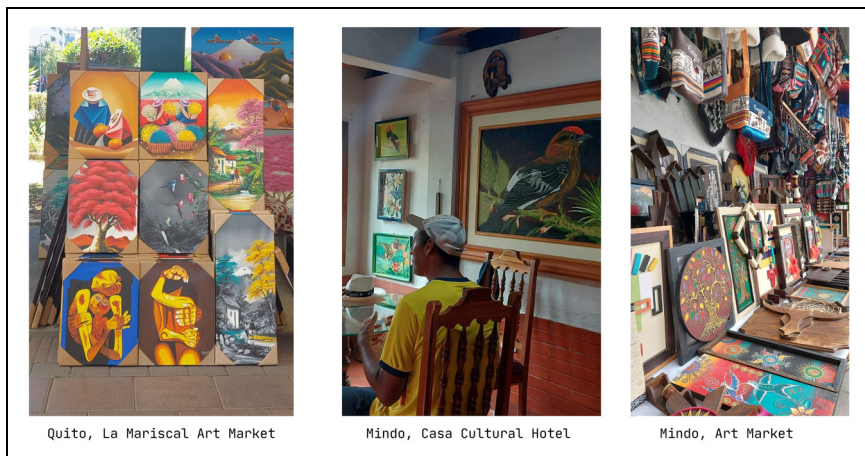

Quito, La Mariscal Art Market   Mindo, Casa Cultural Hotel   Mindo, Art Market

Figure 2. Interview locations in different cities. Images taken by the authors and used with permission of the artists.

tools and spaces as opportunities or threats. We explored their willingness and understanding of the implications of publicly sharing their creations through digital means and the use of digital tools in their work. At the end of the interviews, we asked participants specifically about their experience with Artificial Intelligence and image-generating AI. The in-person conversations were carried out at their place of work (either their studio or their commercial site) which facilitated discussions about their creative process.

Three research questions guided our work:

1. What are the perspectives on creativity among Ecuadorean artists?
2. What are the perspectives of Ecuadorean artists on creativity and technology including AI?
3. How do artists in Ecuador define value in their artistic work and does the rise of generative media shift these values, and if so, in what ways?

Findings and discussion

This section outlines our main findings considering the three main tensions in creative work as reflected in our observations of and conversations with participants: collectivity versus individuality, and process versus product. The tension between originality and meaning to establish creative value is reflected cross-sectionally in the examples provided.

Collective creativities

Participants expressed a collective perspective of creativity based on genetic/family-related and social aspects of creativity. Figure 3 reflects the quotes by participants about collective perspectives on creativity.

The quotes in Figure 3 reflect an understanding of creativity as *intrinsically collective*, incorporating other actors as key for creativity to happen. According to our participants, artistic creativity is passed through genes and socialization, rather than *intrinsically individual* (which is the dominant Western view). Networks of artists and family members become key sources of skill, inspiration and success, while family legacies of art and creativity become embedded in their personal creative processes. Colleagues collaborate in creative projects and are unable to separate their creativities, gaining insight from others in the process.

In our observations of artists' places of work, we noted the presence of copied works, for instance Figure 2 reflects the presence of copies of famous works by Guayasamin and it was evident among some artists in the La Mariscal market and artisanal markets in Mindo and Loja, that some of them copied each other's styles and topics. When asked about it, artists generally accept the copy of their artwork as part of artistic practice and they do not take legal action to protect it, even when these copied works are being sold in the same space:

> [...] if you make a serious proposal, if you do a quality job, things will happen. [...] What is happening to me right now is that I am seeing many copies in the artisan market [...] I have copyright and everything, but here people do what they want. (David, Quito)
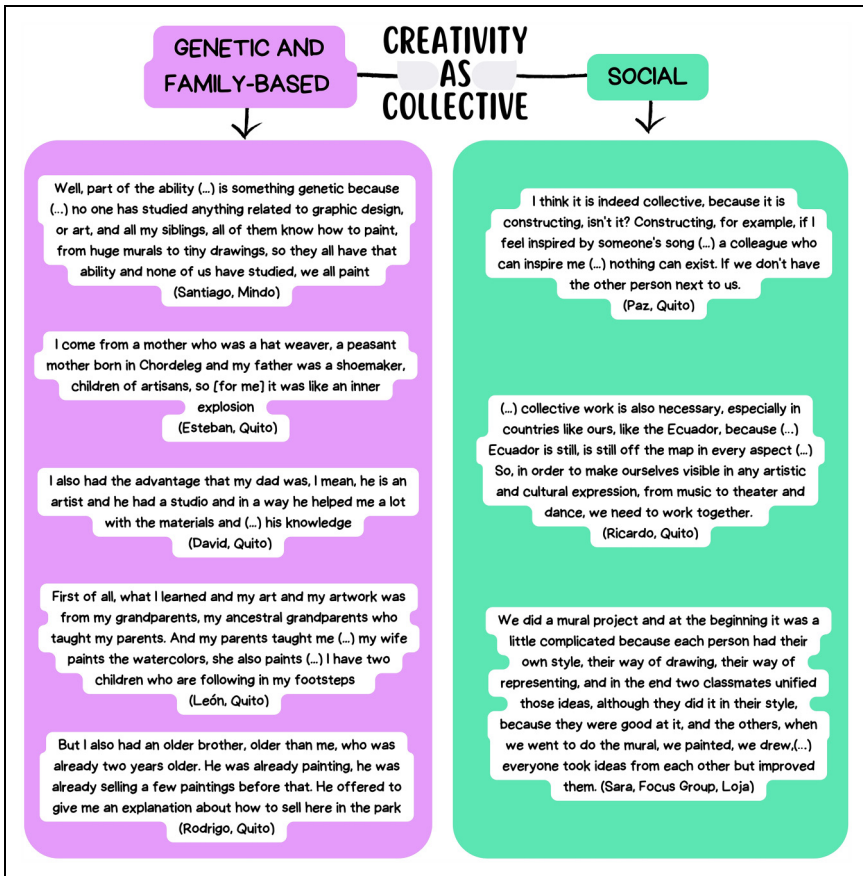
Figure 3. Collective perspectives of creativity across social and family-based dimensions. Created by the Authors.

David's experience reflects the embeddedness of piracy cultures (Castells and Cardoso, 2012; Dent, 2020) and the pragmatic acceptance of the copy. In general, artists reflected resignation in the face of plagiarism, they expressed less concern and a more constructive outlook as they see this as the only pathway to move forward, by offering other sources of value, such as a serious proposal and quality materials. Daniel mentions that seeing his work being copied bothered him in the past but that now he approaches it pragmatically:

at the beginning it frustrated me, […] but I learned, my career, the benefit that brings the most to my life is to allow me to discover who I am […] copies will be made but I am capable, what I propose says that I am the best each day […] I keep creating, If I get stuck on one idea, I am not contributing anything. This is what is interesting about the artist, you must be uncomfortable with the comfortable. (David, Quito)

Elena Malo, a Professor in Art History at Universidad Técnica Particular in Loja, explains the prevalence of plagiarism in Ecuadorean art and how it is rooted in collective notions of ownership that exist among Indigenous artisans,

> In Ecuador different levels of plagiarism are part of the artistic practice […] One of the issues is that the price for protecting copyright is out of reach for most artists in the country and most of their works are not protected. Ecuadorean artists are highly likely to copy artistic trends, especially contemporary trends with no regard to copyright. Many artists in Ecuador consider the skills required to create the work of art as more important than its originality.

A collective perspective of creativity complicates copyright as it becomes about group ownership across processes, generations, and authorships. The quotes of our participants suggest the need for a pragmatic approach that considers adaptability to contexts of weak enforcement and persistent piracy cultures as a form of agency. In the case of families and communities dedicated to artistic work, contributions to authorship can span decades and consider different generations as part of the authorship collective. In these cases, individual credit becomes complicated by the generational and community-based creative processes. Collective ownership also implies collective profit sharing which is not always fair to all members, due to competing interests and abuse, but it can be successful if the members of the collectivity realize that it is in the best interest of the group to maintain the (creative, artistic, and digital) commons away from market interests and towards the use and enjoyment by the community (Arora, 2014) through collective rights (Arora, 2019a). The consideration of image-generating AI as *inspired by* and as *inspiration for* has been argued by comparing it to human inspiration, which throughout history has relied on previous ideas to generate artistic works (Manovich, 2023: 6). The Antropofagia approach to creativity considers cultural cannibalism as a form of inspiration that emphasizes the potential to generate original Indigenous cultural products by incorporating and resignifying existing cultural elements and emphasizing the creation of alternative creative futures for Indigenous communities.

The personal aspects of the creative process

Participants also emphasized the personal nature of creativity, not to be confused with individual aspects, since they pointed to the deeply intimate and meaningful introspection processes of creativity rather than individualistic perspectives. Patricia, a biologist and prominent illustrator in the fields of natural science and humanitarian aid who lives in Quito explained:

> I believe that creativity requires a deep space of connection with oneself, before anything else […] Whether it is a painting, a text, or whatever, regardless of the language in which the result is expressed, the process is basically the visualization of all the paths that can lead you to where you want to go.

In this case, the personal aspects take center stage in the creative decision-making process. An artist's connection to themselves can be seen as self-care, affective, reflexive,

and tied to one's lived experience. Researchers have found that art-making can improve well-being for artists through processes of self-continuity (connecting with previous versions of the self), fostering self-esteem, and connection with their environment (Titus and Sinacore, 2013).

For Susana (Quito) the value of her work reflects a combination of its relevance for society and an alignment with her personal values:

> People have told me that I could make a lot of money by putting my designs on T-shirts and cups […] and I could, but I don't because it is unnecessary trash […] I have to be coherent. […] I don't want to leave an environmental footprint […] I have made decisions with specific contracts to avoid being violent to myself […] I won't sign a contract that takes my soul away […] to me it is not an economic transaction, I have to love myself.

The connection between art and sustainability, as well as the importance of art as a contribution to society, is a recurrent theme among participants and a source of pride and value for their work. Susana reflects on the rejection of the commodification of artists and their work and ties value to impact, rather than monetary gains. Her prioritization of her values and the needs of her local community rather than the monetary aspect of the work reflects the collective and unconventional notions of value in creativity, which are part of our Antropofagia framework.

Paz, an illustrator and artist who works in the literary industry and lives in Quito mentions the importance of avoiding the comparison with other artists as a form of self-care. When discussing the use of digital tools in her work, she stated:

> […] it makes me anxious, and I have been taking care of my mental health for a long time now, I mean, I dedicate myself to take care of my mental health, because my work is creative, so taking care of my mental health is non-negotiable. (Paz, Quito)

The need for self-connection and self-care reflects the emotional dimension of artists' creative processes and their work, as well as the investment of their energy and mental resources in the creative process. This perspective supports Jiang et al.'s (2023) argument that generating visual products in a process that excludes the culture and experience of artists, or the human dimension, also strips it from its artistic value. The connection between artists and their work has been characterized as one of "transcendental unity" (Jerrentrup, 2024), which is reflected in the ways in which Ecuadorean artists discuss their self-care measures and their deep connection with their work beyond ownership. The Antropofagia Manifesto promotes a return to one's roots. Based on this, our Antropofagia framework for creativity and AI calls for a denial of taboos and an embrace of the self as it is, including aspects that may not fulfill existing norms, uplifting Indigenous cultures from within (de Andrade, 1995). Self-knowledge is key in this process—a deep familiarity with oneself as a creator and as a person, including identity traits that may be unconventional. It also considers the importance of connecting to Indigenous knowledges as a core area of expansion and elevation of Indigenous cultures.

Context, process and product as sources of value in creativity

Many of the artists interviewed mentioned natural contexts as their main sources of inspiration for creative processes. This included using materials from their community, such as the case of Eduardo, an Indigenous artist from Otavalo (a town in the north-central part of Ecuador, and home to the Otavalo Indigenous peoples), who lives in Mindo and describes the chain-like process of his work as collective and driven by natural materials:

> I don't work alone, to obtain my raw materials I go to Otavalo, for instance, eucalyptus, corn, or banana leaves. My friends dry the leaves and have them ready, as I said before, we work in a chain.

In his case, the people who prepare the materials he will use in his work are also part of the creative process. He sees himself as one more person in a chain of people generating the final output. Other artists expressed how their surroundings inspired them to define the subjects of their work. In this sense, Roberto (Quito) and Cristóbal (Loja) explain:

> In this case I am going to tell you a little bit of my story, as a Lojano [person from Loja]. I really liked to walk through the jungle, the mountains, and I was inspired by nature, which is beautiful in the jungle. Mangroves, rivers, birds, animal noises. So I experienced all that in my youth. (Roberto, Quito)

> And then you go out into nature and see everything, right? And that nourishes you. And I think that is why it is important for us to recognize our starting point in the process of creation. (Cristobal, Loja)

As reflected in Figure 4, nature was one of the key themes in the work of participants. The resignification of contextual natural elements that are indigenous to a specific geographic region reflects the way in which Antropofagia provides a useful framework to understand creativity. These three examples reflect the connection with the natural roots of the country shaping the themes of the work while promoting these themes through the use of a Western medium or style: in the first case the walls of a building (Western) resemble the natural environment of the region (Indigenous), in the second case the minimalist style of the renderings (Western) reflect an innovative interpretation of these South American mountains (Indigenous), and in the last case the digital medium (Western) enables a unique version of the Ecuadorean jungle (Indigenous).

For some participants, nature is both the subject of and the motivation for their work, shaping their perceptions of value in their work and reflected in their personal values such as the cases of Santiago and Susana. For Santiago (Mindo), value is reflected by the role of art as a contribution to society. Santiago explained his perspective on the connection between art and beautifying his surroundings:

> […] if we have a pleasant, harmonious space, it will be transferred to human beings and we must express that, but if a person finds a place with dirty walls, stained, full of garbage and everything, then the human being […] will think 'if I throw one more paper or one more fruit peel

"Everything I paint (...) is precisely aimed at reusing materials. I try as much as possible. It would be unusual for me to paint on a canvas. So I try as much as possible to use super comfortable, super cheap, acrylic paints, that do not generate any alteration to the skin, or anything else, no dyes, no toxic paints."

Klever Tello
Mindo

"I work with costumbrismo (...) what characterizes me is minimalism, within that I mix styles, forms and then something different comes out."

Daniel Reynoso
Quito

"They have told me my images are very poetic. So by talking about graphic poetry, (...) It is important to make it a little closer to the heart and the feeling of the people who will be the direct consumers of your illustrations, of your product."

Illustration From the Book:
To dream and to live the jungle:
Poetry for the Yasuní
Pepa Ilustradora
Quito

Figure 4. Artworks with nature themes across techniques and artists' statements about their art. Used with the artists' permission.

there is no problem'. So, I am part of a group in charge of beautifying all the urban part, here in Mindo, free of charge. The murals on the main street, all those murals are painted by me. […] If we become empowered in our public spaces, those public spaces become spaces not only for leisure and recreation, […] but also contribute to people's self-esteem. (Santiago, Mindo)

Santiago draws a connection between art and well-being in his community. His statement aligns with notions of creativity as placemaking (Zitcer, 2020) and emphasizes the importance of the meaning of creativity for the community and the space. In this case, ownership is not as relevant, as the value of this type of collective effort dominantly lies in benefiting the community. In this description, he connects the collective nature of creativity and art with his environment, where he describes a cyclical relationship between the environment and art. He uses local materials such as leaves and wood to create his art, and paints subjects related to these contexts. In this case, placemaking is enabled by tangible aspects of the context (Sweeney et al., 2018) which can be considered Indigenous elements that connect both the community and artists to their Indigenous roots by adapting their urban space in accordance with the Antropofagia approach. When considering image-generating AI and digital placemaking, the question remains whether these virtual experiences can create meaningful connections comparable to those formed through traditional creative placemaking practices. The human experience ultimately determines the significance and authenticity of these digitally-mediated spaces.

There are contextual aspects that shape how artists value their own work, for instance the regulatory context. For artists who work in the editorial industry, their perceptions of

value are reflected in the contractual and legislative protections of work which establish their right for recognition and ownership. For example, Jorge (Quito) has worked in the publishing industry for more than 20 years as a graphic designer including as chief graphic designer for one of the largest publishers in the country and around the world. He mentions the challenges of getting royalty payments in this sub-field of graphic design and illustration:

> The editorial industry offers the clearest and most differentiated system of authorship recognition. I mean, copyright cannot be waived, you will appear as an author, but it may not be linked to a financial recognition of your work in some countries […]. In Ecuador, it becomes very complex because […] historically the publishers would give authors 10% of royalties, and graphic designers and illustrators have been unable to obtain the right to receive part of these royalties in the work we design […] because we have not been able to collectively organize. We usually work for a flat fee that doesn't consider the types of uses that the client may make of our work, the flat fee usually covers it forever. (Jorge, Quito)

Jorge describes the current situation of precarity in his experience as a graphic designer. He specifies that the editorial industry features the most structured and clear legal protections for authors and illustrators and therefore has the potential to provide the best conditions for graphic designers. However, his perspective of ownership and value is one of resignation in the face of partial economic recognition of his work. He mentions that a client may profit from his work regardless of the low flat fee that he receives and proposes a fairer system that considers the economic gains that the publishing company obtains. His description of the conditions of copyright in Ecuador echoes the criticism of the Copy/South report which argues that copyright favors big companies privatizing the work of artists, especially in the Majority World (Story et al., 2006). His proposal of a model of royalties that considers the income of the publishing company to define his income as the artist reflects a collective perspective of ownership and profit sharing in line with Arora (2024).

In the case of AI-generated images, the contextual aspect of the creative process is provided within the prompt. The prompt generates a synthetic context to be considered by the image-generating AI system and the chatbot as part of its decision-making process to generate a specific image that contains certain characteristics. Generating an image using this technology does not necessarily require the prompter to be familiar with the context. It generates an agreed-upon result based on the image-generating AI's understanding of what the words used in the prompt mean. In this process, having a good result means that the tool was able to accurately represent what the prompter meant. In our exploration, Susana, an illustrator in Quito explained how prompting with an image-generating AI tool worked for her:

> I couldn't model what I sensed in my head […]. I don't know what it is, but the monster that came out was like a generic troll monster. It was not even close to what I had in my head. Then I said I no longer want it to do it for me, but to give me a base and then I will modify it. (Susana, Quito)
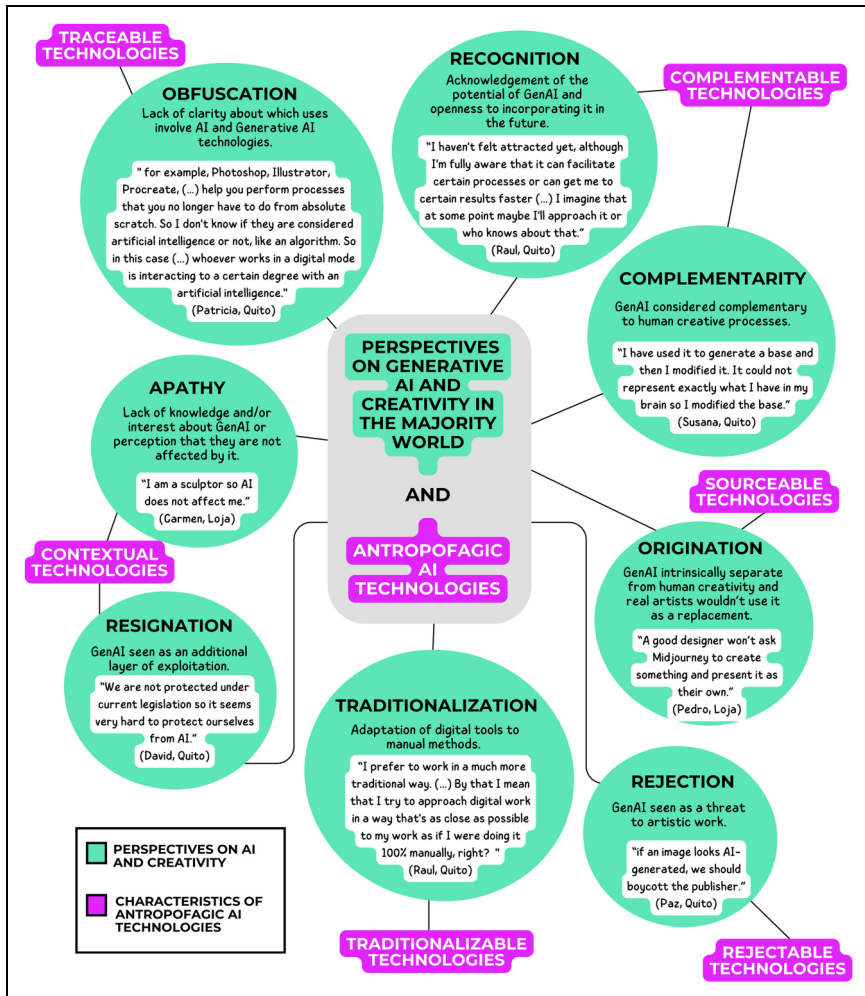
Figure 5. Perspectives of AI among artists and their connections to antropofagic AI technologies. Created by the authors.

This experience reflects the opportunities and limitations of prompting as a tool for artists. Susana's experience reflects the difficulty of obtaining the imagined result from the image generator. Much of the creative process is intangible, demands meaning making, affect, and experiential inspiration. Her personal perspective of the result was achieved through an editing process rather than a mere prompt. This illustrates the complementarity perspective, which enables the Antropofagic process of cannibalizing elements and generating something unique that better connects to one's roots and the need for Antropofagic technologies to be *complementable* (Figure 5). Prompting is not just about the right language and framing, it is about what we cannot articulate but that we feel which cannot be channeled into

a prompt, which can only be judged by the artist. The reliance of image-generating AI on text has been cited as a crucial limitation in its design (AltexSoft, 2023).

Towards Antropofagic AI technologies: Valuing the use of AI for creativity in the Majority World

It is important to note that many of the artists interviewed carry out the creative, manual, and commercial aspects of the work. Their perspective of value in their creative work is often shaped by the type of artistic work they generate, their motivations, and their professional experience in the field. In this section we explore (1) the main themes in artists' perceptions of value in their artistic work, (2) the role of technology and image-generating AI, and (3) our proposed characteristics of Antropofagic technologies based on these perspectives. Figure 5 reflects the eight themes present in their responses and the deriving characteristics of Antropofagic technologies.

Obfuscation (*traceable technologies*): Some artists explained their confusion when describing whether the technological tools they already use incorporate some form of Artificial Intelligence, both in the creative and commercial dimensions of their work. This reflects the perception of a seamless integration of AI technologies in their work and the confusion that this causes in the context of rapid advancement of AI technologies. In relation to our proposal of Antropofagic technologies, this theme calls for a preference for *traceable* rather than seamlessly integrated generative AI technologies that let artists know that the actions they are taking involve generative AI, to provide choice and agency to creative professionals.

Rejection (*rejectable technologies*): Is closely connected with the previous theme. Rejectable technologies call for transparent notifications about the type of technology being used and the possibility to opt in or out of these technologies. Regarding Antropofagic technologies, different levels and stages of opting in or out should be integrated both in the use of generative AI within the creative process and in the choice to include images by creative professionals to train generative AI models, making these technologies *rejectable*.

Traditionalization (*traditionalizable technologies*): Artists described the handmade, material aspects of their work as the ones that should have a higher value, which is also reflected in our proposed *traditionalization* perspective towards generative AI and creativity. This theme resembles theorizations of the traditionalization versus mediatization of folklore (Briggs, 2020) and empirical explorations of art co-created by human artists and AI that found that artistic works perceived as more manual and labor-intensive are higher valued (Messer, 2024). In this sense, this theme promotes a hybrid approach where technologies can be used in a way that is close to traditional, manual methods in the face of image-generating AI. This focus connects with the proposed Antropofagia approach which calls for reconnecting with Indigenous roots and choosing the best aspects of the Western world to expand and promote Indigenous knowledge (de Andrade, 1995). This also reflects how the local (represented by traditional creative methods) can inform the global (generative AI). The use of digital tools (Western) in

ways that resemble traditional techniques (Indigenous) is a great example of the *traditionalizability* that should characterize Antropofagic technologies.

Origination (*sourceable technologies*): Another perspective is *origination,* which calls for a differentiation between human and AI creativity and the need to make these boundaries clear for creative professionals. This reflects the focus on the process rather than the product in our Antropofagia approach, following Indigenous norms of creativity and meaning (Florescano, 2000). This entails the need for Antropofagic technologies that are *sourceable,* meaning that they should enable the determination of the human versus machine-generated origin of a creative product.

Complementarity and Recognition (*complementable technologies*): The *complementarity* theme refers to the desire to combine generative AI technologies and human creative processes to get the desired result. It is closely related to the *recognition* theme because the latter reflects the possibility of using generative AI and the acknowledgement of its opportunities in creative work. In the Antropofagic approach, it relates to collective approaches to creativity and AI considering the potential of various authors and complementing these with image-generating AI in line with examinations of value in human-AI co-created art (Messer, 2024). These two themes reflect the need for Antropofagic technologies to be *complementable* or to be designed to enable complementarity between generative AI and other creative processes which may be analog or require other technological tools. This promotes experimentation among creative professionals.

Apathy and Resignation (*contextual technologies*): Apathy refers to the lack of knowledge or non-affectedness when discussing image-generating AI and resignation refers to the lack of existing protections for artists in the current environment. Antropofagic technologies consider a range of contextual aspects such as the lack of regulation, access or literacies among artists to take advantage of generative AI technologies.

Conclusions

This paper set out to explore perspectives about creativity among artists in a small but illustrative country in South America This paper offers three main contributions: (1) the threefold tensions of creativity according to our participants (collectivity versus individuality, process versus product, and meaning/societal impact versus novelty) ; (2) our proposed Antropofagia framework that proposes inverting current dominance models to enable the local to inform the global; and (3) the six principles of Antropofagic technologies based on the eight perspectives on AI and creativity from our participants.

Our findings suggest that artists perceive creativity as a process that can be profoundly personal but also builds on collective endeavors, which they describe as a cyclical process of reciprocity. Many of the participants consider their natural environment and personal expression as closely related and intertwined, reflecting the importance of meaning and connection with the self in the creative process. The legacies of piracy and collective perspectives of authorship result in practical coping responses by artists and provide alternative notions of value in creative endeavors. These results outline our proposed Antropofagia framework, emphasizing the potential to reimagine image-generating AI tools to incorporate the contribution of Majority World perspectives of creativity to mainstream approaches to AI and creativity.

Some of the limitations of our research include the difficulty of understanding creativity from a scientific perspective due to its unpredictability as explained by Boden (2004). The focus on one country can be seen as a limitation but it provides a nuanced perspective on the types of concerns that affect the region due to limited protections under existing governance models, and provides insights that can inform future work. In the case of Ecuador, one of the most biodiverse countries in the world, with a rich Indigenous culture, we can argue that Western-designed generative AI tools fall short of responding to the needs and perspectives of creativity in the region. Moreover, the materials, textures, life experiences, and personal creative processes that are considered key sources of value in their work are absent in technologically generated art. The shift towards an increasingly digitalized aesthetic, and the digitalization of the visual is a concern that illustrates the trajectory of artistic work towards the use of digital tools in the different stages of creativity and commercialization that considers AI tools as one more step towards this process, but one that requires human input to get to the desired result.

Our proposed Antropofagia framework can inform future lines of research, policy and technological design, especially the identification of pathways where the local can inform the global by legitimizing Indigenous norms about creativity, promoting alternative and unconventional forms of knowledge and exploring adaptive behaviors to enable alternative and practical responses in contexts of persistent piracy. The Antropofagia model emphasizes agency among Majority World artists to enable alternative futures and moving forward research should explore these possibilities. We have identified some of these alternative responses in the present paper, but additional research could expand on this work.

Informed consent statement

Written informed consent was obtained from participants, and they approved the use of their quotes and the use of images of their work and workplace to be published. The quotes have been anonymized by using pseudonyms to protect participants' identities. Artists' real names are used only when images of their work are used upon agreement with them.

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Data availability statement

Due to the anonymization of participating artists and the specific consent to the use of their responses for the present work, we are unable to make raw data available.

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