From the Traces of a Social Moment: Music, Image, and Virtuality in *Naqoyqatsi*

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Resumo
Naqoyqatsi: Life as War (2002) is an experimental and “non-verbal” American film directed by Godfrey Reggio, with a soundtrack composed by Philip Glass. The film focuses on the world of communication and new digital technologies in connection with war. The objective is to identify how the film represents aspects of technological development, describing how the virtual dimension is staged and interpreting the significance of these characteristics within the social panorama of the work. Adopting methodological strategies proposed by Pierre Sorlin (1985), the study employs the concept of “relational systems”, understood as networks of relationships and hierarchies formed among characters within films, which, in turn, reflect social dynamics and values present beyond the screen. It is emphasized that the interconnections between music and image are strong discursive elements that contribute to the analysis of the traces of a social mechanism and the social phenomena highlighted in the film.

Palavras-chave: sociology of cinema; virtual dimension; repetition; sound-image relationship.

Introduction

Naqoyqatsi: Life as War (USA, 2002) is a film that diverges from traditional narrative conventions, as it does not present conventional characters, verbal dialogues, or a linear narrative. Directed by Godfrey Reggio, it is the third and final feature-length film of the Qatsi trilogy, with a soundtrack composed by Philip Glass. Unlike its predecessors, *Naqoyqatsi* was not produced using original footage: instead, it relied on the digital manipulation of pre-existing images, sourced from audiovisual archives and films, involving the appropriation and transformation of content, combined with computer-generated sequences. This method of film construction emphasizes the potential of digital technologies and represents the interconnectedness of digital media and flows by employing contemporary image processing techniques such as remixing, copying and collage, distortion, transcoding, sampling, recycling, and synthesis, effects that are present from the very beginning of the work.

What is understood by “conventional”, or “concrete” characters corresponds, according to Aumont and Marie (2003, p. 226), to the “embodiment by an actor (of flesh and blood but represented cinematically through images and speech)”. This is the most common form of character representation in cinema. However, the authors point out that there are other possibilities for character construction, such as those developed through verbal descriptions or narrations (Aumont; Marie, 2003). For the analysis proposed here, I adopt the perspective presented by Aumont and Marie (2003, pp. 226–227), according to which the cinematic character occupies an intermediate zone between the “actant”, in the sense assigned by Greimas[1], and the actor—understood as a figurative entity anthropomorphic entity that embodies the character, which allows for the inclusion of animals or objects in this interpretive function. Based on this understanding, I consider, in this analysis, elements such as the crowd, weather phenomena, inanimate objects, lights, colors, and various visual patterns as characters—even if they are not represented by actors or speech.

In the film, the interplay between images and music as the main narrative thread, the digital processing of images, and the incorporation of other expressive forms of audiovisual media, such as video and video art, introduce new possibilities for narrative construction. This process not only challenged the paradigms of conventional storytelling but also evokes the complexity, simultaneity, and immediacy of contemporary experience. In a context where information is incessantly fragmented and disseminated across multiple platforms, art not only adapts to represent this new reality but also plays an active role in transforming these models. As Castells (2002) notes, the escape from the clock-based culture is decisively facilitated by new information technologies, which are integrated into the structure of the network society—eternal/ephemeral time also fits into this specific cultural mode. Given the relationships between artistic narrative forms and the temporal and spatial dynamics of society, culture mirrors the rapid movement of production, consumption, and politics upon which our society is based. The time of the new culture adapts to ephemeral times but also adds powerful layers to it.

Naqoyqatsi (2002) thematically focuses on various aspects of media culture permeated by the affiliation between information technologies and warfare. Considering this, I aim to identify the ways in which the film represents technological development and the boundaries of the virtual dimension of reality, interpreting the meaning of these characteristics within the social panorama to which the work belongs. These are aspects that “overflow” from the historical context of the 2000s into the film and constitute its very material of construction.

[1] According to Greimas and Courtés (1979, p. 12), the concept of actant is defined by human agents, beings, things, weather phenomena, concepts, and inanimate objects that contribute to the construction of a narrative. The actant can be conceived as the one who performs or undergoes the act, regardless of any other determination. Thus, Greimas and Courtés (1979, p. 13), citing L. Tesnière, to whom the term is attributed, state that “actants are beings or things that, in whatever capacity and in whatever way, even as mere extras and in the most passive manner possible, participate in the process”. According to Aumont and Marie (2003), unlike “actor” and “character”, actant designates the deep narrative structure of a unit within the global system of actions that constitute a narrative.

Here, the concept of “virtual” is directly tied to the cyberspace–cyberculture nexus. I thus approach the definition of “virtual” as simultaneous coexistences—articulating the notions of virtual dimension, virtuality, and virtualization, since the very concept of the virtual undergoes transformations. In these terms, it is important to emphasize that the concept of “virtual” or “virtuality” has been employed in different ways, often being associated with technology and modernity. This notion has been the subject of reflection by several thinkers, including Pierre Lévy, Gilles Deleuze, Arlindo Machado, and Philippe Dubois, among others. Although the focus of this work is not to explore the semantic plurality of the term, it is necessary to briefly address it, since it constitutes a relevant aspect for understanding how technological development and the virtual dimension are evoked and represented in the film under analysis. According to Pierre Lévy (1999), the term “virtual” can be understood from at least three distinct perspectives: a technical one, a colloquial one, and a philosophical one (Lévy, 1999, p. 49). The first meaning is related to the field of computer science, involving technological mediations, communication networks, and computational processes. The second, more common in popular usage, associates the virtual with the absence of reality or concrete existence, that is, with what is intangible. The third meaning of a philosophical nature refers to the virtual as that which exists in potential, but not yet in actuality. Within this latter conception, Lévy (1999) emphasizes that virtual constitutes an essential dimension of reality: immaterial elements, such as the world of meanings, are also considered virtual.

The discussion of the “real” and the virtual finds significant resonance in the field of images and video art, as discussed by Philippe Dubois. Considering the advent of what the author calls the “ultimate technology” emerging at the end of the 20th century, new configurations of the “real” begin to articulate with virtuality, especially through what has come to be known as the computer-generated image—also referred to as synthetic image, infographics, digital image, or virtual image (Dubois, 1999, p. 47). The computer-generated image challenges the very notion of the “Real”—understood as the original referent—by displacing its traditional status. According to Dubois (1999, p. 47), the emergence of these computational images represents a decisive inflection: the machine no longer depends on an external referent and begins to produce its own “Real”, that is, its own image. As the author states, “with computer imagery, this is no longer necessary: the machine itself can produce its ‘Real,’ which is its very image” (Dubois, 1999, p. 73). In a similar sense, Arlindo Machado (1994) also addresses the absence of representational character and the paradigm of non-referentiality in digital or virtual images, which allow for the overcoming of what he defines as the realist myth: the way in which electronic and digital media render obsolete the long-dominant understanding of the referential nature of visual language. According to him, in the age of computer technology, digital images and computer realism becomes disembodied, essentially conceptual, and developed from mathematical models rather than physical data extracted from visible reality.

Building on these considerations, but going further, as Hippertt (2024) states, citing Laymert Garcia dos Santos (2003a), the virtual is not opposed to the real. The actual dimension of reality is that of what exists, while the virtual dimension is that of what also exists, but as potential. Thus, when we speak here of the "virtual", it is not only a reference to the field of communication or to the media as they exist today. These are merely one segment, albeit a relevant one—of the cybernetic turn, a phenomenon that entails far more than the simple use of electronic media to transmit information. As Santos (2003a, pp. 11–12) asserts, information technologies vastly transcend the field of media and new media, "as they operate—in all fields—the coding and digitalization of the world by manipulating the informational reality that permeates inert matter, living beings, and technical objects". This is what we call the virtual dimension of reality. In this sense, when we speak of the "virtual", we are not referring solely to the realm of virtual reality, but also to the virtual dimension of reality itself.

Considering this definition of the "virtual dimension of reality" without disregarding the specificities of the artistic field—and relating it to the filmic material under analysis, we may ask: in what ways does *Naqoyqatsi* represent and express its connections with the digital society from which it emerged? It is worth emphasizing, as Hippertt (2024) argues, that the *Qatsi* trilogy began production in the United States in the 1970s, during the early stages of what would become the cybernetic revolution. In this context, an important challenge arises: how does the film express the transformations, tensions, and relationships resulting from the impact of new information technologies on contemporary society, making use precisely of "computer-generated images" or virtual ones—that constitute a large portion of *Naqoyqatsi*'s visual fabric? How can we address all these phenomena through a sociological analysis of the film? And beyond that, what is the sociological relevance of focusing our attention on a single work?

It is important to recall, as Menezes (2017, p. 25) states, that sociological analysis is not aimed at trying to see how a particular social phenomenon occurred at a specific time or place, but rather, more directly, seeks to understand how a given social phenomenon is valued and reconstructed to find its place as a filmic phenomenon. As Pierre Sorlin (1985, p. 38) states, we must take the film itself and dedicate ourselves to discovering, within the combinations of images, words, and sounds, as many clues as possible in order to follow certain ones—specifically, those that allow us to return to the historical moment by clarifying the external (social exchanges) through the internal (the film's micro-universe). Considering this, it is important to highlight that the methodology employed in the present research is the sociological analysis of film, based on several methodological strategies proposed by historian Pierre Sorlin (1985) in his book *Sociologia del Cine*. To carry out this analysis, we take as a point of reference the concept of "relational systems" proposed by Sorlin (1985, p. 217), understood as networks of relationships and hierarchies formed among characters within films. However, such systems are not limited to the diegetic universe, as they, in some way,

represent and reconstruct—explicitly or implicitly—social dynamics and values that exist beyond the screen.

In his proposal for a sociology of cinema, Pierre Sorlin asserted that to study the mise en scene—or, more broadly, what we call the construction—is to attempt to discern what social strategies and what models of classification and reclassification are at work in films. This approach serves to distance the analysis from the mimetic fascination with films, whose dominant tendency is to find within them what we already know about the societies in which they were produced (Sorlin, 1977, p. 200). In other words, our objective, from a sociological perspective, is to identify how the organization of visual and auditory elements within the film structures propositions about society and the historical period it reflects.

The non-linear narrative and absence of conventional characters in *Naqoyqatsi*—filmic characteristics that diverge from those prioritized by Pierre Sorlin—do not constitute an obstacle to the sociological analysis of the film, nor do they render the use of Sorlin's methodological guidelines unfeasible. On the contrary, it is entirely possible and necessary to access the film's social context through the evocations it makes of its milieu—especially through its very construction materials, which consist of remixing, repurposed archival footage, surveillance camera recordings, and editing marked by strong digital intervention. These elements not only represent central aspects of cyberculture and the information society—such as the omnipresence of surveillance and the logic of data and image reuse—but also possess the potential to critically problematize the very media that generated them. The camera movements, archival images, and sound elements and the digital technologies employed in the production of *Naqoyqatsi* reveal not only aesthetic choices but also political and ideological stances. Moreover, the reality expressed by the film is constructed through a series of processes that transform it.

In this regard, when referring to *Naqoyqatsi*, we also draw upon the concept formulated by Christa Blümlinger (2013), who uses the term "second-hand cinema" to designate films and new media works that are structured around the reuse of pre-existing material, understanding this practice as symptomatic of a transformation in memory culture. According to the author, these productions operate at the boundaries: "between documentary and fiction, authenticity and falsification, reality and imagination, but also between icon and index, figuration and abstraction" (Blümlinger, 2013, p. 13). As the author points out, the central issue is not merely what these works narrate, but how they enable us to structure our relationship with history and memory, producing specific forms of historical experience. In this sense, this aesthetics can be analyzed not only based on the content presented by the films or the sources from which they extract their materials, but above all through their cultural referents.

The practices of image reuse thus stand out for their propensity to formulate, through the images themselves, a reflection on the history of images—and even more so, on history itself

as image. It is a visual thought process that is not structured solely by the temporal succession of images, but also by their co-presence and confrontation within the same expository space. This shift pertains not only to an aesthetic transformation but also to a profound change in the conditions of image circulation, which are no longer confined to the traditional cinematic space. In light of what Sorlin also emphasizes, what is prioritized in the case of the film under analysis are not merely the formal and aesthetic choices mobilized by the filmic narratives to articulate different horizons of meaning tied to a specific historical context, but also their capacity to reveal layers of signification that transcend the explicit intentions of their creators—elements that, in some ways, escape authorial intentionality and the central message.

In *Naqoyqatsi*, the "military class" and the "popular class" are represented through various archival and news footage, accompanied by a musical score with a specific rhythmic marking of a march—often ceremonial in meaning, for example; they are constituted as distinct groups within a network of hierarchies that are visually and sonically constructed, playing a fundamental role in the representation of technological development. The way in which these groups are articulated through filmic language allows for an understanding of how technology is staged and how it conveys elements of the sociotechnical context of the societies depicted—particularly that of American society. War—whether in the military domain, the media sphere, or in the dynamics of everyday life—emerges as one of the main manifestations of this techno-informational trajectory, which will be further explored below.

Repetition and Simulacra: When the Virtual Dimension Exceeds the Media Sphere

Naqoyqatsi opens with scenes of computer circuits, pixels, codes, and keyboard keys: a virtual screen-environment that fragments, presenting a composition of images, symbols, and data that collide and dissolve (Figure 1). The music *Primacy of Number* emerges, while a sequence of zeros and ones appears in the background, allegorically representing the materiality of the digital throughout the film, as binary code constitutes the essential foundation of digital devices. As some numbers begin to appear on screen, a world map—predominantly in green and red—takes shape, modeled in the form of an electronic board,

Figure 1 – Representation of the digital environment: numbers, codes, and pixels (reference source: frames extracted from the film *Naqoyqatsi*, 2002)

possibly a motherboard. In this way, a sense of connection is constructed between global interconnectivity and digital infrastructure.

As Hippertt (2024) states, the soundtrack follows this dynamism with the jaw harp, whose accelerated rhythm matches the rapid succession of images. Initially, the musical piece is based on the repetition of a single group of notes, later introducing small variations in the recurring sound fragments and in the number of repeated notes. More precisely, as Sean Atkinson (2009) points out, *Primacy of Number* employs a specific type of repetition known as subtractive process: an initial group of four notes, when repeated, is reduced to three notes, and finally to a pair of notes. This pattern recurs throughout the movement, playing a subtle but essential role in the formal structure of the music. In this way, repetition maintains a relationship with the original but continually manifests as something new and singular; the principle of repetition becomes evident both in the rhythmic patterns and groups of notes—which, although subject to variation, retain their structure—and in the visual elements, through the persistent recurrence of the numbers displayed on the screen. The music and the visual elements of the scene express, within their own domains, aspects of a post-industrial society: repetition, reproducibility, serialization, and simulacra. These latter are not merely faded copies that could never truly reflect the model.

In this regard, as Hippertt (2024) argues, the simulacrum, as a concept, is staged in *Naqoyqatsi* in two ways:

> both as an internal constituent of the music (with the repetition of the same group of notes, in this initial moment of the track, with subtle differences that gradually become independent of their origins), and through the visuality of the scene, which evokes certain characteristics of a process of virtualization of the world, of societies, and of individual experience amid codes, screens, avatars, symbols, and repeated digital images that substitute material “reality” (Hippertt, 2024, p. 121).

This possible dimension of the hyperreal—in which the virtual and representation become the very “reality” in the contemporary world, with media and digital images playing a central role—is discussed by various authors, such as Jean Baudrillard (1991), in his book *Simulacra and Simulation*. The hyperreal is the concept of a reality more real than the real—its simulations are not representations, imperfect copies of an original, nor aesthetic illusions, “annihilated by technical perfection” (Baudrillard, 1991). Thus, Baudrillard defines the simulacrum as the emptying of the concept of reality, in such a way that the very world in which one lives is replaced by a “copy-world”, in which all previous meanings and significations are completely emptied, and the individual comes to seek only simulated stimuli.

It is important to mention that the formal constituents of the film’s music are essential elements for the sociological interpretation of certain enacted phenomena, transcending their function as mere atmospheric support to the work. The music materializes and codifies, in its own field, traces of a social and cultural moment. More precisely, as Adorno (2011) argues,

society does not extend directly into works of art, nor does it become directly perceptible in them, but rather enters through well-disguised formal constituents. It is around this idea that, in *Naqoyqatsi*, the "simulacrum" as a characteristic of the virtual environment and of technological diffusion is staged. Through the repetition of rhythmic and melodic structures, the mechanical nature of the societies portrayed is engendered. Therefore, it is not only in the images that the repetition of visual patterns is established; repetition, as a constructive effect, also occurs in the music.

Minimalism as the predominant style of the score composed by Philip Glass is also deeply intertwined with the society from which it emerged. The minimalist music in the *Qatsi* trilogy, with repetition strategies, rhythmic continuity, and emphasis on pulse, constructs a plane of automatic stimuli, which also represents the rationality and mechanical artificiality that constitute the film. These elements are closely connected to the society that generated them. It is worth recalling that the minimalist music movement originated in the American musical context of the 1960s and emerged as the trend most clearly associated with the systematic use of repetition (Hippertt, 2024). In general terms, it can be stated that this musical school emerged alongside the ideas of minimalism in the visual arts. Composers such as Terry Riley, La Monte Young, Philip Glass, and Steve Reich arose in this context with a new proposal that distanced itself from serial music, while still being an heir to Modernism. Wisnik (1989) associates atonal music with a time that escapes experience—a disconnected time, lacking causality—whereas minimalist music is associated with the "compulsion to repetition", a circularity that empties time. These musical forms are traces of contemporary subjectivity marked by difficulties in maintaining a centered sense of self. Minimalism, unlike dodecaphonism, elects repetition as its central principle: while dodecaphonism would correspond to the "urban-industrial experience of simultaneity, fragmentation, and montage", minimalism would represent the "serial-repetitive character of the post-industrial, computerized world", characterized by large-scale repetition and simulacra (Wisnik, 1989, p. 175).

Subsequently, in the film, digital transformations and war-related conflicts emerge as recurring elements within the narrative construction: computer-generated imagery, the juxtaposition of war sequences with mathematical and chemical representations. The soundtrack accompanies these images with percussion and brass instruments, creating a progressive crescendo that culminates in a climax filled with expectations and potential resolution. Throughout this progression, the filmic structure establishes a connection between armed conflicts and technological advancements, leading us to consider aspects external to the film—namely, the social and historical context of *Naqoyqatsi*'s production, in which the historicity of the internet plays a fundamental role in understanding the trajectory of its evolution. Manuel Castells (2002) argues that the creation and development of the internet resulted from the intersection of military strategies, scientific collaboration, technological innovation, and

countercultural movements. Originating in the context of ARPA—the Advanced Research Projects Agency of the United States Department of Defense—the internet was driven by the space race of the 1950s, catalyzing the advent of the Information Age. In response to the fear generated by the launch of the first Sputnik in the late 1950s, ARPA initiated efforts that significantly altered the course of technology, heralding the large-scale arrival of the Information Age. Castells (2002) identifies in the history of digital technology (and the internet) formative roots that continue to influence the structure of contemporary digital technological society.

This relationship between military power and digital advancement is a recurring axis throughout the cinematic work under analysis, manifesting in the relational systems between characters and in their interaction with the events depicted. In this sense, the “military class”, which emerges as part of the film’s relational systems, organizes the relationships between characters and develops in *Naqoyqatsi* alongside the musical composition “Massman”. In the film, this construction unfolds through the relationship between imagery depicting military clashes, war armaments, and marching soldiers, and the music, which forms an essential foundation for building the characteristics of the military group. That is, the musical score at this point using instruments commonly found in a sports/military band, such as trumpet, tuba, trombone, snare drum, cymbals, triangle, and particularly the specific rhythmic pattern of a march, often carrying a ceremonial meaning—constructs the filmic “discourse” and emphasizes the group’s conflicts and tensions. Considering that the film lacks concrete, traditional characters, music also assumes the role of constructing such elements (Hippertt, 2024).

In the film, scenes involving computers, information systems, machines, and digital technologies appear to migrate from the domain of media into the human body itself. In other words, the machinic dimension begins to take part in the constitution of physical bodies. This is exemplified in the film when athletes are shown in close-up—scenes of swimming, gymnastics, skydiving, and long jumping—where the body surpasses its limits and is enhanced by technology. A focused man, with a furious gaze, prepares his physical strength before leaping. Individuals undergoing intense physical exertion are highlighted through various sports practices. In this way, the idea of military discipline and competition is constructed, of bodies pushed to their limits, much like in warfare. All images of athletes in training are now endowed with a new dimension: throwing, running, diving, and jumping are all Olympic disciplines.

Within the sequences of competitive divers, there is a shot highly reminiscent of those featured in the film Olympia (1938), directed by Leni Riefenstahl. As Rovai (2009, p. 102) argues, beyond being a film about Nazism and its themes, the Olympic Games in general, or the world of sports, Olympia can also be interpreted as a work concerned with the body transformed into an abstract and visual commodity—images of bodies whose beauty is associated with agile, clean, and purposeful movement, thus deemed productive and harmonious. For Rovai (2009, p. 101), more than a film about racial supremacy in the Nazi

era, Olympia addresses the repetition not of behaviors, but of a certain aesthetic standard materialized in the image of muscular bodies subjected to physical exhaustion.

In other scenes, the editing emphasizes the fusion between biology and technology, with images of swimmers overlaid with laboratory fluids, artificial insemination, medical examinations, and internal visualizations of the body's structures. The "machines of vision" transcend the limits of the human sensory system, revealing bodies as networks of information. The visual repetition of babies and sperm cells, along with the animated image of Dolly the sheep, refers to the theme of cloning and the technical reproduction of life. As Baudrillard (1991) reminds us, human identity oscillates between individuality and immersion in mass society. On this point, Bonotto (2009) argues that *Naqoyqatsi* explores the duplication of visual elements, generating differentiated versions of a single object. The film particularly emphasizes this duality by presenting images in which the boundaries between individuals become indistinct—whether in marching crowds, groups of athletes, or aligned babies. The effect of visual multiplication and duplication is reinforced by the soundtrack, in which musical patterns overlap and imitate one another, establishing a parallelism between sound and image.

In this context, the human body is reconfigured as an "information system", in which the combination of cybernetics, molecular biology, and information technologies establishes a new technoscientific paradigm: the molecular-digital. Sibilia's (2002) observation becomes particularly insightful when interpreting the film in relation to its social context; the author notes that contemporary bodies come to be understood as encoded profiles, bundles of information that are projectable and programmable, embedded within a digitized logic that redefines their materiality. In this way, the boundaries between nature, culture, and technology dissolve, revealing a virtual dimension of reality in which processes of coding and digitalization permeate all spheres of existence. The "cybernetic turn", as pointed out by Santos (2003a), implies a structural reconfiguration of technique, with information assuming a central role. This shift positions technoscience as the driving force behind a mode of accumulation that encompasses not only the material world but also human bodies as processable data. In the film, this issue is represented through the relationship between bodies and technological devices, highlighting a scenario in which human existence is increasingly permeated by digitized information and the technical reproduction of life. However, it is not only the body that is traversed by digitalization—geographic space itself is also represented in *Naqoyqatsi* as a simulacrum.

In the sequence between minutes 30 and 33, the musical track "New World" functions as an interlude, offering a moment of pause after the intensity of the previous segments. Visually, the film presents natural landscapes and urban spaces, but these are altered by digital editing techniques, revealing the interference of new digitalization technologies on archival imagery. *Naqoyqatsi* lays bare the deterritorialization of these cities—that is, the urban images appear to have been diluted and abstracted through digitalization: a metaphor for

metacities and virtual cities. In this latter case, virtual information exceeds the domain of media and begins to constitute the very fabric of spatial construction, which is no longer locally situated, in fact.

Philip Glass's soundtrack, featuring solos by cellist Yo-Yo Ma, functions as a counterpoint to the images. As Hippertt (2024, p. 129) points out, "the essentially acoustic musicality contrasts with the digitalized visuality, creating an effect of audiovisual dissonance". The cello stands out as a "voice" that grants a human dimension to the soundtrack, softening the coldness of the synthetic imagery. This music-visual dissociation reinforces the dichotomy between the "natural" and "artificial" environments and, simultaneously, their integration within the virtual dimension. Furthermore, in this relationship, music and image complement each other in contradiction, as expressions of dystopia: the music does not imitate the image, nor does the image mirror the music. Beyond this absence of mimicry, the music does not act as movement, but rather as a stimulant of movement—without duplicating it. What emerges is the presence of a musical continuum that operates as a "reflective speech act", as Deleuze (2005) suggests, an exterior presence acting as a "foreign body" upon the images. In other words, the music accompanies something that is present in the film without being directly shown. These narratives thus create a true audiovisual image. The use of unusual and saturated colors to treat the images—where the earth appears blue, water purple, and the sky orange, for example—emphasizes the concept of a nature altered by technological "progress".

Art, War, and Social Time

In the following segments, the first images show a man in a straitjacket surrounded by numbers, formulas, and codes—a geometric and digital abstraction. Immediately thereafter, and not by coincidence, a succession of images depicting atomic bomb explosions emerges. Certainly, the "informational bomb" cannot be compared, in destructive scale and mortality, to what was unleashed with the atomic bomb, which revealed the real possibility of man ending humankind. Still, for Virilio (1999, p. 65), "after the first bomb, the atomic bomb capable of disintegrating matter through the energy of radioactivity, emerges at the end of this millennium the specter of the second bomb, the informational bomb, capable of disintegrating the peace of nations through the interactivity of information". His discontented reflection seeks to argue how the internet has become the destabilizing axis of industry and the economy, often generating social divisions between poles of poverty, between North and South.

In this part of the film, military development intertwines with new technological advances, radically transforming the representation of time and space: high-speed modes of displacement, such as automotive safety tests, challenge the traditional limits of spatial and temporal experience. Similarly, digital communication networks, represented by symbols and icons from the virtual environment, resignify the notion of time by creating a flow of instantaneous and

decentralized information. In this way, the film metaphorizes the temporal transformations of contemporaneity, composing a visual mosaic of bomb and car crash tests, tunnels and highways captured through time-lapse techniques—where the altered frame rate intensifies the sensation of accelerated time—thus constructing an atmosphere of relentless speed (Figure 2). Moreover, the constant presence of advertising images, luminous panels, and computer screens accumulates within the frame, presenting an environment saturated with information and hyperconnectivity, in which past, present, and future merge into a simultaneous and fragmented experience.

Figure 2 – Images representing the transformation of social time
(reference source: frames extracted from the film Naqoyqatsi, 2002)

It is important to highlight that this sequence draws attention not only to the theme of speed but also to the way images are treated and accelerated within the very language of cinema. Many of these scenes are presented at a pace similar to speed watching—a video acceleration tool offered by streaming platforms—creating a sensory experience that directly "reflects" new modes of audiovisual consumption. In other words, the film not only thematizes the power of speed but structurally incorporates it into its editing, revealing how social acceleration, intensified by engagement with digital technologies, influences the perception of time. The acceleration effect is not merely illustrative; it manifests in the very material constitution of the work, functioning as a commentary on transformations in the contemporary experience of time and image (Hippertt, 2024).

In a subsequent moment within the same sequence, the highlighted scenes turn toward records of explosions, showcasing the destruction of houses, various constructions, as well as bombarded fauna and flora. Archival footage recalls scenes of everyday violence and protests around the world, with direct confrontations, police clashes, and raw state repression exposed.

The US flag in flames and people being assaulted compose a visual mosaic that denounces a state of constant conflict. A subtle but significant detail appears in a scene of an individual being arrested: a small Rede Globo logo briefly appears in the lower corner of the screen, serving as a visual fragment that constructs meanings about the role of communication. Thus, in the representation and dissemination of images of conflict, the interconnection between power, information, and the spectacularization of violence is reinforced.

As Hippertt (2024) argues, the soundtrack enhances this atmosphere of tension. The track “Point Blank” relentlessly resonates with drum rolls, rhythmically marking moments of attack and intensifying the sense of urgency. The use of snare drums and timpani—frequently associated with military and ceremonial rites—reinforces the mechanical precision of the shots and attacks, establishing a sound environment that alludes to the logic of war. Furthermore, destruction and the clashes between police/military and civilians are musically translated through the repetition of ascending and descending scales, creating an incessant dynamic of action and reaction. This constantly alternating sonic movement visually mirrors the struggle between two sides, a perennial conflict without resolution. Thus, both visually and musically, the scene constructs a choreography of war, in which aggression and response succeed each other in a cycle of continuous violence, representing the warlike aspects of everyday life.

The film articulates hierarchy and power relations through a clear imbalance of forces, frequently materialized in scenes of civilians subjected to military violence. However, this dynamic is not limited solely to direct confrontations between military forces and the population. What becomes evident in this segment is the military presence in everyday urban life, engaged in continuous clashes with civil society itself. There are no war tanks, demarcated geographic divisions, or a visible external enemy; instead, the military apparatus turns against the population, operating within cities and exerting authority over those it is supposed to protect. Regarding this moment, a fundamental methodological aspect for identifying power groups in the film lies in the relational systems it constructs and authorizes. As highlighted by Hippertt (2024), revisiting this structure is essential to understanding how power relations among social groups are represented in *Naqoyqatsi*, and how this relates to the sociocultural fabric to which the film belongs: besides the military class, already evidenced in the analysis, another group emerges—the popular class. This class is represented both by civilians who enter conflicts among themselves and against police forces, as well as by vulnerable individuals, such as children and the elderly, exposed to poverty and suffering.

This social context represented in the film can be interpreted with the aid of Virilio’s (1999) discussions, particularly through the concept of deterrence. According to the author, in a security-based society, the military no longer fights an international enemy, but rather its own citizens, justifying repressive actions under the logic of maintaining order. The film evokes aspects of this militarization of everyday life, highlighting how violence becomes an instrument of social control,

operated not only by state forces but also by political and economic interests that instrumentalize fear and repression to perpetuate structures of domination. In this way, war and its representations of power are constructed within daily life and playful simulation, emerging in the film through a focus on symbolic investments in technologies of destruction and control, such as weaponry, private security, and surveillance cameras (Hippertt, 2024).

It is crucial to recall that most of the images presented in the film are drawn from media sources and are combined with two other essential elements for constructing meaning in the scene: the internet and modern video games. This sequence reveals the commodification of violence, showing how the culture industry appropriates war experiences and converts them into entertainment products. The montage establishes visual relationships between archival footage—such as clashes between civilians and the military, violent confrontations, and protests—and scenes of fights, gunfire, and digital combat from video games, creating a juxtaposition between the "real" and the virtual worlds.

From this perspective, in the face of aestheticized, normalized, and consumed violence, the discussion proposed by Susan Sontag (2003) on the impact of television on warfare resonates meaningfully with the filmic construct. According to the author, war would never be the same after the advent of television broadcasts, which transformed conflict into spectacle, fostering the emergence of "videowar", a war monitored and mediated by cameras. Moreover, the visual correspondence between real people in conflict and digital avatars in violent games is so striking that their shapes and colors converge into a single visual illustration. The film thus suggests a collapse between the real and the virtual, evidenced these images become practically interchangeable. This fusion, in turn, evokes Jean Baudrillard's (1991) concept of the simulacrum: a state in which the image no longer has an external referent and instead becomes reality itself. Reality is thus replaced; the simulacrum no longer has equivalence with the real, nor does it function as a sign that represents it—instead, it becomes the referent itself, the Real itself.

The overlap between the virtual and the non-virtual is also manifested in sequences where iconic works of art—such as paintings by Van Gogh and Frida Kahlo, as well as those that appear to be by Sandro Botticelli—are digitized, reappropriated, and distorted (Figure 3). At this moment, the film provokes a clash between past and present, evidenced by the digital manipulation of archival images (in this case, reproductions of original paintings). Thus, two historical times coexist within the filmic formulation, as already observed in previous frames: the past, represented by classical artworks, and the present, which re-signifies them through digital editing. As the sequence unfolds, the images begin to morph and blend rapidly, resulting in a scenario where the distinction between "real" and simulation dissolves. This effect of superim-position culminates in the fusion of artworks with scenes of armed soldiers, forming a visual

Figure 3 – Digitization of artworks in *Naqoyqatsi*
(reference source: frames extracted from the film *Naqoyqatsi*, 2002)

mosaic in which images emerge from one another. In this context, the reuse and combination of images, archives, and memories in *Naqoyqatsi* can also be understood as a reflection of the modes of image consumption promoted by digital culture. According to Blumlinger (2013), this context encourages the creation of reassemblies, offering a new experience of films and a relationship mediated by intermedia transfer—an experience that no longer depends on theatrical exhibition and is instead accessible at any moment.

In *Naqoyqatsi*, the experience of conflict and the visual apparatus of war—including weapons, surveillance cameras, and digital technologies—are mediated by images, virtuality, and the media, configuring a new scopic regime. In this context, a significant connection is established between various shooting scenes—in which the gaze must be directed for the weapon to be activated—and the artworks inserted into the film, many of which bear elements of Renaissance aesthetics. This connection constructs a field of meaning that may be partially analyzed through the lens of Antoine Bousquet's (2018) propositions. According to the author, technologies of automated perception intensify and profoundly transform the process of rationalizing and mathematizing the visual field, a process that began in the Renaissance with the introduction of linear perspective. The entanglement between art and war, in this case, refers to the moment when linear perspective—by enabling the projection of three-dimensional space onto a two-dimensional surface while maintaining relative proportions—made it possible to organize spatial representation within a coordinate system translating into mathematical language. More than a mere artistic

advancement, linear perspective represents a convergence between optical geometry, pictorial representation, and topographic surveying (Bousquet, 2018).

This intersection between art and war is not merely aesthetic, but profoundly political and epistemological. When complemented by a new set of optical instruments—among which the telescope stands out—linear perspective extended the range of human vision and simultaneously gave rise to a geometrically and mathematically constructed perception of the world. The impact of this transformation on military operations was considerable. Furthermore, as Virilio (1999) states, the generalization of machines of vision—devices capable of perceiving reality through sensors—signals a paradigmatic shift. The Renaissance worldview gives way to a new mode of perceiving and intervening in reality: through the codification of information, transmitted as waves or impulses. This transformation restructures not only how we see but also how we act upon the world. *Naqoyqatsi*, therefore, by thematizing war through digitized images and algorithms, reveals how this technological mediation is rooted in a visual tradition that dates to the Renaissance. By merging different temporalities and uses of images, the film shows how the staging of war, filtered through optical and digital resources, is transformed into a hyper-spectacle.

At the end of this segment, longer and more static shots mark the transition: the soundtrack fades almost entirely, leaving only a subtle and nearly imperceptible ambient sound. This sonic emptiness finds a visual counterpart to images of people from different ethnic backgrounds, many in states of suffering, despair, or grief. The sequence concludes with a line of soldiers singing a hymn that cannot be heard, intensifying the sensation of silencing. Here, the use of silence as a narrative device carries crucial symbolic weight: the pleas for help and the suffering depicted are inaudible—both within the film's diegesis and in the real-world context it represents. This silencing is reinforced by the complete absence of music, establishing a moment of "non-sound" which, as Deleuze (2018) points out, causes all sonic certainties to vanish, while the silence itself acquires the qualities of sound. The contrast between the preceding moments—where the film displayed consumer goods and the development of new technologies—and the current scene, marked by pain and inequality, reinforces the meanings and expressions of war and technological advancement, both of which are characterized by human suffering. This suffering, silenced within the framework of contemporary media and political logic, finds expression and legitimacy through cinematic form.

Final Considerations: What Did *Naqoyqatsi* Anticipate?

As Hippertt (2024) reminds us, *Naqoyqatsi* presents—and perhaps anticipates—many of the possibilities brought about by digital editing and their impacts on the subjective and material construction of contemporary society. At the same time, this technological and digital society

also shapes the very making of the film, produced in the early 2000s—a period already marked by the advancement of digital technologies and image manipulation. The film incorporates these technical transformations by exploring frenetic editing rhythms, with sequences that resemble speed watching (the practice of accelerating audiovisual content). Faced with this incessant flow of images and the avalanche of visual data, the acceleration and deceleration of scenes alter the perception of time and the meaning of interactions between groups, characters, and urban space. This aesthetic and narrative treatment underscores a fundamental aspect of the work: the construction of a dystopian vision of the future.

In this sense, the film appears to "anticipate" a scenario of threat, mediated by a hyperabundance of images in maximum acceleration. The technical and historical context of the 2000s—marked by the exponential growth of the internet, the digitalization of information, and the expansion of media surveillance—is expressed in the way the film represents a future of visual and informational chaos. However, more than twenty years after its release, it has become evident that this "future" has already become our present. In other words, the social acceleration, the intensification of informational flows, and the proliferation of digital images portrayed in the film are now concrete realities, manifested in the cultural, aesthetic, and temporal dynamics of contemporary societies. The film, therefore, not only represents the impacts of digitalization but also seems to "anticipate" (through its very mode of production) and artistically translate the ways in which society has come to interact with the world and with life itself.

It is important to remember that—between the filmmakers' intentions and what, in some way, exceeds those intentions—the representations constructed through cinematic works, which include a set of visual and sonic signs, are understood here as social practices of those who produce them, that is, filmmakers, screenwriters, producers, technical crews, etc., who formulate a network of meanings and signifiers (Hippertt, 2024). The fragmentation of experience, the instant consumption of information, and the extreme speed of interactions are, to a large extent, the realization of what *Naqoyqatsi* had already indicated as an inevitable trend. It also becomes apparent that the film's "apocalyptic" vision of technology and emerging dystopia reveals ideological characteristics inherent to the production itself and to aspects of a broader technological imaginary. The association between war, information/technology, and dystopia is not a neutral one; rather, it carries traces of a specific era's view on technological advancement.

Within this context, *Naqoyqatsi*—alongside the entire trilogy—fits into a perspective often characterized by technophobic tendencies toward new technologies, reflecting a collective imaginary that crystallized into an apocalyptic and dystopian vision of the future. This imaginary took shape in the 1970s and more consistently influenced the artistic movements of the following decade. This impact can be observed in films such as Blade Runner (1982), Videodrome (1983), Robocop (1987), The Terminator (1984), and The Matrix (1999), which not only portrayed this vision but also achieved significant box office success. The recurrence of shared elements

across these productions suggests a coordinated response to the social transformations of the time, with a cyberpunk aesthetic marked by a critique of technological modernity.

Maximum speed, the notion of "time that cannot be wasted", the simulacrum, and the transformation of the individual into mere data banks are among the central meanings of *Naqoyqatsi*. The film illustrates how the acceleration of the digital environment not only modifies the perception of time but also redefines the relationship between physical space and virtuality. The decline of activities in physical space—replacing bodies and physical cities with digital representations—marks a moment in which the virtual ceases to be a mere extension or reflection of reality and instead becomes reality itself. From this perspective, the film's soundtrack plays an essential role in shaping the temporal experience: using ritornellos, ostinatos, duplication, and circular musical forms, the repetition of rhythmic and melodic structures—central to most of the film's scores—not only accompanies the acceleration of images but also drives the narrative movement itself. This effect can be interpreted through Wisnik's (1989) concept of the repetitive "insistence in time" (p. 197), described as a process that leads to new variations. What is at stake here is what Wisnik calls a "time of gradually deferred repetitions" (p. 98), in which recurring sound patterns do not simply reproduce identically but instead undergo subtle variations that transform their perception over time.

Music in the film, by maintaining an essential relationship with society in which it is embedded and crystallizing as a trace of a social moment, "migrates" and shifts into the work itself. This relationship, in turn, affects the internal content of the music. For Adorno (2011):

> Since it shares the same origin as the social process and is constantly permeated by its traces, what appears to be the pure and simple self-movement of the material develops in the same direction as real society—even when these two spheres no longer recognize each other and behave with mutual hostility. For this reason, the composer's engagement with the material is also an engagement with society, precisely to the extent that society has migrated into the work itself and no longer stands before artistic production as a merely external, heteronomous factor (Adorno, 2011, p. 36).

Thus, the musical score of *Naqoyqatsi* reinforces a sociological meaning of the film: a spiral of acceleration and repetition, in which time does not stabilize, but rather folds in on itself, producing a ceaseless flow. This sonic effect, combined with visual construction, underlines aspects of the social experience: the dissolution of boundaries between the real and the virtual, the process of digitalizing life, and the technological speed connected to repeatability and simulacra. However, the aspects of an informational society, which emerge through the film's music and imagery, while asserting themselves as norm—with all their consequences—also point to lines of flight through differentiation. As Deleuze (2018) reminds us, in this sense, by liberating repetition from the chains of comparison to a model, it is freed from identity and imitation and thus dignifies the simulacra, which are not merely copies but

also contain the capacity to alter all copies, including the model itself. In this sense, repetition can call forth the new.

All of this brings us to a fundamental aspect: the poetic transmutation of social phenomena in cinema is not a mere mirror of reality, but a complex process of symbolic reconstruction. In *Naqoyqatsi*, for instance, the representation of technological advancement, virtuality, and wealth production does not occur in isolation or objectively, but within a visual and sonic discourse that expresses and reorganizes these realities according to the director's choices—and to what, in some way, escapes them. This means that analyzing a film requires understanding the relationships between the society portrayed, the society that produced it, and the filmmaker's perspective on that context. The film not only captures images of the world, but reinterprets them, filtering them through its own cultural stereotypes, ideological assumptions, and the technical tools available at the time of production. This process reveals how the work not only represents a time and place but also constructs meanings and significations that articulate different fragments of the social experience.

Moreover, film analysis is also a form of storytelling constructive act. Therefore, in this context, the selection of *Naqoyqatsi* and the way its elements are sequenced in the analysis are part of a construction, an organization of meanings that allows for the revelation of technical, aesthetic, historical, and social aspects embedded within the work. In this way, the film not only represents an era and its challenges, but reorganizes these elements, providing a space in which social experience and technological transformations can be problematized and re-signified through new, particularly visual and sonic, perspectives.

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