KNOWLEDGE NETWORKS
OF NEW MEDIA ARTISTS

Master Thesis

Fereshteh Adi Saatlo Anzures (466500)

Supervisor: Lenia Carvalho Marques

Second reader: Mariangela Lavanga

ESHCC Erasmus University Rotterdam

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MA Cultural Economics and Entrepreneurship

Erasmus School of History, Culture and Communication

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Abstract

Knowledge-based economies regard a high importance to knowledge and technology for the productivity and economic performance of societies. Its importance extends to the cultural sector, where it is considered to have an important role to creativity. The formation of knowledge networks in the sector responds to the common formation of social networks and its function as a way to access and share knowledge. In the artistic genre of new media art, which is based on the intersection between art, science, and technology, the constant acquisition and reconfiguration of explicit and tacit knowledge is important, which is most often approached by the means of interdisciplinary collaborations. Based on empirical data collected through 14 interviews to new media artists, this research answers the research question: To what extent do social networks of new media artists foster processes of creation, transfer, and adoption of knowledge? Furthermore, in order to answer this main question, this research delve into the study of the networks and the ways to access to them; as well as the motivations, the learnings, and the contexts present in these knowledge-related processes. Mexico City was chosen as the empirical setting for this study. This research contributes to the available information and understanding about new media art by looking into social phenomena that affect the production of artworks. Also, the results provide relevant information about the way in which learning processes happen between actors of interdisciplinary practices. The results confirm the importance of knowledge networks for new media art and the contexts in which knowledge is created, transferred, and adopted. They highlight the importance of horizontal relationships in interdisciplinary collaborations and projects, a characteristic that fosters the flow of knowledge between the actors involved.

Keywords

New media art, social networks, knowledge, knowledge networks, Mexico City

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Abstract and keywords

Acknowledgements

1. Introduction

Knowledge-based economies regard a high importance to knowledge and technology for the productivity and economic performance of societies (Dubina, et al., 2012; OECD, 1996). Its importance extends to various sectors of the economy, including the cultural one. In this sector, knowledge is regarded to play an important role to creativity (Mumford et all, 2013; Scott, 2010) as its acquisition and recombination support the generation of novel ideas, which in turn foster creative thinking and problem-solving. Fields of high uncertainty, such as the cultural sector, are drawn to form social networks (Potts et al, 2008; Scott, 2010) and use collaborations to access and share knowledge (Bathelt et al, 2004; Currid, 2007; Scott, 2011; Wenting et al. 2011). This is also found in fields with extensive use of technology (Wallbank, as cited in Cox et al, 2004; Powell, 2008; Wasko & Faraj, 2005). The connections of these actors and their knowledge-related intercommunication constitute what is known as knowledge networks (Phelps, et al., 2012; Powell, 1998).

In the cultural sector, an artistic practice emerged with the technological advancements of the end of the last century. The artistic genre which is often called new media art is based on the intersection between art, science, and technology. The broadest characteristics found in it are the use of technology as a medium (Paul, 2008) and the reflective approach to the social, political, and cultural implications of the media it uses (Brouwer et al., 2012; Quaranta, 2013). The intrinsic interplay of artistic and scientific disciplines poses learning challenges to the artists, as it requires a constant acquisition and reconfiguration of explicit and tacit knowledge. A challenge which is most often approached by the means of interdisciplinary collaborations.

This thesis addresses the convergence of these subjects by providing a qualitative enquiry about the role that the artists' social networks have in their learning processes. Based on empirical data collected by interviewing new media artists, this thesis aims to answer the research question: To what extent do social networks of new media artists foster processes of creation, transfer, and adoption of knowledge? In other words, it looks into the knowledge networks of new media artists and the knowledge outcomes that emerge from the interactions in the network

(Phelps, 2012). In order to answer this main question, this research delve into the study of the networks and the ways to access to them; as well as the motivations, the learnings, and the contexts present in these knowledge-related processes.

Mexico City is the empirical setting chosen to develop this research. The biggest urban area of Mexico is an important place for the production of new media artworks in the country, as many new media artists and institutions are based there. However, very marginal research about their activities has been done (Villagomez, 2017). This research contributes to the available information and understanding about new media art by looking into social phenomena that affect the production of artworks. Moreover, the results provide relevant information about the way in which learning processes happen between new media artists and the actors in their social networks, particularly in the context of Mexico City. In turn, these results highlight the circumstances in which the creation, transfer, and adoption of knowledge can be fostered in social contexts. Although the results cannot be generalized, the implications of the findings may be also be useful to develop further research and practice of interdisciplinary work.

The thesis is structured as follows. Chapter two provides a review on the literature on the general circumstances that surround the production of cultural goods, followed by the analysis of the formation of social and knowledge networks in cultural production, as a way to establish a context in the cultural sector. The last sub-sections provide a context about new media art and the collaborations between the actors in this genre to point out important characteristics that affect the dynamics of these practices. Chapter three states the aims and objective of the research in the form of the main research question, and following sub-questions that support the investigation. Chapter four provides a deeper explanation of the methodology of the study. It explains the chosen method a qualitative study, as the best avenue to explore these social processes that are reliant on the artists experiences and worldviews. The presentation of Mexico City as the empirical setting is given, with information that sets this context as an interesting place to base the research. The fourth chapter also provides an explanation of the snowball sampling technique and it is presented as a suitable way for the analysis of social networks. Lastly in this chapter, the data analysis procedure of coding is explained. The fifth chapter provides the findings and their implications. It presents the results based on thematic sections that cover the following topics: First, it presents an introduction of the

practice and collaborations in new media art, as well as a brief note on the background of the artists interviewed. Second, the sources of knowledge for new media artists is given. Third, a description of the most relevant actors in the artists' social networks and the way in which they have accessed them is given with the intention to emphasize the relevance of certain relationships. Lastly, the end of this section is dedicated to detailing the motivations, outcomes, and contexts for the knowledge networks that new media artists form throughout their careers. The sixth chapter of the thesis, gathers the conclusions from the study that confirm the importance of nurturing knowledge networks for new media artists. The final chapter of the thesis presents an overview of the limitations and possible avenues for further research, as proposed by the researcher.
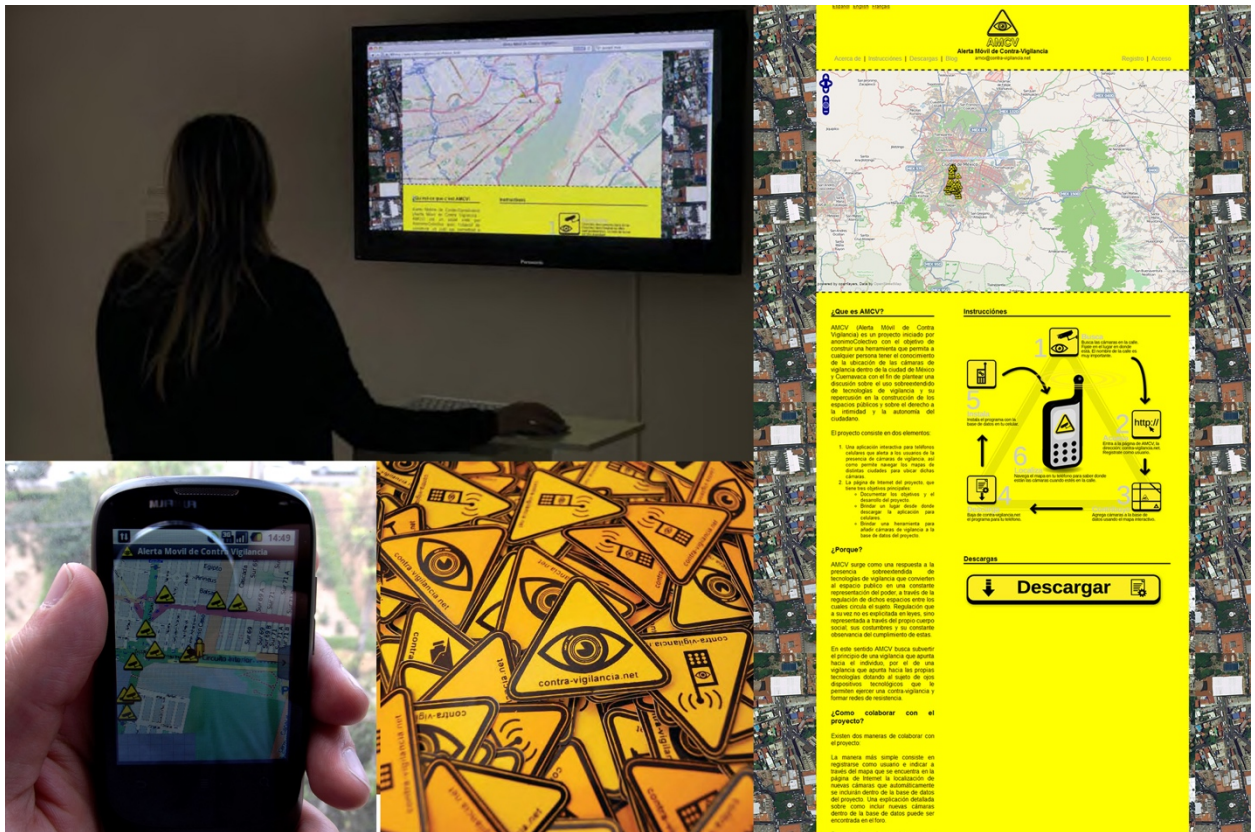
Anónimo Colectivo (Jorge Benet, Leonardo Aranda) (2008-2012)
AMCV (Counter-surveillance Mobile Alert)
Mobile app

2. Literature review

2.1 Production of cultural and creative goods

The production of creative and cultural goods has explained by academics and researchers in the field of cultural economics who describe a set of peculiar characteristics. Some of them present distinct features or approaches to cultural production. However, the identification and recognition of these features of the production of cultural and creative goods helps to understand the context in which these producers work. Moreover, recognizing these features helps to understand why the sector organizes in the way it does. According to the economist Richard Caves, creative goods and services are those which carry cultural, artistic, or entertainment value. Based on contract theory, he argues that the creative industries present contracts with a high level of incompleteness, as there is much uncertainty involved in the production and the consumption of the creative goods. From the production point of view, he argues that the output of an artistic endeavor is uncertain as it goes through the process from its conception through its creation. This is recognizable in an production process which is transformed and evolves with the flows of creativity. From the consumption point of view, he argues that the artistic outcomes are unknown, as the consumer demand of the output is uncertain until the final output is delivered to and consumed by the audience (2003). Other features that distinguish the incompleteness of contracts in the sector, according to Caves are time related characteristics of the production. These emphasize the importance of the temporal coordination of the activities, often performed by different actors, for the economic profitability; also, they may retrieve durable rents, either by the output itself or its documentation, although the extent to which this is possible may be very different from each artistic output to the other. Creative goods are highly differentiated amongst them, both vertically and horizontally, with an infinite potential configurations. This means that the set of different styles or genres to which a creative practice belongs may be very diverse as it may span horizontally through many of them. Also, the possible outputs within each style or genre may be highly differentiated from each other. Therefore, cultural and creative activities often require complex teams of producers with differentiated skills and aesthetic values necessary for the constant novelty generation that the cultural goods strive for. They engage in

incomplete contracts where uncertainty is generalized, which influences the organization of the sector (2003). This is also referred to as a vertical disintegration of production, which mainly manifests itself as collaborations, and is considered to be induced by the uncertainty of the sector, as collaboration between different actors helps to cope with or mitigate possible internal misallocation of resources (Scott, 2010). Additionally, Caves (2003) argues that there is a growing tendency in which creative production also requires the collaboration between different actors that provide inputs of different nature, such as creative or non-creative inputs. This type of collaboration between different disciplines may also generate conflicting priorities and preferences amongst the members of teams. However, the involvement of non-creative workers in the cultural and creative sector has been a growing tendency, as it allows the creative producers to cope with the constant changes in the market and to find solutions to problems which deal with technology. Nevertheless, it is recognized that all workers in the cultural and creative sector show a high level of affection and passion towards their practices, which translates into intrinsic motivation to carry on with their tasks. Even when Caves's analysis dates back to the beginning of the new century and probably does not take into account the full effects of mass use of information technologies, he points out interesting features which are still recognizable nowadays.

Empirical research on creative labor in the cultural sector has pointed out other endemic circumstances in which workers perform. A research conducted by Scott (2012) found that creative workers are often exposed to precarious employment and low or non-existing wages, and thus compensate the motivation with emotional labor to carry on with their tasks. Also, workers in the cultural sector often hold multiple jobs, to compensate for the lack of financial motivation. Moreover, they invest in their own identity, through the projects and affiliations they engage with. However, the sector is notable for the intense competition, which often leads to high failure rates. As the sector is so dynamic, creative producers form dense social networks which are based on trust and reciprocity, and comprehend a vast array of creators and intermediaries (Scott, 2012).

Social networks, in this sense, are formed naturally by the multiple connections that cultural and artistic producers create along their careers. The formation of networks helps them to cope with the challenges they inherently face, such as uncertainty and harsh labor markets (Potts et al, 2008; Scott, 2012). In these

networks, they meet other cultural producers, intermediaries, institutions, and other incumbents who become sources of relevant information, knowledge, feedback, and recognition.

2.2 Formation of networks in cultural and creative production

The dynamic characteristics of the sector, besides the uncertainty that permeates the production of cultural goods foster relationships between the people involved in it (Potts et al, 2008; Scott, 2010). This phenomenon is enhanced by the interaction that arises from a project-based, vertically disintegrated organization of labor (Caves, 2003; Scott, 2010; Scott, 2011). Projects bring together individuals with different skills who have built a strong reputation within their contacts (Grabher, 2002; Lingo & Tepper, 2013; Throsby & Zednik, 2011). In order to cope with the high complexity and costs of cultural production and the constant requirement of different skills needed to achieve it, projects are often organized in groups of independent collaborators (Lorenzen & Frederiksen, 2008). When the project is interdisciplinary by nature, a collaboration between different skilled people is a evident solution for novelty generation. Therefore, highly skilled individuals in the cultural sector are in constant mobility, a process that fosters innovation by the flow of knowledge and practices between their networks (Vinodrai, 2006).

Networks are collections of items, called vertex or nodes, which show connectivity between them (Newman, 2003). Complex networks are those in which different types of nodes or different types of connections can be identified, such as social networks (Newman, 2003). In the analysis of social networks, vertex are often referred to as actors and their connectivity are referred to as ties (Newman, 2003).

According to Potts et al., the cultural and creative industries can be identified as the practices in which both production and consumption of goods are embedded in a social context, thus forming social networks. In this context, social networks are groups of connected actors who make production and consumption decisions based on the signals of others. Moreover, social networks have four noticeable properties: they go beyond the group of acquaintances and extend throughout the economic system, they have a complex topology, they entail social origination, adoption and retention processes, and lastly, social networks are intertwined in the social and economic system (2008). Potts et al. also consider the market dynamics of cultural

and creative industries as open-systems based on complex social networks. Although this is a common assumption for the fields of science and technology, the extension of this view to the arts and culture invites us to look at the social networks that form around them as the main source of signals that drive both their consumptions and production, i.e. "individual choices are dominated by information feedback over social networks rather than innate preferences and price signals" (Potts et al., 2008, p.4-5). Thus, they propose that the creative industries can be analyzed by looking into three main components whose interplay creates and diffuses symbolic and economic value. Namely, agent cognition and learning, social networks, and the organizations and coordinating institutions which are referred to as enterprises (2008). Most importantly, it is the communicative actions amongst them that create such signals and information flows, and not only their connectivity. Hence, social interaction in the cultural sector not only functions as a mean to gather the team members needed to create products and services, but it also provides the recognition and feedback from others who assess how socially meaningful the work is (Scott, 2010). This information feedback and recognition is of great value in the production of cultural and creative goods, where high uncertainty and a search for novelty are always present (Potts et al, 2008).

In order to access social networks, creative and cultural producers must engage in socializing. The decision to engage in conversations with others fosters the creation of social bonds. These social processes happen in both formal and informal settings where cultural producers interact with each other as well with gatekeepers and other cultural incumbents (Currid, 2007). As the social environment is considered to be the most important mechanism for the cultural economy (Currid, 2007), urban areas are considered the predominant spots where arts and creative activities cluster (Wenting et al, 2011). According to Scott, the concentration of productive activities arise from three phenomena. Namely, networks of specialized and complementary producers, a large division of labor, and the interaction the participants of the cluster which may derive in learning and innovation processes (2011, p.300). The clusters that arise from these social interactions are beneficial to the participants, also called agglomeration economies. Some of these agglomeration economies include the possibility to engage in situations in which participation in projects, or ideas of projects, arise, thus advancing one's career (Currid, 2007). Moreover, sharing knowledge, information, and ideas that foster innovation and

creativity can be identified (Bathelt et al, 2004; Currid, 2007; Scott, 2011; Wenting et al. 2011). Despite the recognition of these benefits, it is important to acknowledge that these will be available to the people who decide to engage in socializing. Certain characters or personalities may be less inclined to do so, which may hinder their opportunity to benefit from these social exchanges (Currid, 2007).

2.3 Knowledge networks in cultural and creative production

Knowledge

In the production of cultural and creative activities, human capital is valued as the main resource for novelty generation and product differentiation. Human capital is considered the "analytical thinking, judgment and decision-making, fluency of ideas, social perceptiveness, capacities for interaction with others, and imagination as well as knowledge and expertise" (Scott, 2010, p. 115). However, this notion is also present in other sectors of the economy, where creative and cognitive skills are highly valorized. The term knowledge-based economy has been used to identify the importance of knowledge and technology for society based on the impact they have in productivity and performance (OECD, 1996). It describes the state of economies which are based and driven by knowledge as the main mean for production and exchange, and considers it a valuable resource which is continuously renewed, shared, and used (Dubina, et al., 2012).

Knowledge is considered a particularly valuable resource for competitive advantage in uncertain environments (Wasko & Faraj, 2005), which is the scenario of cultural and creative production. In economic terms, the performance of individuals and organizations appears to have become more dependent on their ability to create and use knowledge (Phelps et al., 2012). Beyond the impact on economic performance, knowledge plays an important role in many human activities since it is closely related to creativity, which is in turn important for novelty generation (Mumford et al, 2013; Scott, 2010). Mumford et al. (2013, p.249) define creativity as the "production of high-quality, original, and elegant solutions, to complex, novel, ill-defined, or poorly structured problems". In this sense, the acquisition of relevant knowledge and especially its further recombination and reorganization allows the creative workers to create new knowledge in the form of novel ideas (Mumford et al, 2013; Scott, 2010). Creative thinking, therefore,

originates with the knowledge and skills available through education, experience, and informal social exchanges (Scott, 2010).

Knowledge is comprised of intangible assets, operational routines, and creative processes in the form of new information, expertise, and ideas (Wasko & Faraj, 2005). Moreover, knowledge has two distinct levels, namely explicit and tacit knowledge. Explicit knowledge consists of articulated, structured, information that can be gathered and expressed through information technology (Ajmal & Koskinen, 2008; Saint-Onge, 1996). On the other hand, tacit knowledge is the unarticulated information we gather through our perception and experiences in the form of intuition, perspectives, believes, and values. It is highly valuable in our daily activities for it allows us to filter, interpret, and understand our experiences which in turn will affect our decision-making, behavior, and performance (Ajmal & Koskinen, 2008; Saint-Onge, 1996). There is a high importance in the renewal of tacit knowledge, as it allows further learning, i.e. to make meaning from knowledge. The Organization for Economic Co-Operation and Development (OECD) also provides a distinction between types of knowledge. They describe four different types, which can be grouped into the levels mentioned before: know-what, know-why, know-how and know-who. Know-what refers to knowledge about facts and information; Know-why is the scientific knowledge of the principles and laws of nature; Know-how involves the skills to do something; Lastly, know-who involves the information of social relationships that allows the connection with other individuals who possess certain knowledge and use it meaningfully. The first two correspond to articulated or explicit knowledge, the last two refer to unarticulated or tacit knowledge (OECD, 1996).

Both levels of knowledge are highly valuable, as they become important resources for our daily performance. However, it is in the interaction between tacit and explicit knowledge that new knowledge is created (Ajmal & Koskinen, 2008). As pointed out by Dhanaraj et al., "whereas explicit knowledge provides the building blocks, tacit knowledge provides the glue and integrating mechanism in learning" and the acquisition of both can happen simultaneously (2004, p. 430).

<u>Learning from others</u>

Learning through the exchange of knowledge amongst individuals happens when they are able to generate, access, and integrate new knowledge. Through the means of communication and socializing, they are able to detect the assumptions of

others, recognize their own assumptions, and understand how that affects their reactions (Bathelt et al, 2004; Saint-Onge, 1996).

Knowledge networks are formed by the social relationships of individuals, collectives, and organizations, who heterogeneously possess knowledge, and who based on their interactions are able to the search, create, transfer, acquire, and use knowledge (Phelps, et al., 2012; Powell, 1998). The interconnection or links between the participants of the networks can arise and develop in both formal and informal settings and relationships (Currid, 2007; Powell, 1998). It is through these connections that one actor is affected by the experience of others, in a learning process.

In such networks, one can identify two types of nodes: the knowledge that is exchanged, and the actors who exchange the knowledge, while exchanging other goods and services (OECD, 2013). However, membership or access to the network, although necessary, is not sufficient to engage in meaningful flows of knowledge. Learning from others in a network is a "complex, multi-level process" which requires the establishment of routines and norms that mitigate the risk of opportunism (Powell, 1998, p.231). Thus, the learning process also includes the understanding how to create the circumstances in which knowledge can be acquired and distributed. Important social processes such as sharing, interpreting, and combining information are important in knowledge exchanges or transfers (Argote, Levine, & Moreland, 2000). Furthermore, knowledge exchanges are possible when the individuals are able to understand and apply the knowledge they receive through common language and understandings, which poses a challenge in exchanges between people from different disciplines.

Academic research on networks and their social contexts argue that connectivity in a network fosters the transfer of knowledge amongst its members as they perceive the benefits or resources they acquire through those relationships (Inkpen & Tsang, 2005). Dhanaraj et al. (2004) found that relational embeddedness, i.e. the social ties that link two parties, plays an important role in knowledge transfers and has a stronger impact on transfers of tacit knowledge than those of explicit knowledge. Therefore, individuals acquire knowledge when they belong to a network, through connections to other individuals, and their relationships have positive characteristics (Nahapiet & Ghoshal, as cited in Wasko & Faraj, 2005). Positive characteristics in a relationship amongst members of a knowledge network

include a strong feeling of trust, commitment, and reciprocity. Most importantly, mutual trust plays a crucial role in facilitating exchanges of communication, "especially where exchanges of tacit knowledge are at issue" (Scott, 2010, p. 120). Trust is "the belief that an exchange earner would not act in self-interest at another's expense" (Uzzi, 1997 as cited by Dhanaraj et al, 2004).

Individuals who are structurally embedded in a social network of common practice are motivated to exchange knowledge when they expect that their contribution will enhance their professional development (Wasko & Faraj, 2005). Benefits can be very varied, such as division of labor, building up reputation (Wasko & Faraj, 2005), gaining new knowledge in strategic areas of their practice (Powell, 1998), establishing personal contact with important stakeholders and receiving any form of remuneration or compensation for their contribution (Scott, 2012), among others.

The endemic characteristics of both levels of knowledge pose different perks and challenges for their exchanges. Differentiating between tacit and explicit knowledge is important when looking at the exchanges between them (Dhanaraj et al., 2004). A close relationship to the person providing tacit knowledge makes easier the transfer of if, since it allows for better understanding, assimilation, and socialization (Uzzi, 1997, as cited by Dhanaraj et al., 2004). Tacit knowledge can only be transmitted through an active involvement of the party providing it, however, it does not require standardized processes. It is not easily codified and cannot be reverse-engineered easily (Dhanaraj et al., 2004). In contrast, since explicit knowledge is easily codified and transferred, even without the active involvement of the providing party. (Dhanaraj et al., 2004).

Following Phelps et al. (2012), the study of knowledge exchanges within networks has been assessed in previous research by looking into three conceptually different types of outcomes. Namely, the creation, transfer, and adoption of knowledge.

- Knowledge creation refers to the formation of new ideas, practices, products or services considered as new knowledge.
- Knowledge transfer refers to the diffusion of knowledge between actors.
- Knowledge adoption refers to the integration and use of acquired knowledge, which involves the decision to do so.

These outcomes are closely related to each other in the natural process of human cognition. It appears to be that new knowledge is facilitated by existing knowledge; it is by its combination, but also by the use of the pre-existing knowledge we can search, access, and understand knowledge. Moreover, "once knowledge is created, cognitive and other resources are needed to transform and translate it to facilitate its transfer, which is often necessary for discrete, embodied knowledge to be adopted and used" (Phelps et al., 2012, p. 1119).

Knowledge flows are also categorized based on the function they provide, (Snider & Nissen, as cited in Ajmal and Koskinen, 2008). 'Knowledge as solution' refers to the real-time transfer of knowledge to solve problems in a particular setting. 'Knowledge as experience' refers to the accumulation of knowledge for future use. 'Knowledge as socially created' refers to the knowledge that is created and shared among individuals in social relationships (Ajmal and Koskinen, 2008). In the last category, informal social interactions and communication embrace discussion, argumentation, negotiation, and decision that foster the creation and transfer of knowledge.

Learning in projects

The collaboration of individuals and organizations is vital to the creation and transfer of knowledge (Phelps et al., 2012). Collaborative efforts are commonly performed in the form of projects, a central way of organizing cultural and creative activities. Projects are often unique, uncertain, and complex (Ajmal & Koskinen, 2008) where a pool of people with different skills and knowledge come together to the realization of a set of objectives. Furthermore, they are often constrained in resources, such as time and budget. In these forms of organization, the effectiveness of the transfer of knowledge varies, as it depends on the capabilities of the team members to create, value, absorb, and share knowledge (Ajmal & Koskinen, 2008). In professional collaborations, a strong social tie can be identified by the extent to which the parties commit themselves to the exchange of emotional support, managerial expertise, and interaction time between them (Dhanaraj et al., 2004).

Ajmal and Koskinen (2008) describe the process of knowledge creation within a project in the following steps. First, the data is gathered and organized to produce general information. Then, it is sorted and structured to meet the project

requirements, i.e. contextual information. Later, the team members create knowledge by absorbing such information and transforming it by the means of their experiences, attitudes, skills, and perception and then use it in the context of the project. Hence, both levels of knowledge, tacit and explicit, come in an interplay in the process.

Maskell and Lorenzen (2003, as cited by Bathelt et al, 2004) argue that the transfer and recombination of tacit knowledge are best organized in the form of projects, where a pool of experts works collaboratively in a specific time with specific goals. However, limitations to these forms of organization and the extent to which knowledge is exchanged are also noted. Ajmal and Koskinen (2008) argue that the failure of knowledge transfers relies on the cultural factors of the organization that has come together to realize the project, more than the technological capabilities. The culture of an organization is the basic ideology of the team and is comprised by the shared values, managerial styles, ways of thinking, and approaches to problem solving (Cameron & Quinn, 2011). The basic dimensions of organizational cultures are the extent of flexibility or control that they enforce and the internal or external orientation of their activities; hence, more flexible teams have more horizontal structures which fosters knowledge transfers (Ajmal & Koskinen, 2008; Cameron & Quinn, 2011). In this sense, project collaborators often fail to process the information into knowledge, which compromises their personal effectiveness, as well as that of the projects. Ajmal and Koskinen also point out certain processes that foster knowledge transfer in project-based organizations. This is accomplished by assessing the project that ends, but also putting it to use in future collaborations. These processes can be done on an individual, group, or organizational level. The processes that foster knowledge transfer include to capture, sort, and organize knowledge and experiences gained in the project in order to apply it in future ones, in addition to creating a space of social interaction and communication, where explicit and tacit knowledge is shared and acquired among the incumbents. However, they also point out that these processes are often set aside by the pressure of the time and budget constraints, as well as the perception of a lack of benefit from the members to do so. Moreover, the managerial task of undertaking these processes often depends on the project leader (2008).

Conroy and Soltan (1998, as cited by Ajmal and Koskinen, 2008) refer to three categories of knowledge that are created in projects: Technical knowledge,

which comprises the techniques, processes, and technologies used within a project. Project management knowledge, which means the methodology used in the implementation of the project. And project-related knowledge, or the knowledge about the people and organizations relevant to the project and future projects.

As mentioned before, in fields of high uncertainty learning through interaction with other individuals and organizations is an important source of skills, ideas, resources and expertise, or in general terms, a source of tacit and explicit knowledge (Powell, 1998). Likewise, technology-related fields are also drawn to the use of collaborations to access new knowledge (Wallbank, as cited in Cox et al, 2004; Powell, 2008; Wasko & Faraj, 2005). This is particularly relevant for the context of new media art, the set of artistic practices that involve the use of technology and science, which is the focus in this study and is explained in detail in the following section. In this context "artistic research is distinguished from scientific and technological research by the fact that it is not a means of reflection and theory formation (like scientific research) nor problem-solving and product development (like technological research), but is itself a form of reflection" (Brouwer, et al., 2012, p.7).

2.4 New media art

New media art is an artistic genre that spans several disciplines, including but not limited to, visual and performing arts. In these artistic practices, art, science, and technology are inherently intertwined. Although other art forms may nowadays use technology at one point or another, new media art uses science and technology as a medium, instead of as a tool (Paul, 2008). Using technology as a medium also corresponds to a shift in the focus within the artistic practice, from the object itself to the process through which the artwork is created (Paul, 2008). The emphasis on the process of the artworks also concedes them to be part of continuous explorations, which opens up the possibility of many different outputs over time (Villagómez, 2017). New media artworks commonly have some of the following characteristics: they are dynamic, process-oriented and time-based, and may be participatory, interactive, immersive, collaborative, performative, modular, variable, generative, customizable, and networked (Paul, 2008; Gonsalves & Chan, 2013). However, confining it to a set of attributes will only be naïve and misguided.

The term 'new media art' is considered to be problematic to define (Kimbell, 2004; Quaranta, 2013) since it presents difficulties to describe the aesthetics of hybrid digital media (Paul, 2008). Moreover, other terms have been used to refer to artworks who are commonly named new media art, though the application of the term relies on the context where it is used and particular characteristics of the artwork themselves. Such terms include media art, digital art, and electronic art; or other more specific to a certain medium such as net art, software art or robot art. However, the art professional Domenico Quaranta regards most of these terms obsolete. He states that the terms media art and new media art as the most commonly used to describe these artworks, the first one being most used in Germany and comprising a wider range of media such as television, press and so forth (2013). In general terms, he suggests that a common agreement among art professionals and scholars is that new media art "is defined in relation to the media it uses, and it sets out to draw forth the social, political and cultural implications of those media" (Quaranta, 2013, p.30).

The term new media art is chosen in this study because it is widely employed by experts in their artistic curatorial literature. However, scholars and art professionals consider that despite the term being problematic, one of the best qualities of the genre is the freedom that arises from a lack of a delimited definition (Paul, 2008), as the constant evolution of digital technologies opens up new possibilities for the creation and the experience of art. Furthermore, new media artists often work with different media and other artistic and scientific disciplines, which makes their practices and explorations difficult to be confined to one term over time. The broadest consideration when talking about new media art relies on the use of computational algorithms to produce, store, and present the artworks (Paul, 2008). Technology in this practice is used in the methodology of the creation of the artwork, their context, and their content (Baker, as cited in Cook & Graham, 2004). The exploration with digital technologies in this field is characterized not only by the use and development of new applications, but also by their distortion and reconfiguration that invites to the reflection of the implications such technologies have in the social and cultural realm, and the interaction we have with machines and technology (Brouwer, et al., 2005).

The origins of what is now called new media art are rooted in the technological advancements during and after the Second World War that allowed to

process and store data (Gere, 2004). Hosted by academic institutions, the development of digital technologies led to experimentation with the technical and aesthetic capabilities of the media. Suchin (2004) argues that during the 1960s changes around the conceptualization of "art", such as immateriality, interactivity, and a desire to distance it from formal art institutions led to the emergence of new media art. Decades later, in the 1990s, the commercialization of personal computers and the availability of the internet outside the academic world encouraged the development of the genre. It is also around the middle of this decade that the term new media art begins to be employed by art and media specialists to refer to the convergence of the mass media, the new capabilities of data processing, and its intersection with art, and not only to any emergent or new media that became available (Quaranta, 2013).

The production of new media artworks, therefore, involves the use of a wide range of knowledge and inputs from diverse fields, mainly science, art, technology, and design. These inputs are often gathered, researched and developed by the means of collaboration between interdisciplinary teams of artists, designers, technicians and scientists (Brouwer, et al., 2005). In new media art, both tacit and explicit knowledge are in a constant interplay because artists do not only make use of available technology or create new technological configurations, but they also delve into the implications and connotations of technology to our society, which involves a reflective process.

The interdisciplinary approach of new media art also poses understanding and linguistic barriers, as the artists delve into new fields with different terminologies and concepts (Nigten, 2005, p.87). In these scenarios, the acquisition and creation of knowledge become highly relevant. Artists can overcome these situations by delving into the study of other fields, and by the social interaction with other actors who together build conceptual and technical bridges of understanding.

Furthermore, new media art's hybrid nature poses certain difficulties to its integration into the traditional contemporary art world and the traditional exhibition spaces (Quaranta, 2013). In this sense, knowledge networks in new media art have been fostered in part out of necessity to create spaces and situations in which the interplay of art, science, and technology is researched and shared through wide collaborative networks (Druckrey, 2005).

2.5 Collaboration in new media art

Although not restricted to the genre, collaboration is a common and important practice in new media art. Following its interdisciplinary nature, collaborations often involve the contribution of actors from different fields and backgrounds, such as artists, scientists, and technicians. Creative and technical collaborations are present in different phases, from the conceptualization and production to the presentation and discussion of the artworks. The extent of these interdisciplinary collaborations changes from project to project and the explorations may pose new challenges. The involvement of artists in the scientific and technical aspects of the artworks depend not only on their own skills and knowledge but also on the extent to which they decide to acquire new knowledge. Although some artists in the field opt to cede the technical production of their works to specialized collaborators, for some others the nature of their works have led them into the adoption of new knowledge and skills and their further specialization. The process-oriented nature of new media artworks also leads to a constant reconfiguration or ramification of the projects (Brouwer, et al., 2005; Villagómez, 2017). However, these collaborations often have undefined boundaries, posing difficulties to determine the authorship of the artwork (Gonsalves & Chan, 2013).

In engaging in projects, new media artists develop linkages among the people, organizations, and institutions that support their creation. The networks that arise from these collaborations are self-organized in order to maximize their possibilities (Cadwallader, 2004). The interdisciplinary character of new media art has led to the establishment of institutes and artistic laboratories supported by both the private and public sectors, by the means of art funds, and scientific programs (Brouwer, et al., 2005).

In a fast-paced evolving environment, such as digital technologies, collaboration networks are an important source of knowledge for cultural producers (Cox et al, 2004). These collaborations are not only limited to a physical space or setting, but they often happen through the means of electronic networks. Electronic networks are an important source of information in our present where people with similar interests gather in forums, online groups, and other electronic spaces where common themes are discussed. The exchange of knowledge in electronic networks seems to be rather different than in physical interaction, as the sense of reciprocity

from the one receiving the knowledge is not predominant, but the reciprocity is generalized throughout all the members of such networks (Wasko & Faraj, 2005). For many new media artists, mainly those whose primary practice is based online, electronic networks become also a place where their artworks are showcased and recognized.

Inter- and transdisciplinary collaborations

As was pointed out before, the production of artworks in new media art involves the input from different disciplines. These hybrid integrations of knowledge are commonly referred to as inter- and transdisciplinary. These approaches to collaboration, however, are common to many areas of practice that recognize the need to gather knowledge from different disciplines to approach complex phenomena (Villagómez, 2017) The distinction of these terms relies upon the extent to which the involvement of different disciplines is framed. Namely, interdisciplinary practices are those which integrates knowledge from two or more disciplines in a process of analysis and synthesis to approach problems in a mutually interactive way, to form a new perspective where the boundaries of each discipline are blurry (Fawcett, 2013). Transdisciplinary practices are the comprehensive integration of different disciplines that create a common new structure to approach problems and together conduct the research to its solution. They are the fusion of "the natural, social and health sciences in a humanities context, and in so doing transcends each of their traditional boundaries" (2006, Choi & Pak, as cited in Fawcett, 2013). People from different disciplines combine inputs from either closely-related or distant disciplines and inherently share their knowledge. The implication of these approaches to artistic research is a vast amount of knowledge, coming from different disciplines into a particular set of explorations. Although the level of involvement of these people may vary from project to project, the transmission and adoption of knowledge are necessary to attain the objectives of such explorations and reflections.

2.6 Literature summary and conclusions

As the literature review shows, complex social encounters happen between people with different backgrounds and knowledge in the production of new media

artworks. The social networks that arise from these interactions can be identified in cultural and artistic practices (Potts et al., 2008) and are the central point of departure to analyze the knowledge processes that are involved in new media art. These networks evolve into knowledge networks when the creation, transfer, and adoption of knowledge arise between the actors. The knowledge networks are affected by the endemic circumstances of cultural production, in general terms, but also respond to the particular dynamics of the hybrid genre of new media art. The extent to which this happens has not been yet been studied in the context of cultural production in new media art. As these artists are exposed to different disciplines with different actors, their learning processes become an interesting case. The following diagram aims to simplify the focus of this research.

New media artist's social network

Transfer and adoption of knowledge

Tacit knowledge

Explicit knowledge

Creation of new knowledge
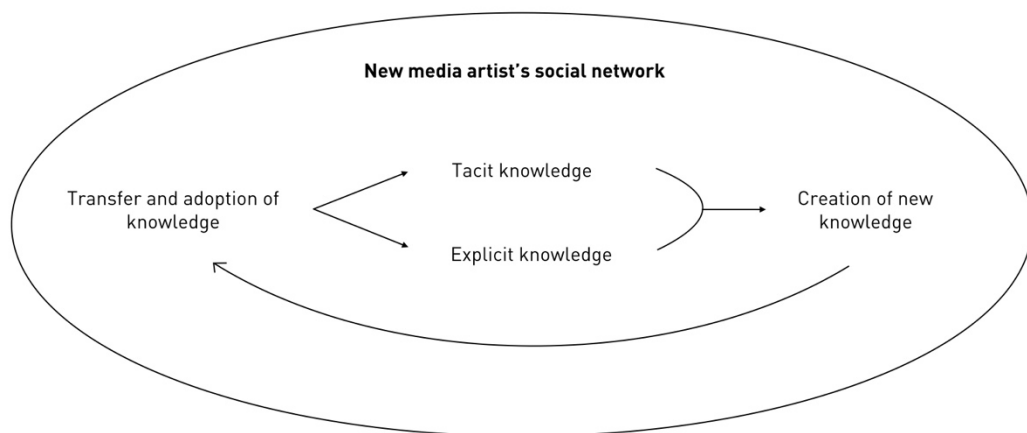
Source: Own elaboration

Anni Garza Lau (2012). Environmental Disturbances.

Interactive video installation and brainwave sensor.

3. Aims and objectives

The aim of this study is to answer the main research question:

To what extent do social networks of new media artists foster processes of creation, transfer, and adoption of knowledge?

In order to answer this question, some sub-questions where developed. Their objective is to explore and study the composition of the networks and how they access them. Furthermore, the study of the motivations to exchange knowledge, the learnings that they perceive, and the contexts which positively influence the knowledge processes between them. These sub-questions are stated as:

- How do new media artists access social networks?
- What are the motivations perceived by new media artists to engage in knowledge processes with their social networks?
- What are the learnings that new media artists perceive from the interactions with their social networks?
- Which contexts foster the creation, transfer, and adoption of knowledge for new media artists and their social networks?

4. Method

This chapter describes the operationalization of the presented research. In the sub-sections of this chapter, the research strategy and design are explained, followed by a description of the chosen method and data collection. Moreover, the empirical setting for this study, Mexico City, is further discussed and directly related to the sample and the sampling technique. Finally, the process of data analysis is clarified.

4.1 Research strategy and design

Firstly, in order to conduct the research inquiry that drives this study, a qualitative research strategy is followed. This approach is best suited for this study because it aims to understand the extent to which new media artists' social networks influence knowledge-related processes, who the actors within the network are, and how they learn from each other. Since the social network of each artist may differ

from one another, alongside with their individual capabilities to gain knowledge from the networks, the artists' responses may contain too many nuances to be expressed in quantifiable data. Moreover, their perception of the studied processes may also be different. This choice was made with respect to Bryman's statement (2016), that qualitative strategies are useful when the interest is to assess and understand how individuals interpret their social environment, from an epistemological point of view. And when, from an ontological point of view, it is considered that the interaction between the individuals constructs the social phenomena that are looked into.

Secondly, this study follows a comparative design with the aim to contrast the multiple cases of new media artists in relation to the social phenomena that the research question aims to explore. Bryman argues that a strength of a comparative design is to "allow distinguishing characteristics of two or more cases to act as a springboard for theoretical reflections about contrasting findings" (2016, p. 68). By contrasting the findings for each of the cases, the goal is to understand the characteristics in which new media artists learn from their social networks and seeking similar and contrasting positions and opinions in regard to the topics of the study.

4.2 Method and data collection

Since the main interest consists of the understanding of the extent to which new media artists create, transfer, and use knowledge through the interactions with other individuals in their social networks, the expression of their own perspectives is of great importance. Qualitative interviewing is helpful in assessing a person's attitudes, values, and opinions, and their interpretation of experiences, events and understandings (Byrne, 2012). To do so, the study employed in-depth semi-structured interviews. That allowed to adjust questions for each interview accordingly with regard to the flow of individual conversations.

Following the findings from the literature review, knowledge has two levels, namely tacit and explicit. Tacit knowledge is not so easily structured, therefore qualitative interviews are a method of inquiry that allows for depth in the answers provided. New media art is a wide and variant genre thus, artists often do not have similar goals when engaging with others, as well as learning goals. Semi-structured

interviews allowed the researcher to grasp these nuances and to guide each interview in a 'personalized' way, without missing any crucial information.

Furthermore, the flexibility that the semi-structured interviews have, thanks to the lack of strict boundaries, helps to gather information about what the interviewees find relevant instead of forcing them to go in one direction.

The literature review also represents a building block for an interview guide which was constructed as an outline to conduct the interviews. The questions were designed to cover the main topics of inquiry, without giving too many hints to the interviewees in order to avoid possible biases in their answers. However, the questions and topics were presented to the interviewees in a different order, according to natural flow of the conversation with each interviewee. Furthermore, in some occasions additional questions arose during the interviews if the conversations reached particular topics which became relevant or if the interviewee asked for a rephrasing of the questions for better understanding. The main interview guide can be consulted in Appendix A.

Next, matters of evaluation criteria that arise from qualitative research studies are explained. Following Bryman (2016), the most common criteria of internal validity, external validity, reliability, and objectivity are more common to quantitative studies but have parallel criteria for qualitative studies. The latter are the ones used in this study. The respective parallel criteria are credibility, transferability, dependability, and confirmability. In terms of credibility, Patton argues that it is achieved in the extent to which rigorous methods and techniques of sampling, data collection, and analysis are applied. Also, the presentation and honesty of the experience of the researcher is important (1999). These issues were addressed by presenting the research to the participants in the right context with complete honesty of the purpose of the study (See Appendix C). Furthermore, the findings of the study are solely based on the information provided by the interviewees, based on the methodology presented in this section. Also, the researcher required deeper explanation from the participants when the responses were slightly vague, in order avoid misunderstandings. In addition, the interviewees were disposed to do follow up interviews or questioning if needed. In terms of transferability, this study explores the context of artists' work and their cognitive processes, therefore many individual view and personal details were encountered. However, the findings are not meant to be generalized beyond the specific research context. In order to provide transferability

to this research, a rich description of the sample and context are given to make it possible for other researches to apply the results in other contexts. Dependability in this study is achieved by providing a record of how the research was conducted and supported by the interview guide and codebook found in appendixes A and B, respectively. Lastly, confirmability refers to the objectivity of the researcher in conducting the study. Although this is impossible to attain in a perfectly complete manner, as the interpretation of the data is also possible by the researcher's own cognitive capabilities, the research is conducted in good faith, avoiding that personal biases interfere with the findings, and taking all the different opinions expressed by the participants into account, without omission of certain voices. Finally, in order to address this research with compliance of ethics in the research, participants were given an informed consent form to read and agree to. It consists of a brief description of the subject, details of their participation, the observable risks of their participation and solutions to avoid them were provided. The form, which sample can be consulted in Appendix C, was sent to the participants before the interview and the details were discussed during the interviews.

The interviews were conducted via online video or audioconferences and were recorded and transcribed, with the prior permission of the interviewees. For matters of confidentiality, neither the recordings nor the transcripts are published but the researcher holds a copy of them to support the findings.

4.3 Empirical setting: New media art landscape in Mexico City

The study is focused in the context of Mexico City, the capital city of Mexico. As the main city in the country, it has led the conversation about art and technology. Although there is an active practice in some places in the rest of the country, the infrastructure and institutions established in the capital city have facilitated the exchanges and explorations around new media art, since most of the main institutions and organizations who address art, science, and technology are localized there. The creation, exhibition, and documentation of new media art in Mexico City appears to be a collaborative effort between different actors, namely artists, scientists, public institutions, and art organizations. Moreover, Mexico City hosts most of the exhibition spaces for new media art in the country (Villagómez, 2017). The most notorious ones are the Centro Multimedia, Centro de Cultura Digital,

Laboratorio Arte Alameda, and Museo Ex Teresa Arte Actual, all of which are owned by the Mexican government. Nevertheless, new media art has found a diverse set of exhibition and research spaces, both online and offline. Therefore, the practice cannot be confined to specific places nor institutions.

Similarly to other countries, the histories of new media art in Mexico began in academic environments where innovation, research, and development of technologies and their applications are fostered. The first explorations are considered to have been made by Manuel Felguérez in the early 1970s in a computer lab in the National Autonomous University of México (UNAM, from Spanish Universidad Nacional Autónoma de México) and what is considered the first exhibition in 1988 hosted by the Metropolitan Autonomous University (UAM, from Spanish Universidad Autónoma Metropolitana) (Villagómez, 2017). In 1994, the National Center for the Arts (CENART, from Spanish Centro Nacional de las Artes) was created by the Mexican government. As one of the core divisions of CENART, the Multimedia Center (from Spanish Centro Multimedia) was created as a space where the relationship between art and the new technologies is fostered through experimentation, exhibitions, research, and education programs (http://www.cenart.gob.mx).

Recently, the support towards the inter- and transdisciplinary relationship between art, science, and technology has been expressed by academic and federal institutions (http://www.dgcs.unam.mx/boletin/bdboletin/2017_845.html). In December 2017, an agreement between UNAM and the Secretariat of Culture (from Spanish, Secretaría de Cultura) was signed. In the agreement both parties commit to the creation and development of what was named 'the art, science and technologies program' (from Spanish, Programa arte, ciencia y tecnologías). In this manner, they seek to endorse and finance inter- and trans-disciplinary projects that involve the use of technologies into artistic endeavors, their research and exposure. The agreement also considers the formalization of a collaboration network with cultural organizations and academic institutions in the field, both on a national and global levels. This includes building a network of collaboration with Ars Electronica, based in Linz, Austria, one of the main organizations focused on art, science and technology. These efforts come at the right time since there is a lack of attention and funding to the research, documentation, and preservation of the new media artworks. This need was publicly expressed in the Liverpool Declaration, by the Media Art History

platform, and was signed by many different actors involved in art, science, and technology across the globe (http://www.mediaarthistory.org/declaration).

Mexico City represents an interesting empirical setting to conduct this study for various reasons. First, although Mexico City is a place where the creation and exhibition of new media art is thriving, very marginal research has been done in the country (Villagómez, 2017), including the city. Second, by looking into the knowledge processes in these practice, conditions that support learning processes can be created, which are beneficial for the cultural sector and the economy at large. This is supported by the results of an economic survey developed by the OECD which refers to the Knowledge Economy Index developed by the World Bank Institute that represents the development of the countries towards a knowledge-based economy. In 2012, Mexico was placed at the bottom of the OECD countries based on this index. The OECD includes the recommendation to improve the skills and knowledge among the Mexican society (OECD, 2017). Thus, by exploring the learning processes of a dynamic and interdisciplinary practice such as new media art, other fields in the cultural sector and the economy where collaboration is important can explore new ways in which knowledge and creativity can be fostered in the country.

4.4 Sample and sampling method

To carry out this research, a purposive sampling was used. Snowball sampling is the purposive sampling method of choice, therefore, it began with establishing contact with a small group, and asking for their recommendation on other artists that could fit the research. This type of sampling suits this study because of its focus on social networks. The initial group consisted of two new media artists in Mexico City known to the researcher from previous cooperation. Three additional artists were contacted through secondary contacts. After interviewing this first pool of interviewees, and parting from their recommendations and proposals, other artists were approached and invited to participate. The invitation to participate was sent over electronically, mainly via email and Facebook private messages between March and April 2018. The interviews were conducted through video or audio conferences held between April and May 2018.

Snowball sampling also helps to validate the definition of the participants as new media artists, since not only self-determination but also external social

recognition is important for the creation of meaningful creative works (Scott, 2010). Therefore, by recommending other artists, the first elements of the sample recognize others and their work as belonging to new media art practices.

The following graphic represents the way in which snowball sampling was conducted. In order to ensure anonymity, the interviewees are not identified by the codes used in this study.

```
                                          ┌──────────┐     ┌──────────┐
                                          │ Artist 2 │─────│ Artist 9 │
                        ┌──────────┐      └──────────┘     └──────────┘
                        │ Artist 1 │                       ┌──────────┐
                        └──────────┘                       │ Artist 10│
                        ┌──────────┐                       └──────────┘
                        │ Artist 4 │                       ┌──────────┐
                        └──────────┘      ┌──────────┐     │ Artist 11│
                                          │  Artist  │─────└──────────┘
     ┌────────────┐                       └──────────┘     ┌──────────┐
     │ Researcher │                                        │ Artist 12│
     └────────────┘                       ┌──────────┐     └──────────┘
                                          │ Artist 8 │     ┌──────────┐
                                          └──────────┘     │ Artist 14│
                                                           └──────────┘
                                          ┌──────────┐     ┌──────────┐
                                          │ Artist 3 │─────│ Artist 13│
                        ┌────────────┐    └──────────┘     └──────────┘
                        │ Secondary  │    ┌──────────┐
                        │ contacts   │    │ Artist 5 │
                        └────────────┘    └──────────┘
                                          ┌──────────┐
                                          │ Artist 6 │
                                          └──────────┘
```
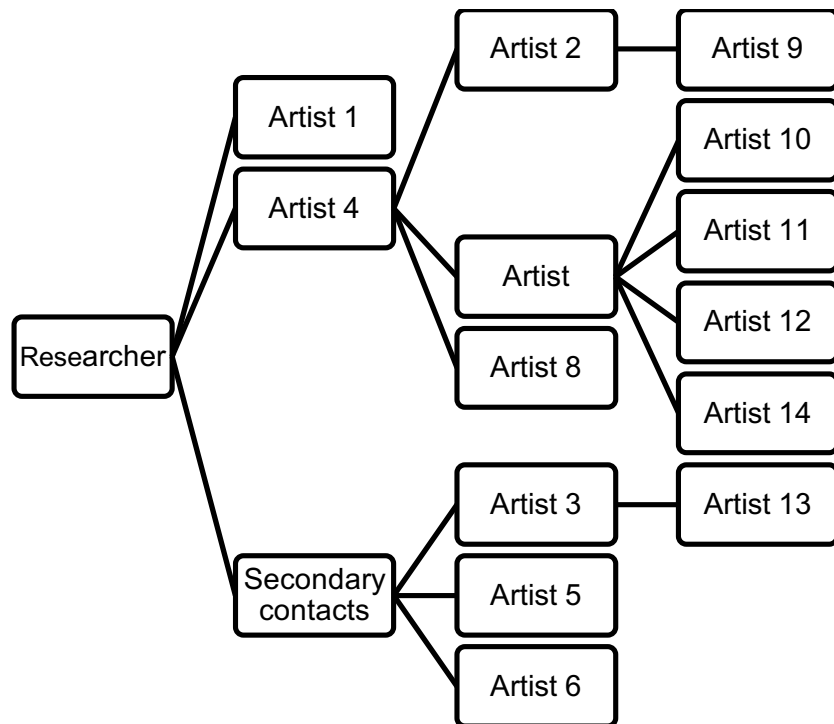
Source: Own elaboration

The composition of the sample consists of people who are involved in artistic practices with the use of science and technological media. For the purpose of this study, new media artists are defined as creative producers that recognize their practice within the umbrella term of new media art and, in accordance to the literature review, those who use digital media to produce, store, and present, their artworks. Since the boundaries of new media art are blurry and often new media artists move through and across the use of different digital media and technology, no specific requirements were established in this sense. The self-recognition as 'new media artists' is assessed during the invitation to participate in the study, making the interest for artists identified by this genre or practice explicit.

Furthermore, the sample considers artists who regardless of their origin, have a strong bond between Mexico City and their artistic practices. All but one of the artists interviewed reside in Mexico City and consider it their main place of practice. The only exception is an artist who is Mexican but now resides in Barcelona. The decision to include this participation was taken based on the fact that through the sampling method of snowball sampling described, she was referred to by one other artists as someone with a great input relevant for the study. The decision to include her participation is based on the fact that she has had a strong and constant development in Mexico City in the past, and continues to do so by keeping strong connections with individuals and institutions in the capital city of Mexico. Furthermore, since this study is looking into networks, this presents an example of how networks work. In total, fourteen new media artists are interviewed.

4.5 Data analysis

The information gathered through the interviews was interpreted by doing a thematic analysis. It consisted in the creation of categories, sub-categories, and codes that form part of the themes addressed in the research question and sub-questions. The coding technique was mixed, as it includes codes that were decided a priori and, after the first reviews of the interviews, emergent codes were integrated. All the codes constructed are informed by the literature review. Two broader themes were established, namely new media art and knowledge networks. The first one aimed to build a contextual reference for the artistic practices and backgrounds of the participants, as well as to recognize similitudes or contrasts with the information of the literature review. The second theme, knowledge networks, comprise categories that address the access to knowledge for new media artists, a brief description of the actors that belong to their networks and how they got to meet such actors. Also, it includes the categories that refer to the type and level of knowledge that new media artists perceive to learn from their social relationships, as well as the contexts in which theses social cognitive processes are fostered.

Then, the analysis of the data proceeds with finding patterns among the responses. The patters arise in the extent to which the topics presented in similar, contrasting or frequent ways. The coding book used in this research can be consulted in Appendix B.

Salvador Loza (2018).

Fitness Plan + Plastic Surgery + Dream Holidays.

Render 3D

5. Results and discussion

5.1 New media artists in Mexico City

This section aims to describe some of the characteristics of the artistic practices performed by the interviewees in order to create a comprehensive point of departure for the analysis of the data. The artists' background is also provided in order to stress differences among them. Furthermore, some of the characteristics of inter- and transdisciplinary collaborations are emphasized since they constitute an important role in the exchange of knowledge in new media art.

5.1.1 Artistic practice

Already from the literature review it is apparent that it is very difficult to draw strict lines between artistic practices in new media art. Simply naming the use of certain technologies is not enough, as one of the main interests is the reflective use of technology. Moreover, artistic explorations often involve the use of different technologies. In order to gain more knowledge about their careers, the participants of the study were asked to give a brief introduction to their artistic practice and to point out whether they identify themselves with some genres or disciplines. The majority of the artists interviewed have worked with many different media, and therefore, confining their artistic career in this sense is pointless. Few of them were more specific about the type of media they use, mostly, those who have a shorter artistic career. However, they coincide with the rest of the sample in the sense that using a set of terms could not completely cover the extent of their work.

Nevertheless, the underlining characteristic of the artists interviewed is that they use digital technologies as media to create, store, and exhibit artworks and that their work mainly relies upon the intersection of art, science, and technology. The most notable characteristics of new media artworks, as was also outlined by Paul (2008), are consistent with the descriptions given by the artists. The most prevalent characteristics in this study were artworks which are participatory, interactive, immersive, collaborative, performative, and generative.

The artists with more experience explained that their interests have changed over time. In the early stages of their career, they were primarily interested in the

technologies they could use to create art but as their careers advanced the focus shifted towards more conceptual and critical interests. As a result, the technologies took on the role of a medium to say or express a certain message. This shift, as was also pointed out in the literature review, is in line with the process-based focus of new media art (Paul, 2008). The most predominant description of the artistic practice of the interviewed new media artists is the reflective use of technology and the use of interdisciplinary collaborative efforts that are put together in an artistic work. In the words of the interviewee 7:

> When there is a participatory design methodology, there are certain rules that everyone has to acknowledge and accept in order for the design to be possible. '…' In the end, all the collective effort may be done to turn one LED lamp on. Though the important thing is not if the LED is turned on at the end of the experience, but what you can comprehend or experience in the process. (Interview 7)

Interestingly, three artists in the study used the metaphor of a LED lamp to describe the importance of the process in new media art, regarding the final apparent result of the lamp turning on less important than the process of creating the artwork itself. The focus on the processes was also noted in the constant reconfiguration of their artworks. The new media artists emphasized the rework and further manipulation of the artworks, for different ideas spring while their explorations and interests evolve.

5.1.2 Inter- and transdisciplinary practices and collaborations

As explained in the literature review, interdisciplinary collaborative work in new media art is common practice. The findings recognize that this form of organization is widely adopted by new media artists, in the forms of artistic collectives and project-based collaborations. However, only one artist expressed that he has not been able to work collaboratively as often as he would like, despite his intentions to do so. He ascribes this to his own personality, since he considers himself to have difficulties to engage in the social processes that allow these collaborations to happen, which in turn may be hindering his artistic career. Socialization skills are of great importance to the people in the art world to foster

their careers with other artists and gatekeepers (Currid, 2007), thus, lacking this abilities may hinder the artistic career. However, for new media artists this poses an extra effort, since the opportunities of socialization crosses to other disciplines where other behaviors and values are important.

For the vast majority, however, the collaborative teams are formed by people who provide different perspectives, skills, and inputs. In this sense, two concepts that were often expressed were inter- and trans-discipline. These approaches to collaborative work were introduced in the literature review and have a strong impact in their creative processes and outcomes. The artists in the sample regard them as important means to learn from different disciplines, which affects their creative processes by the recognition and understanding of different inputs over the same topic. These approaches allow them to combine different ideas and perspectives into critical reflections, ideas, and productions. Ultimately, it is by these constant transfers that they build a creative identity or profile in which different disciplines are inclusive, or even transversal. This is also part of the reason why it is so difficult to assign stable labels in new media art.

The interdisciplinary approach is conceived as natural to the practices of new media art, as their projects are both artistic and technological explorations, and often span over different artistic disciplines. However, those artists who recognized a transdisciplinary approach were those who have participated in an informal educational course called Tránsitos, held by the Centro Multimedia. Tránsitos is a transdisciplinary course in artistic research, experimentation and production. Its first edition was held in 2008 (http://www.cenart.gob.mx/2018/01/transitos/). Nearly one third of the participants of the study attended the course at a certain stage of their careers. This course appears to have had a strong impact in the artistic approach of those who attended it.

Inter- and transdisciplinary research has been regarded as important approaches to many disciplines (Fawcett, 2013). This value is recognized by new media artists and it is exemplified by interviewee 11:

> In general, I believe that this is the future not only for the arts, but of all sciences. It is not just that art can learn from biology or other sciences, it is also science and technology which can learn from the methods of artistic production. '…' It is an important way of working because one needs many

perceptions about the world and when one only has one it is easier not to be creative. In the end, being creative is to combine ideas. (Interviewee 11)

Thus, knowledge transfers in these forms of collaborations are reciprocal and include tacit and explicit knowledge, and in line with the literature review, the combination between these two creates new knowledge. As mentioned by this interviewee, by engaging in artistic projects, professionals in other sciences could acquire new forms of knowledge which could be replicated in non-artistic explorations.

The following summary lists different disciplines with which the participants of the study have worked, however, it is important to keep in mind that this list is by no means extensive, nor exclusive, as many other disciplines may have been involved in their inter- and transdisciplinary approaches. In the field of arts, the main disciplines with which the new media artists expressed to have worked interdisciplinary are music, dance, theater, and poetry. In the field of natural sciences biology, neuroscience, physics, and mathematics were pointed out. Lastly, from social sciences, psychology, political science, and sociology were named.

In addition, the involvement of different disciplines for new media artists happen even when looking at their own personal set of skills and knowledge, since they come from different backgrounds, a matter that is discussed below.

5.1.3 Artists' background

The findings show that the educational or practice-based backgrounds of the interviewees differ significantly. Although not all of them have an artistic educational formation, they converge in the sense that they come from disciplines that involve creativity and the constant flow of ideas in their learning processes. The background disciplines for the sample are philosophy, art, music composition, visual design and multimedia communication, architecture, and industrial design. More importantly, they all have moved through and across different disciplines throughout their artistic practice. The main common characteristic is that they have developed skills in digital technologies, mainly in the use of computational languages.

5.2 Access to knowledge for new media artists

Most of the interviewed artists emphasized the importance of the ability to be self-taught throughout their practice, particularly in the early stages of their careers where the search for technology-related knowledge is most present. However, it is an attitude that they carry along through their practice. The acquisition of technical knowledge also poses a constant learning challenge. The findings show that new media artists are quite aware that the constant and rapid change in digital technologies makes it difficult for them, if not impossible, to stay up to date with technological advancements. This was expressed particularly in the context of new technological tools and languages that emerge, as obsolescence in the old technologies implies obsolescence in the knowledge which is confined or specified to a particular technology. As one interviewee explained:

> We give a higher importance to conceptual knowledge than to technical knowledge. This is because one of the lessons we have had in working with new media is that there is great obsolescence in technical knowledge. If you base your practice on the latest technologies you are always going to be chasing behind it. (Interviewee 10)

Moreover, all the artists recognized and emphasized that constant research is fundamental to their artistic practice. They gather knowledge from communication channels that provide structured information, i.e. explicit knowledge, such as video tutorials, manuals, non-fiction books, and other resources which they commonly find online. Other sources of research were also identified, particularly in search of inspiration for creative endeavors. They often mentioned that one of the main sources of ideas, i.e. tacit knowledge, is found in other creative contents such as fictional books, movies, music, and dance performances. Although this has been a common source of inspiration in the history of art, it is important to emphasize that new media artists are also close to this sources of inspiration and express these sensibilities with their high technological involvement. In this sense, they do not grant a higher value to certain disciplines. As expressed by Interviewee 10:

We are interested in having a great diversity of subjects who can come into the discussion and where, even though we work with new media, the tool is not regarded a higher importance above other types of knowledge. So, there are times in which reading a science fiction novel is more interesting than reading a manual. (Interviewee 10)

A common interest which was identified is the reflection of the implications of the use of technology in our society, specifically how technology affects our daily lives and the possibilities for social transformation it represents. Hence, of the main sources of tacit knowledge, is found in the different perspectives on our society by the means of observation of current behaviors, policies, attitudes, values, and aesthetics. This knowledge, however, is mainly accessed and shared through the discussion of it with others, mainly those who are closer to them or who become closer in their research purposes. As this is the main topic of interest of this research, it will be explained in greater detail in the following sections.

5.3 New media artists' knowledge networks

Knowledge networks of new media artists are formed by the social relationships they establish with actors from different backgrounds and with whom they engage in knowledge exchanges. In the sample several groups of people were identified and are arranged in order of the frequency in which they were mentioned. A brief description of each group is given, in order to clarify the relationships the artists established with them.

Other artists

The findings suggest that other artists, both national and international, are the most frequent groups of people with whom new media artists exchange knowledge. In it, some sub-groups were identified in the findings. It is suggested that the most frequent type of actor who new media artists consider to be part of their knowledge networks are other artists in Mexico with whom they collaborate. The relationships with this group were regarded with high relevance for all the participants of the sample and have permeated their professional and social lives. In some cases, these social relationships evolve into professional relationships, in the form of artistic

collectives. The professional partners of those artists who have establish this form of organization for their artistic endeavors are also deemed important, since the conversations that arise between them are most frequently directed to problem-solving situations which need a flow of knowledge between them. Moreover, collaborations with other artists abroad also create important relationships for the exchange of knowledge. Lastly, the artists who were enrolled in a professional art or design education programs referred to their former colleagues as important connections, in terms of knowledge exchanges.

The role of other artists, in general, is important in the cognitive processes of new media artists as there is a constant flow of information, skills, and ideas between them. This finding is in line with the arguments expressed in the literature review, which state that the production of cultural goods is done in a social context and social relationships spring from these encounters, as a way to cope with the challenges of creative and cultural activities. Interestingly, further social connections between the artists from the sample were noticed during the interviews, beyond the connections already known to the researcher by the use of referrals typical to the snowball sampling technique. In many cases, some artists in the sample mentioned each other without knowing that they were all part of this research. This points out that cohesive communities are built by new media artists as their practices foster connections between them.

Naturally, actors from other disciplines are also part of the artists' knowledge networks. They are people from other fields or disciplines which new media artists have encountered mainly in the research process of their production. They are regarded as important actors in their knowledge networks, particularly when they are involved in inter- and transdisciplinary explorations, as the conversations provide the exchange of new knowledge. This group mainly involves natural and social scientists whose work includes artistic research, and holds important and specific knowledge.

Institutions

Certain institutions were sometimes also regarded as important actors who influence the artists' knowledge processes. Particularly, these are places where new media artists gather for specific purposes but at the same time they are exposed to natural socialization processes. Moreover, the people working in these institutions are also considered to be important actors of the social networks in the extent to

which they are able to drop the bureaucracy boundaries and are willing to socialize with the artists they encounter.

At large, national public art and culture institutions are considered important institutional actors in the knowledge networks of new media artists. In this category, the most influential institutions in Mexico City are Centro Multimedia of CENART, Centro de Cultura Digital, Fábrica Digital El Rule, which opened its doors in 2017, and the network of Fábricas de Artes y Oficios (FAROS), a network of cultural and formative spaces in Mexico City. The museums Ex Teresa Arte Actual and Laboratorio Arte Alameda were mentioned among important places too. Nonprofit art organizations, especially galleries and research centers, also play an important role as actors in the networks. They are places for research, production, and exhibition of artworks where important social processes happen.

Additionally, some international art and cultural institutions in Mexico City have become important places for the exhibition of new media art. Therefore, those institutions have developed relationships with the either artists because they have given them an opportunity to exhibit in their premises or because they have relevant programming in their activities that attracts them. The most influential institutions of this sort are Spain's Cultural Center (known as Centro Cultural de España, in Spanish), Goethe Institute, French Institute for Latin America (known by its acronym in Spanish, IFAL).

To a lesser extent, international cultural institutions placed abroad and other Mexican government dependencies were mentioned, however, the main involvement with them resides in economic support for the creation and presentation of artworks in Mexico and abroad. Also, the formal educational institutions that some of the new media artists attended were regarded as important, in the sense that they have offered support and networking opportunities.

On the institutional level, it is noticeable that those institutions and organizations which are devoted to art, offer a space and shared interest for new media art are the most relevant. It is important to notice, however, that some artists expressed having little involvement with institutions because they do not perceive them as a place which would foster their artistic careers. That applies especially to artists focused on virtual spaces.

Other actors

The findings suggest that there are also other actors important for the generation of knowledge for new media artists. These include their friends and families who mainly provide emotional support and resources, particularly when the artists lack the means to fully support their artistic creation. Also, their life partners were regarded as meaningful sources of knowledge. The proximity between two people enhances the ability to share and provide feedback, and partners can eventually even become collaborators. Although these actors were mentioned less frequently, the nature of the relationships suggests the social ties with them are stronger.

Other actors also include professors from formal educational programs, whose influence in the early stages of their artistic careers is important. Lastly, creative workers, people who are not involved in creative processes but that are in contact with artistic creation and are also sources of knowledge, as they provide new perspectives and new skills to the creative production.

These findings suggest that the social networks of new media artists , which evolve into knowledge networks by the exchanges of knowledge, extend throughout the economic system, as it is argued by Potts et al. (2008). Moreover, they cross over regional borders. All artists expressed that their networks expand over the national territory and unto international regions. International networks have been accessed through the means of projects and in two particular cases through the enrollment in formal education programs abroad.

5.4 Access to social networks

Building on the presented literature, social networks evolve into knowledge networks when knowledge processes become part of the relationships. In order to map the avenues how new media artists to access or create their social networks, a detailed review of the main sources of access is provided.

It is important to mention that regardless where the artists meet the different actors, the most relevant action in which they establish relationships beyond establishing contact is through an active dialogue with them. This general finding is in accordance with the literature review which stated that the creation of signals and information flows characteristic of social networks are possible through active communication. The conversations between the artists and who they meet are what

fosters social ties. These ties may evolve into connections of knowledge networks as dialogues evolve, common interests are found, and the intentions to share knowledge arise. Therefore, the circumstances and situations in which they meet are of high importance, as they may either foster or hinder dialogues and exchanges of knowledge.

In addition, the personal socialization abilities of each member are different. Although all of them are aware that the social relationships they have are not only a source of knowledge but also foster the advancement of their careers, for some of them these social processes are not so easy to perform. Whereas some artists regarded themselves as talkative social persons, others recognized personal lack of networking abilities. These findings are in accordance with those of Currid's work (2007). In this sense, some artists may experience difficulties in broadening their social networks.

Access to networks through electronic platforms

For almost half of the artists interviewed, electronic platforms have provided access to social networks in a significant way, particularly in the early stages of their careers. This was especially important for the artists whose creative work is predominantly visual and highly related to virtual spaces, such as that of net art, glitch art, video art, and virtual reality. This might seem obvious, as the nature of their artworks can exist comfortably in those virtual spaces, however, they go beyond being spaces in which they show their work, and observe other people's work, to spaces where they create relationships and further knowledge exchanges. As one of the interviewees expressed:

> Above all, the digital or virtual spaces '…' have been very fertile spaces for me because I have a constant feedback all the time, and also inspiration with all the flux of images and art that the net hosts. '…' I am replying to questions, and also sending messages to the artists that I am interested in. In my particular case, the net and virtual spaces are where I have found a fertile terrain from which I father contacts. (Interviewee 5)

The electronic social networks which were mentioned include social media platforms such as Tumblr, Facebook, Instagram, and MySpace, as well as

independent virtual galleries. Virtual galleries and communities are important places of reunion for these artists as they share these spaces with artists with a similar aesthetic, technical or ideological interests, and can easily extend the reach of their social networks into international communities by engaging in conversations relevant to their practices. For example, one of the interviewees expressed how she discovered online communities when she started her practice and how they influenced her:

> I started to research and I encountered a whole internet community, not of Latin people but American and European people who had been doing a lot of glitch art and it is a huge community online. On Facebook, there are about 80,000 people who are called the Glitch Artists Collective. '…' From there I started to get to know a lot of people, all through the internet. Also in these groups, I noticed Mexican and Latin-American members and we started talking and eventually did virtual exhibitions together. (interviewee 8)

In addition, the importance of virtual spaces is also emphasized by the perception of the lack of physical spaces to exhibit artworks, such as galleries or museums. Hence, new media artists started using virtual spaces to cover these needs. It is by the use of the existing electronic platforms, such as those mentioned before, or by creating their own, that artists have found a place where their artworks are displayed. One of the interviewees expressed this motivation for collaboratively creating a virtual space with other artists:

> I started the creation of an online gallery '…' which arose from the lack of spaces that were available to this type of things '…' We generated a whole universe for ourselves, an alternate reality for us in which our things could be displayed. (Interviewee 3)

In essence, electronic networks constitute important places for new media artists. For some artists, they have had a crucial role in their careers, however, everyone mentioned the use of electronic networks to communicate, in one way or another, with their social contacts. This is obviously an endemic characteristic of our

current society and permeates our personal and professional lives as they affect our social interactions and the way we organize our professional activities.

Access to networks through social events

Many social connections arise from the encounters new media artists have in social contexts. The findings suggest that attending social events fosters new relationships for new media artists. This finding is aligned with Currid (2007) who argues that the social milieu is of high importance for the cultural economy to flourish. Indistinctly, these events may be of a formal or informal kind. Formal events, such as exhibitions, symposiums, conferences, are mostly hosted by institutions. Informal events can take many shapes and forms but these are endemic social environments which foster new connections.

Access to networks through institutions

For most of the new media artists involved in the study, institutions have played a major role in how artists' social networks are formed. The main types of institutions that have played this role are the educational institutions, art and culture public institutions, and other governmental dependencies which offer specific support programs for artistic creators.

The majority of the interviewees have been involved with art and culture institutions and recognizes that their personal approach to the institutions predominantly corresponds with the need for spaces in which new media artists can explore their particular interests and creative processes, and expose specific types of content and ideas. Nevertheless, as was reviewed in the previous section, not all the artists find in these institutions such promising places to foster their artistic practices.

Worth noticing is the fact that new media artists encounter other people with the same needs through their coincidence in institutions. In attending these places, the address common needs they consequently develop further relationships which are often developed to informal settings. The ways in which different institutions provide the opportunity for access to social networks is discussed below.

One of the main ways in which new media artists access networks in the institutional context is by attending educational platforms, both formal and informal. The majority of the artists interviewed, all but one, mentioned that their involvement

in educational activities has been one of the main sources of contacts who later become part of their social networks, whether they were the instructors or the attendees of such activities. The institutions that hold these platforms become facilitators for the development of relationships as they put together people with similar interests and curiosities in a particular learning context.

On the one hand, informal educational platforms were most frequently regarded as important places to foster these connections. These include workshops, talks, courses, conferences and other informal educational activities held by specialized cultural institutions. New media artists have attended these programs in a search for gaining a deeper involvement with new media art. Access through networks in these contexts happens in a very natural way, as artists meet in places where specific themes relevant for the practice of new media art are exposed. Moreover, as these programs have an interdisciplinary approach, many different types of actors are drawn. The new media artists who have been part of such activities have taken different roles, namely as instructors or as attendees.

More than half of the artists in the sample have taken the role of knowledge facilitators in these platforms, some of them have even specialized in inter- and transdisciplinary educational activities. This finding is interesting in a way that they are willing and committed to engage in knowledge transfers. Moreover, the uniqueness of their profile encourages the programmers of such activities to invite them repeatedly. Regardless of whether the artists were attendees or facilitators in these programs, these are spaces in which new social ties are formed. This highlights the importance of such spaces, not only by their formative character but also by the social and further learning opportunities they represent. As one of the interviewees mentioned:

At one point the most interesting thing for me was not the course nor the knowledge I would get from the course, but meeting someone who may know a more and getting together to learn together. (Interviewee 12)

On the other hand, formal educational activities are also spaces in which some new media artists have developed some of the most influential contacts, although to a lesser extent, compared with informal programs. This suggests that by

attending courses and workshops more focused on their particular needs, new media artists meet people with similar interests and needs.

Cultural and art institutions have also provided access to networks in other ways. Around one-fourth of the artists in the sample have held jobs in some of the most important art and cultural institutions in Mexico City which support new media art practices. All who have held a position within these institutions consider it one of the main catalysts for their access to national and international social networks directly involved with art and technology. One of the interviewees commented on this manner:

> Centro Multimedia is the main (new media) art institution of the country, so basically, every new media artist has been there in one way or another. '…' For me, it was a great entrance to meet other people. And it is also evidently linked to other (institutional) spaces. (Interviewee 11)

Finally, the organizations and institutions that offer arts and cultural funds offer also something else than the economic or material support. One of the most relevant benefits is that they provide access to a network of artists from many disciplines who are also recipients of the financial support. In addition, the visibility that the support provides, helps them gain more recognition and thus a higher chance to construct wider networks, both on national and international levels.

These findings show the relevance of public and private institutions and organizations which are dedicated to the field of new media art. It is in such settings that new media artists get to know other people with common interests and begin relationships which can evolve into knowledge exchanges.

Access to networks through projects

The findings of the research confirm that the main way to access networks for new media artists is through the projects in which they work, which was also pointed out by Potts et al (2008) and Scott (2010). As mentioned in the literature review, creative collaborations in new media art are most commonly interdisciplinary, and may also involve people which coordinate non-creative tasks. The constant

reconfiguration of the individuals involved in teams allows them to expand their networks in accordance with the nature of such projects.

When engaging in projects, new media artists also look for different collaborators who they believe to have fruitful contributions. In these searches, artists access potential collaborators with the help of references from their existing contacts. In these situations, recognition and reputation of their artistic practices become key factors in accessing new networks.

Also, the findings highlight that in some cases, when the collaborations have been successful, the core members in collaborative teams tend to establish more stable relationships as previous good experiences lead the way to further collaborations, and often evolve into the formation of artistic collectives.

Additionally, the access to networks is not only mediated through the people involved in the project, but also through the interaction that arises when project's output is presented, either in virtual or physical spaces. Ultimately, this final step in the project process, the recognition of their work by other actors, has become crucial in accessing new networks.

It is important to mention, that there is a natural overlap in the different ways of accessing networks that evolve in knowledge exchanges as soon as artists engage in collaborations. For example, they may get to know certain people in institutional contexts with whom they exchange ideas and perceptions, but it is through the decision of collaborating together that they get involved in richer knowledge exchanges.

The extent to which the artists are selective in engaging in projects seems to be related to the expertise they have. In other words, those artists who expressed not to be selective in the projects where those who are in the initial stages of their careers, as they grasp almost every opportunity they are offered. On the other hand, the most experienced artists also expressed not to be selective, but for other reasons. The interviews show that as their careers advance and develop unique profiles, they are offered projects with specific characteristics. Time constraints and resources become the main criterion in the decision making process of whether to agree to a specific project.. Still, the main consideration for all artists when involving in a project is the ideology behind it. This includes the ideas and objectives set in the project, and the context in which it is going to be developed. In fact, this type of selectiveness helps them create their unique profiles and areas of expertise. This

finding corresponds with Scott (2012) who argues that cultural producers partially build their identity through the projects they perform. The underlining ideological characteristic that new media artists look for, according to the interviews, is whether the team holds shared exploration interests. In this sense, the most important aspect is whether the project holds a critical approach to the intersection of art and technology. Also, when they are invited to participate in other projects, the extent to which they are granted artistic freedom has significant influence in their participation as they may set other rules to compensate for this lack.

Beyond the ideology of the project, most of the artists in the study make an evaluation of the projects to decide whether or not they will participate in them. The people who will be part of the project, who ultimately affect their social and knowledge networks, are also deemed important. Evaluating a project based on knowing who may participate in it is in itself a form of tacit knowledge, as pointed out by the OECD (1996). Previous experiences with the people involved in the project are naturally decisive factors. Moreover, the characteristics of the relationships they have with the people involved in the project, which will be developed a further section, play an important role in the decision making as these positive relational traits foster better knowledge exchanges.

Access through online collaborations

As mentioned before, online communities and spaces have been relevant for some of the artists interviewed and the interaction with some of the people they have met online has moved forward into collaborations. Almost one-third of the participants of the study have developed in online collaborations. In order to understand the differences they perceive between these types of collaborations and those that happen in physical spaces, and how these affect knowledge exchanges, further inquiry was made.

The initial stages of online collaborations apparently happen through the exchange of ideas, i.e. tacit knowledge, and references of other works, i.e. explicit knowledge, between the parties. From there relationships can further grow. However, many of these exchanges end before coming into the completion of an artistic artwork. Nonetheless, when they reach a certain point in the relationship, organizational skills become relevant to reach the results they are looking for. Besides the stronger relational embeddedness noticeable in face-to-face

collaborations, two main differences are present in online collaborations. The first one has to do with the time in which these collaborations are developed, as they are perceived to be done with a stronger sense of immediacy. The second one refers to the uncertainty that the lack of physical contact creates, which arises from all the incomplete attempts of collaborations mentioned before. However, establishing these online relationships opens up for further networks, as stronger ties are created.

By being involved in artistic collaborations, new media artists naturally engage in knowledge exchanges, as the work evolves. The interviews uncover that that the main reason for new media artists to collaborate is the inter- and transdisciplinary interests of their artistic endeavors. As pointed out in the literature review and the first section of the results, new media artworks utilize elements from different disciplines. This poses a challenge, as the knowledge and skills of one artist rarely cover the needs of the project. Moreover, new media artists recognize the value that arises from collaboration with different people, as they take part in learning processes. These knowledge outcomes, that is the creation, transfer, and adoption of knowledge is analyzed in the following section.

5.5 Knowledge exchanges

5.5.1 Motivations to engage in knowledge exchanges with others

The findings of this study suggest that t the main reasons for new media artists to exchange knowledge are generally based on the willingness to transfer and acquire knowledge from different disciplines. They are highly driven by the curiosity to learn from other fields, particularly when they are looking for ways to develop projects on ideas but lack the knowledge to fully develop them. Also, new knowledge helps them develop new ideas and perceptions that inspire their creativity. As supported by the literature, the transfer and acquisition of new knowledge allows them to expand their cognitive abilities and skills, especially when these processes involve tacit knowledge in the form of ideas or perceptions.

Also, most of the interviewed new media artists expressed their willingness to share the knowledge they have with other people. Many of them do so in formal settings such workshops, courses and other informal educational programs, where they take the role of knowledge facilitators. These educational programs most

frequently happen in institutional contexts. The institutions which have extended an invitation to these artists include formal education institutions such as universities, and the art and culture public institutions which focus on new media art.

Being involved in knowledge exchanges ultimately affects their artistic development. However, the process of moving the relationship from having mere contact with someone and to further developing it to allow knowledge exchanges is not always driven by a clear intention to do so, since other factors come into play.

5.5.2 Knowledge outcomes: The creation, transfer, and adoption of tacit and explicit knowledge with others

From the interviews, it becomes clear that new media artists are able to create, transfer, and adopt knowledge from the interactions they have with people that belong to their social networks. As explained in the literature review, these processes are closely interrelated (Phelps et al., 2012), as it was confirmed during the interviews. Therefore, the findings in this section approach them in an interconnected manner. In order to understand the nuances of these processes, an analysis of the distinct levels of knowledge, and the different knowledge-related outcomes follows.

In terms of different levels of knowledge, i.e. tacit and explicit knowledge, the findings suggest that new media artists give a greater importance to the exchanges of tacit knowledge when interacting with the actors of their social networks. For instance, they are more interested in having conversations about the ideas, experiences, and perceptions that spring from a certain technology than about the technical aspects of it.

However, in some occasions explicit and tacit knowledge are not really apprehended separately since both types of structured and unstructured information may arise in conversations. For example, when they are part of informal educational programs they transfer and acquire both types of knowledge, as they learn, receive, and share not only structured information, but also ideas, perspectives, and make new contacts with other people, all of which are forms of tacit knowledge.

In order to assess their learnings, the following findings are arranged in order of the frequency in which each type of knowledge was identified during the interviews. The findings suggest that the most frequent type of tacit knowledge they receive and share through the interaction with others are further social relationships

or access through social networks which is labeled by the OECD (1996) as 'know who'. This was identified in every interview, although it was hardly conceived and explicitly expressed as knowledge. The most frequent type of tacit knowledge artists perceive to learn from others are different perspectives. This includes, different points of view and new perspectives from other disciplines. This type of tacit knowledge was expressed by one interviewee in the following statement when talking about transdisciplinary collaboration with a dancer:

> When I was trying to be understood, and trying to understand the other, I had to start moving. '…' And in that moment, other realms of knowledge open up and go through you, which allows you to expand your language, your perception. It might appear to be unprecise but that is the most exciting thing for me '…' to open up different ways to know, discover, or perceive the world which have been set aside by the hegemonic forms (of knowledge), so to say. I believe that it happens there, where it cannot be put into words, where it is not so precise. (Interviewee 12)

The findings also show that for new media artists social interactions are sources of inspiration and sharing of ideas. This type of knowledge is noteworthy, as creativity and novelty arise from it. Conversations allow them not only to receive new ideas but also to take stock of their own and perhaps arrive to unexpected conclusions. As interviewee 4 expressed:

> Having a good idea is fundamental '…' Arriving to a good idea, in any context not only in art, becomes easier and more natural with an external input, through sharing of ideas. (Interviewee 4)

Additionally, an essential ability obtained in these interactions is to know how to work in collaborations, especially in interdisciplinary scenarios. In those scenarios they have learned how to create a common language that allows for the understanding of a same issue from different perspectives. Lastly, they also learn on an emotional level which allows them to analyze situations and learn how to react in emotional situations. Following the literature, these are all forms of tacit knowledge apposite in social contexts as they allow new media artists to create circumstances in which more knowledge can be gathered and shared.

Explicit knowledge is also part of these social processes. The most frequent type of explicit knowledge identified was technical knowledge relating to particular technologies and disciplines. Also, artists and their social contacts are constantly exchanging other sources of knowledge relevant for their projects, such as books, videos, or music, which can trigger the new creation of both explicit and tacit knowledge. Lastly, but very seldom mentioned, some artists have learned managerial skills from their social relationships, which includes knowledge about project management, documentation and production, which is referred to by the OECD(1996) as 'know-what'.

As explained in the literature review, the interaction between explicit and tacit knowledge produces opportunities to create new knowledge. From the interviews, it seems clear that the creation of new knowledge through engaging in conversations is mainly achieved through sharing ideas, giving and receiving feedback. Receiving feedback about their work is an important source of information for new media artists as they are exposed to other perspectives but it is also a form of recognition. As one interviewee stated when talking about showing his work to collaborators and acquaintances:

> It is important to show your work to others. Because psychologically, you put yourself in a relative distance to your own work, '…' Constantly showing your work to a group of people helps you to identify your own deficiencies, or your strengths. (Interviewee 4)

The social learnings that happen through feedback also happen in direct collaborations. These formal interactions allow new media artists to create new knowledge by a communal construction of knowledge. In inter- and transdisciplinary collaborations they are exposed to and contribute to a collective accumulation of previous knowledge that has to be processed to form new knowledge. As one artists who is involved in these experiences shared:

> The interesting thing is to nurture all the knowledge from diverse perspectives to the resolution of problems '…' It is not only a matter of putting every knowledge on the table and mixing them. We had internal creative processes in which we each shared what we knew and how we did something, but we allowed others to speculate in which ways they can approximate each other's perspectives and contribute to each other's disciplines. (Interviewee 7)

Learning involves the decision to adopt new knowledge into further practices. The findings suggest that this selectiveness in adoption of knowledge happens more often in exchanges of explicit knowledge. However, the exposure to other perspectives and ways of working influences the way in which the artists approach their own work. In this sense, the knowledge inputs they create and gather from previous collaborations is acquired and used in different contexts. However, the decision to use the knowledge they have gathered also corresponds with their own interests.

> I believe it is a type of knowledge that is always in movement. '…' I could say that none of the ideas I have developed are mine, all of them have sprung through the contact with other persons. (Interviewee 11)

The use of explicit knowledge is more straightforward as acquisition of new technical skills is often directly put into application. The interest in getting this type of knowledge corresponds with specific gaps in their own skills which they need to perform their creative activities. However, some artists expressed that in some cases, technical skills also function as vehicles to foster tacit knowledge in their learning processes.

> There are times in which technical resources, as the one you talked about with a friend a week ago, allow you to develop something, including ideas. '…' I do believe that I apply technical skills as a vehicle and as a source of inspiration to create certain artworks. (Interviewee 4)

As reviewed in this section new media artists are involved in knowledge transfers as they share and receive tacit and explicit knowledge with the members of their social networks. However, the context in which the diffusion happens affect the extent to which they do so. The findings about these circumstances are discussed in the following section.

5.5.3 Contexts of knowledge processes for new media artists

Knowledge processes within a network are fostered under certain circumstances. As seen in the second chapter, communication and socializing depend on certain characteristics of the settings and relationships that allow the social processes of sharing, interpreting, and combining information; to transfer, adopt, and create new knowledge. This section aims to understand the characteristics of relationships, settings, and strategies that are perceived as benefiting knowledge processes.

The most prevalent finding suggests that establishing a dialogue not only fosters the access to networks, as discussed before, but is the most valuable communication channel to share knowledge. This might seem obvious, but the extent to which two persons can start a conversation which develops into knowledge exchanges requires more than just talking to each other. Certain aspects of relationships cultivate conversations when knowledge is concerned.

The findings suggest that in line with the theory, the relational embeddedness between two actors, i.e. social ties in a relationship, and a mutual feeling of trust play major roles in knowledge exchanges for new media artists. Most of them recognized that they learn most from those with whom they have a close relationship which is built on mutual trust. The findings show that strong relationships are further created in the extent to which the following personal traits, emotions, beliefs, and values are present in the relationship, regardless of whether the relationship is based online or offline. The following table orders them by frequency and accompanies them with a brief description for better understanding.

Table 1: Positive characteristics of relationships

Relationship trait	Description
Openness to share and receive knowledge	Being open and flexible to share and receive knowledge. Particularly relevant in the case of tacit knowledge, where the distant perspectives and ideas are shared.
Shared interests	Having similar topics and explorations of interest.
Integrity	Particularly mentioned in the context of work teams and projects. It implies being able to be part of a positive work environment and being held accountable to perform their own tasks, e.g. sending information when they agreed to, payments, having high standards to the work they are performing.
Respect	Avoiding nocuous judgements towards different opinions and perspectives. Valuing each other's time, work, processes.
Affection	Being comfortable and having a good time together, often shown in friendly relationships.
Reciprocity	Having a mutual benefit from the relationship and the exchange of knowledge. Highly related to respect and trust. Being open and willing to help and share the other in return.
Critical thinking	Having reflective conversations and a critical approach towards the subject in question. Being objective and argumentative.

Curiosity	Showing eagerness to learn together. Being attentive in the conversation.
Recognition & valorization of each other's work	Realizing the value and having admiration for each other's work and knowledge.
Empathy	Learning by seeing each other's perspectives.
Honesty	To express the real intentions of the collaboration, project, and/or conversation.
Clarity in communication	Being able to communicate and transmit information clearly. Particularly in cases of explicit knowledge.

Source: Own elaboration

On the other hand, holding prejudices, such as social, gender, and racial ones, is a significant negative characteristic that hinders any relationship and it was brought up with special emphasis throughout some of the interviews.

The positive characteristics detailed in the Table 1 allow the development of horizontal relationships, which was proven crucial for new media artists. This is closely related to the organizational culture of project teams, as explained in the theory, but it also pervades informal relationships. In these relationships dominant roles are diluted which relies upon sharing values, attitudes, and approaches to problem solving during conversations.

> Sometimes it is difficult when two persons from different disciplines talk because there is always a hierarchy, whoever has the most arguments wins. However, when horizontality is achieved, everything becomes richer, there are less prejudices. It does not matter if someone does not know something,

they will not be treated badly, everyone is learning and has something to contribute. (Interviewee 2)

In horizontal relationships no one tries to impose power or knowledge over the others, attitudes which are generally perceived to be exhausting and demotivating. Some artists use the involvement of different strategies in their managerial styles which aim to reduce the elements of hierarchy in a conversation. It was found that reaching horizontality is particularly important in inter- and transdisciplinary conversations, as one interviewee expressed:

It is in horizontality where there are no longer power struggles, but there is a common interest in traverse the knowledge of the other. '…' In such spaces the knowledge of the other is recognized, the other recognizes my knowledge, we recognize the mutual interest '…' that opens up the world. (Interviewee 12)

Therefore, new media artists expressed the need and goal to create spaces and situations where many opinions are gathered and listened to. Achieving these situations involves the effort and commitment from all the participants to learn how to create them. Courses such as Tránsitos, provide the learning skills that become valuable assets which new media artists carry on throughout their careers. Nevertheless, providing this knowledge does not depend solely on institutions, but on the active practice from the participants. It is in the active participation where both explicit and tacit knowledge converge, to create new forms of collaboration, thus new knowledge. As one interviewee who is deeply involved in the intersection of education, art, and technology explained:

Collaborative work is not something that can be learned through reading. I mean, theory obviously gives you tools, perspectives and all that, but it is only by its action that it is learned. (Interviewee 7)

When exchanges of knowledge happen in projects, respect and commitment towards the team involved in the project become crucial for most new media artists. These values and attitudes contribute towards coping with the uncertainty natural for the production of cultural goods.

I believe that it is important to learn how to work, respect, and create from disagreements. We can disagree but be together, and maybe produce disagreements, instead of agreements. (Interviewee 12)

The findings also show that for most of the artists spatial proximity between actors facilitates the attainment of such conversations and dialogues. However, having shared interests, expressing honesty, respect, and commitment that enhances trust between actors, may compensate the risks perceived in online relationships. Moreover, the inherent immediacy in communication provided by the electronic tools of communication were expressed to become important for most of the artists in the sample.

With regard to formal and informal relationships, the findings do not show a clear distinction. What they do show, however, is that strong relationships move from one role to the other, as formal collaborations often involve friends and other close actors. Hence, when deciding to collaborate in a project, affection is one of the main decisive matters, after the ideology of the project. One of the artists expressed the blurry boundaries of informal and formal relationships in new media art in the following statement:

Through this type work we aim to bring technology to an affective place, where we think of technology through the lenses of community. In this sense it would be strange if our own community didn't have affective bonds. (Interviewee 10)

In terms of settings, both formal and informal seem to be important for knowledge exchanges for new media artists. However, most of them expressed that an informal environment allows people to feel more comfortable to engage in conversations where tacit knowledge is exchanged, as it enhances horizontality in the relationships. They achieve this by meeting in informal settings, or by creating an informal atmosphere within a formal setting. The last strategy is represented by the following artist:

When we organize talks, one of the ways in which we break down formal schemes is by providing coffee or other amenities to all the assistants. These

might appear as very simple gestures but in one way or the other they break the division between who is from the organization and who is an attendee. This allows for a different type of conversation and the reunion becomes much closer. (Interviewee 10)

Other important informal spaces for artists are those that have a recreational character, such as social gatherings, parties, and concerts. It was generally recognized that it is in these informal spaces where many meaningful conversations with their social networks happen or where they have met other people. In this sense, and in alignment with Currid's work (2007), recreational activities and spaces are both places where artists meet new actors, engage in conversations and further knowledge exchanges, particularly those that involve tacit knowledge.

The development and implementation of methodologies or strategies within projects fosters the flow of knowledge between team members. However, only a few of them implement them in their projects. Only three of them implement formal strategies. These include, the use of shared folders in which all the information about a project is put together by all members of the team with the intention to provide a common base for all the participants. This strategy was regarded with great importance, as it is done for every project in its previous stages. Also, the elaboration of the project's dossier containing a chronological review of the events and useful notes that help them prevent errors in future undertakings. In these strategies all three categories of knowledge that arise in projects are explicit, namely knowledge concerning technical information, the methodology used in the project and the important actors in the project are assessed (Ajmal and Koskinen, 2008). The findings show that these strategies are implemented when there is a cohesion between the participants of the project, as detailed reflective processes are easier to implement.

A Triple (Fermin Martinez, Tonalli Villalpando) (2015)

Flujo [Nowhere/NowHere] laboratorio escénico interdisciplinario.

Photo : Olaf E. Rueda / Hypotenuza

6. Conclusions

This research set as a goal to explore the extent to which the social networks of new media artists foster processes of creation, transfer, and adoption of knowledge. It used the setting of Mexico City because of the empirical research gap found in the literature that documents cognitive processes for this artistic genre and for the need to analyze and stimulate knowledge-based activities in the country.

The findings suggest that, in line with the literature review on Potts et al. (2008), the social networks of new media artists expand throughout the economic system. The main actors in the networks with whom they are involved in knowledge processes seem to be artistic collaborators who have similar artistic interests. The merge of different disciplines in new media art expands the horizons of the networks and thus the knowledge they can obtain and create. The inter- and transdisciplinary projects and collaborations are better performed when the relationships are characterized by horizontality and therefore power and knowledge hierarchies are diminished. It is of great importance that the new media artists and the teams with which they collaborate are able to create the conditions in which these dynamics can flourish. These findings implicate that the new media artists also rely on their social skills to contribute to their own acquisition and creation of knowledge. However, the social skills that foster these cognitive processes are those which allow them to develop deeper relationships, as trust and relational embeddedness encourage these exchanges. Social ties are both informal and formal. However, in line with the literature review, relational embeddedness is greatly fed by strong feelings of trust and affection. This also confirms the relevance of informal settings where informal relationships are created, pointed out by Currid (2007).

The results also agree with the literature in terms of the points of access to social networks, which is mainly through projects. As the social ties that develop in this form of organization become stronger, they have a great influence in knowledge transfers. Additionally, projects depend on these knowledge exchanges to be fulfilled. Also in line with Scott (2012), being selective in the projects they wish to engage with builds their own identity, which in new media art was found to be complex by the different nuances that arise by their interdisciplinary profiles.

Furthermore, the research found that institutions with a focus on new media art are of great importance for the genre, because it is a place where new

relationships can be cultivated. Further, they are taken out of the institutional context. However, the perception of access to these institutions was found to be quite different for some of the artists. This also uncovers the need for more inclusive linkages between institutions or organizations that can extend these benefits for other new media artists. Additionally, electronic social networks were deemed important for the creation and development of social relationships that can affect knowledge, aided by the wide reach of these networks and the low barriers to access them.

The extent to which artists engage in social relationships where knowledge is involved highly depends on the characteristics of the relationships themselves. This supports the literature on knowledge networks which states that relational embeddedness is highly important. An underlying feeling of trust is essential for the developing of relationships in knowledge networks. Furthermore, the findings in this study suggest that for new media artists, achieving horizontal relationships is crucial as they foster the exchanges of knowledge and provide a nourishing environment for creative thinking. These types of relationships are characterized by active participation and dialogues between the actors where different skills, ideas, and perspectives are welcomed.

The findings of the study suggest that the actors that belong to the networks of new media artists contribute greatly to the transfer, acquisition and creation of knowledge by developing social ties that foster these processes between them. This is particularly relevant for processes where tacit knowledge is involved. In line with the theory, new media art practices go beyond of the mere use of skills in technology into reflective processes that require a critical analysis. In general, artists in new media art rely on constant processes where knowledge is created and shared. This is because of the endemic search for novelty in artistic practices and the interdisciplinary nature of the genre. By the interaction with their social networks, artists are able to conceive different perspectives which allows them to form their own arguments, by the reconfiguration of explicit and tacit knowledge. It seems that new media artists rely on others to obtain knowledge which is otherwise more difficult to obtain, such as varied ideas and perceptions, but also highly specific explicit knowledge. Thus, although to a lesser extent, explicit knowledge is also part of these social processes. Interdisciplinary collaborations, where both tacit and explicit knowledge are transferred, acquired, and created are therefore the best

scenarios for the flourishment of the genre. Furthermore, these forms of collaborations often could have great implications for other sectors of the economy in Mexico and foster the creation and transfer of knowledge.

The research approached an unexplored subject of high relevance for the understanding of the cultural production that intersects art, science, and technology. The findings of this research generally confirm the literature that was presented in the second chapter and provide interesting and detailed insights about the way in which learning processes are carried out by new media artists in the context of Mexico City. Additionally, they allow the understanding of how these actors in the cultural sector perform in a context of uncertainty, characteristic of the cultural sector. Moreover, these learnings are not confined to the creative production alone but it is something which they adopt in their lives and effect other their performance in several societal situations. In this sense, their knowledge and processes are valuable for the society at large.
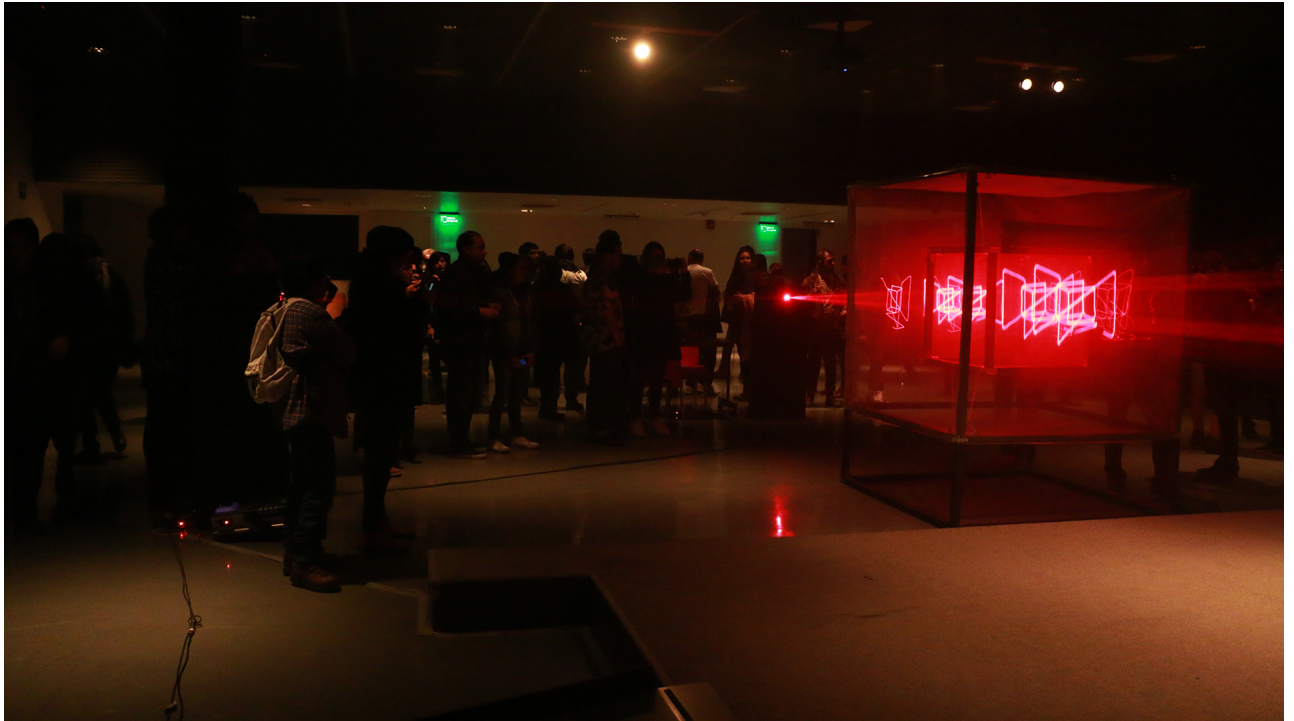
Z_vektor (2012) Multivektor_ .

Audiovisual Performance Installation. Laser projection on tesseract structure.

7. Limitations and further research

The main limitation of the study is mainly its difficult generalizability. The sample size of the study is too small to extrapolate the results to the broader population of new media artists. Furthermore, the learning abilities of the interviewees are also influenced by their broader contexts, which may vary in the same or another empirical setting.

With regard to the replicability of the results, the limitation resides in the fact that the results are also influenced by the interpretation and learning abilities of the researcher. Moreover, the replicability of the study is also limited by the flexible nature of semi-structured interviewing which lacks strong procedures to replicate. Also, the ethics of the study limits the researcher to make the transcripts public so the analysis of the results can solely be acknowledged by the interpretation of the researcher.

Other limitations could include the lack of boundaries of the artistic genre that is subject of this study, new media art. As the term and the practices are not strictly delimited, the definition of the sample cannot be done in a precise way.

The main avenue for further research visible to the researcher is the exploration of a similar study in another empirical setting. This could be done by exploring a different region in Mexico, including participants from all over the country, or another region of the world. This would help to understand the phenomena better by contrasting results from different locations.

Further research could also include the exploration of knowledge networks of artistic interdisciplinary practices from another point of view, for instance, from those who are mainly involved in the scientific disciplines. This would help get a better understanding of the interdisciplinary work and how knowledge flows happen.

Other lines of research could include the exploration of the same social and cognitive research but for other genres of artistic practice and contrasting the similarities and differences among different cultural producers.

Fluiridium
Instalación interactiva / fotosensores, sonido reactivo
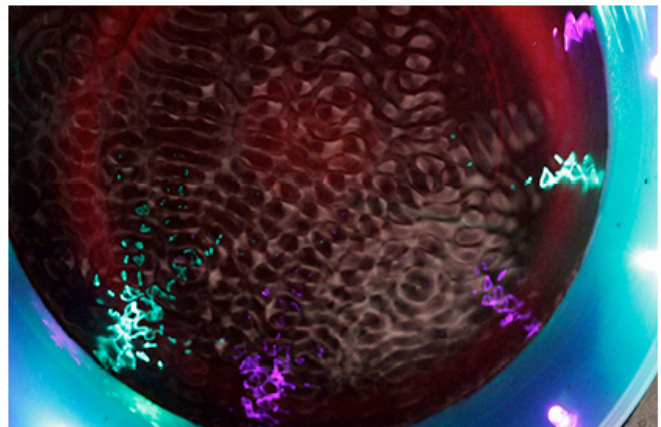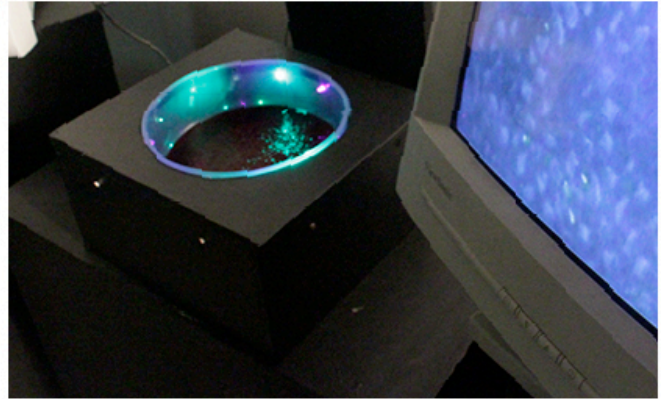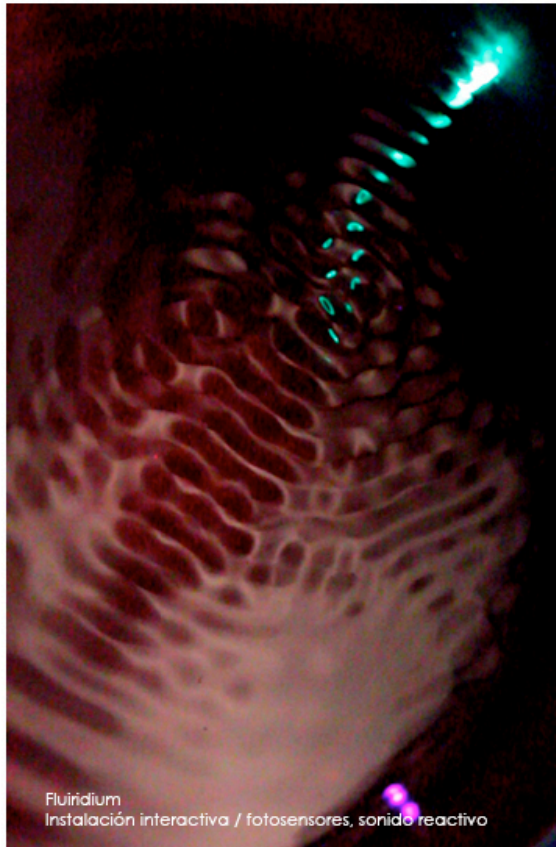
Dora Bartilotti, Alejandro Rosado (2011) Fluridium.
Interactive installation/ Photo sensors, reactive sound

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Appendix A – Interview guide

Research Questions	Topics	Interview questions
-	New media artists	Tell me a bit about your artistic practice. Do you identify your practice with some particular genre?
How do new media artists create or access social networks?	New media artist's social networks	Who are the persons, collectives, organizations or institutions that you consider to be part of your social network?
	Access to social networks	Where have you met these actors?
	Projects as sources of network connections	How do you chose in which projects you want to participate? Follow up: Do you consider the people involved in the project to make a decision whether to participate in them or not?
To what extent are new media artists willing to engage in knowledge processes with their connections in their social networks?	Knowledge networks for new media artists	What makes a relationship strong? Can you give me an example of a relationship that evolved from having just having contact with a person to sharing knowledge?
	Knowledge networks for new media artists	What learnings have you gather from the interaction with the people in your social network? Follow up: What about informal relationships? What about formal relationships?
	Levels of knowledge: Explicit knowledge	Do you exchange technical knowledge, skills or general information in these relationships?
	Levels of knowledge: Tacit knowledge	Do you exchange ideas, perceptions, experiences, values, and contacts in these relationships?
To what extent does the social network connection foster the creation of knowledge…?	Creation of knowledge	Do you consider that these relationships help you create new ideas, practices, ...?

To what extent do new media artists become part of knowledge transfers?	Transfer of knowledge through relationships	Do you consider you engage in knowledge transfers in these relationships?
		Do you follow a certain strategy to create these knowledge transfers?
How do new media artists use the knowledge they gather in their social networks?	acquisition of knowledge	How do you use or integrate the knowledge you receive to your artistic practice? How do you decide what to use?

Appendix B – Codebook

Theme	Category	Subcategory	Code
New Media Art	Artistic practice	Genre/Discipline	Specific discipline
			Interdisciplinary
			Transdisciplinary
		Characteristics of NMA	Dynamic, participatory, interactive, immersive, collaborative, performative, modular, variable, generative, customizable, networked
			Process-based focus
	Inter-, transdisciplinary collaborations	Art	Music, dance, poetry, theatre
		Natural sciences	Mathematics, physics, biology, neuroscience
		Social sciences	Psychology, political science
	Background	Education	Formal education
			Informal education
Knowledge Networks	Access to knowledge	Self- taught	Self-taught explicit knowledge
			Self-taught tacit knowledge
		Others	Informal relationships
			Formal relationships (projects/collaborations)
	Actors in their social networks	Artists	Artists from national collaborations
			Artists from international collaborations
			Artists from educative formation
			Professional partners - collectives
		People from other disciplines	Natural sciences, social sciences
		Institutions	Formal educational institutions
			International art and culture institutions in Mexico City
			International cultural institutions
			National public art and culture institutions
			Nonprofit organizations
			Other government dependencies
		Other actors	Creative workers
			Friends and family
			Life partners
			Professors from formal education programs
	Access to social networks	Through projects	Artistic collaborations
			Clients
		Through electronic social networks	Facebook, Tumblr, Instagram
		Through institutions	Art and culture funds
			Institutions as places of work
			Informal educational activities

			Formal educational activities
Outcomes: Creation, transfer, adoption of knowledge	Tacit knowledge		Inspiration
			Emotional related knowledge
			New perspectives
			Ideas
			Know who
			Creation of circumstances to ensure learning
			Know how to work in collaboration
			Common language and understanding
	Explicit knowledge		Technical knowledge
			Explicit knowledge from other disciplines
			Know what to do in a project
			Recommendation of secondary sources
			Managerial skills
Contexts	Settings		Formal settings
			Informal settings
	Characteristics of relationships		Affection
			Clarity in communication
			Critical thinking
			Dialogue
			Empathy
			Feedback
			Honesty
			Horizontality
			Integrity
			Reciprocity
			Recognition & valorization
			Relational embeddedness
			Respect
			Spatial proximity
			Trust
	Motivation / Benefits		Building reputation
			Creation of new connections
			Division of labor
			Economic remuneration
			Knowledge from other disciplines
			Professional development
			Sources of creativity
	Artistic collaborations and projects as sources of knowledge		Considerations before starting a project
			Online collaborations
			Selectiveness

Appendix C – Informed consent template

CONSENT REQUEST FOR PARTICIPATING IN RESEARCH

FOR QUESTIONS ABOUT THE STUDY, CONTACT:

Fereshteh Adi Saatlo 466500fa@student.eur.nl

DESCRIPTION

You are invited to participate in a research about knowledge, social networks, and new media art. The purpose of the study is to understand the way in which new media artists in Mexico City create, transfer, and use knowledge with other persons or organizations that belong to their social networks.

Your acceptance to participate in this study means that you accept to be interviewed. In general terms,

- the questions of the interview will be related to your relationships and social networks, knowledge processes, projects in which you have participated.
- your participation in the experiment will be related to your practice as a new media artist.
- my observations will focus on the role that social networks play in the creation, transfer, and use of knowledge.

Unless you prefer that no recordings are made, I will use a video recorder for the interview. You are always free not to answer any particular question, and/or stop participating at any point.

RISKS

I am aware that the possibility of identifying the people who participate in this study may involve risks for the relationships with the members of your social network. For that reason—unless you prefer to be identified fully (first name, last name, occupation, etc.)—I will not keep any information that may lead to the identification of those involved in the study and others mentioned during the interview, using only pseudonyms to identify them and their role.

I will use the material from the interviews and my observation exclusively for academic work, such as further research, academic meetings and publications.

TIME INVOLVEMENT

Your participation in this study will take 60 minutes. You may interrupt your participation at any time.

PAYMENTS

There will be no monetary compensation for your participation.

PARTICIPANTS' RIGHTS

If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

CONTACTS AND QUESTIONS

If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish— Lenia Carvalho Marques, Erasmus School of History, Culture and Communication, Department of Arts & Culture Studies, Erasmus University Rotterdam. marques@eshcc.eur.nl

SIGNING THE CONSENT FORM

If you sign this consent form, your signature will be the only documentation of your identity. Thus, you DO NOT NEED to sign this form. In order to minimize risks and protect your identity, you may prefer to consent orally. Your oral consent is sufficient.

I give consent to be videotaped/audiotaped during this study:

Name   Signature   Date