

# Art's Intratemporal Relation to the Future

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## Abstract

The world of art has always been occupied with art's temporal relations to the future. In the current artistic landscape, we see a wealth of exhibition themes and titles concerned with 'the future' in responses to the dominant narratives of a contemporary technological world driven by algorithmic systems and prediction models. This momentous future-orientation is my cue to rethink art's relation to the future, by zooming in on its temporal modes of existence. With a take-off in the notion of art as "time-based," as conceptually based in the time, duration, and/or the function of a medium and the experience it mediates, I propose a different *intratemporal* mode of existence for art. This concerns how art co-exists with, evolves through, and co-produces temporal relations in between humans and technology. This proposal of an intratemporal perspective on art might contribute to further investigations into art epistemologies in which art becomes a part of larger narratives in which human beings and communities co-evolve—and have always co-evolved—with technics. It might offer inroads to study art on its new paths of exploration in collaboration with science and technology and when art is occupied with the very making of the future through participation in innovation projects.

## Keywords

Time-based art, intratemporality, future, innovation culture.

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## Introduction

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My temporal investigation in this paper takes off in the catalog *Alchemists of the Future* published for the Ars Electronica Future Lab's 25 years anniversary in 2021. In the concluding chapter, "Perspectives," we can read about how the Future Lab's activities of visionary prototypes and innovative collaborations between art and science in 1996 were initiated to contribute with future narratives to address urgently needed paradigm changes.<sup>1</sup> The visions expressed in the Future Lab catalog, about art's involvement in our greater societal narratives of technological change, echo the bringing together of art, science, and technology with the conception of the New York-based organization EAT—Experiments in Art and Technology—in 1967, which was founded by engineers Billy Klüver and Fred Waldhauer and artists Robert Rauschenberg and Robert Whitman. The visions of creative and experimental research processes between artists and engineers for bringing artists closer to the materials of technology and more in touch with the forces shaping contemporary society, the use of projection and new communications technology to achieve this, which entailed the exploration of new roles for art in the changing 'technological environment' of the late 1960s/early 1970s, and the migration of these practices from an art to non-art contexts,<sup>2</sup> altogether paved an explorational path for art's evolvement through changing relations to the future.

Today, as we find when searching through numerous recent titles of exhibitions, knowledge forums, and events of art, <sup>(1)</sup> the future orientation has saturated the broader field of art. This future-orientation should interest us as more than a thematic trend.

The legacy of E.A.T., and the catalyzation of ideas of collaboration between art, science, and technology through the Future Lab, among many more initiatives, informs a fast-growing discourse in art whereby the art is treated, funded, and appropriated as a catalyst for change. For example, when art migrates into cultures and contexts of technological innovation; when artists are invited into residencies, technology and science labs of corporate technology companies; or, where art becomes a protagonist in major creative funding schemes and innovation programs and is granted support as a catalyst for, for example, industrial innovation, urban development, or human rights. For one example amongst many, the call "Art-driven use experiments and design" under the Horizon Europe Framework, which explicitly allocates a strategic role for art in technological innovation culture. These movements in art, whereby art has gained new roles in

strategic projects of future-oriented and future-shaping technological innovation, require new approaches to grasp and assess art's modes of existence, which I propose that we understand through its relations to the future as an epistemological and methodological compass.

My inquiry is guided by the following line of questions: Why, in the context of our contemporary technological environment, is the orientation towards the future in art so momentous? What characterizes art's relation to the future in our current technological environment? If the occupation with the future in art concerns a temporal orientation towards how everyday lives, cultures and societies will or might evolve with technology, then how does art participate in the temporal processes that will bring us there? Why does art's relation to the future matter to the roles that art pursues and gains within technological innovation—as a locus for human symbiotic imagination (about the future) and our technocultural making of it?

My overall suggestion is that we need to grant more attention to art's temporal modes of existence as simultaneously a matter of object functionality and environment, human and intersubjective experience, technocultural context, and cultural evolution. With a point of departure in the conception of art as "time-based," I engage an alternative, *intratemporal* mode of existence for art, with which I understand art to be a part of a larger temporal complex: art is not based in time but existing through intratemporal infrastructures and relations with its contemporary technological environment, which in our current age is characterized by and evolving through data-driven algorithmic processes. I unfold the intratemporal perspective on art through three temporal dimensions—object temporality, worldly temporality, and deep temporality—that relate art to epistemologies on how human experience changes with technological culture.

### Art and temporality - beyond "time-based" media

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When art is described and categorized in a temporal perspective, it is commonly referred to as "time-based." My claim in what follows is, however, that this temporal conception of art and the epistemological framework that it engages is insufficient to grasp art's behavioural modes of existence and interdisciplinary evolvement today.

The conception of art as “time-based” is broadly used by museums with reference to artworks that rely on technology, such as video, film, audio, slide, installation artworks, as well as artworks that function only for the duration of their time on display, like computer-based and mechanical works of art. The conception of time-based art ties time to the expressive and functional qualities of the medium. Time-based art is conceptually rooted in “time-based media,” a term coined by museum conservators for durational works of art that unfold over a period of time. It is used widely by art institutions to describe art that is ‘dependent on technology and has a durational dimension’ (Tate), that ‘unfold to the viewer over time’ (Guggenheim), and that are ‘dependent on time, duration, or function’ (National Gallery of Australia). Time-based media has a run-time enabled by the form or medium that limits and contains the experience. The medium enables the inscription of the spectator in different experiences of time. By looking at art as “time-based,” we focus on how the art facilitates meetings between different durations. For example, between the durations of human experience and the durations of a rationalized society. This understanding is fueled by a broad theoretical interest in temporary multiplicity in the writings of among others Henri Bergson, Alfred North Whitehead, Gilles Deleuze, Michel Foucault, and Michel de Certeau.

Christine Ross’ examination on art and temporality in *The Past Is The Present, It’s The Future Too* exemplifies this understanding of art as facilitating meetings between durations. She describes various ‘durational’ temporal strategies in art as aesthetic counter reactions to the forwardness of the modern era. These are temporal strategies of, for example, endlessness, ephemerality, repetition, real-time, contingency, randomness, slowmotion, condensation, acceleration, extension, abbreviation, speeding up, hesitation, disruption, fissuration, extendibility, and interminability—all temporal strategies for suspending linear conceptions of time that confirm one universal temporal logic.<sup>3</sup> Such temporal strategies of suspension evoke a tendency emerging in contemporary art of the 1960s, which is described by Pamela M. Lee in terms of “chronophobia”—a sense of unease or maybe even rebellion in art against temporal societal narratives that dominated during the middle of the 20th century and which translated into a critical consciousness in artistic expressions of performance, conceptual art, sound art, installation practices and land art.<sup>4</sup> The art of the 1960s that both Ross and Lee write about reacted against a relation between temporality and historicity, namely one dominant narrative about technological progress that characterizes Western modernity, which celebrated

technological transformation, automatization, acceleration and standardization. The dominant narrative reflects a universal conception of time as linear, structured around past, present and future, and organized based on classical physics’ ideas about absolute mathematical time and ground principles of natural science about relativity. In this narrative, time and space are compressed by technological and mechanical processes—what David Harvey has named “time-space compression” which refers to how global communications technologies and information economy compress barriers and distances, which is a function of late capitalism.<sup>5</sup> This global, temporal narrative is structured around a singular temporal scale characterized by rules of regulation, discipline, speed, effectivity, immediacy and progression—as Jonathan Crary describes in the book *24/7*.<sup>6</sup>

The time-based conception rests on a philosophical notion rooted in the ideas of Plato and a substantivist and absolutist conception of time, treating time as an empty container with rules and logics, that is, temporal rules and logics that are ready for art to critically engage with. We recognize this conception of contained time when art is accounted for as an aesthetic, conceptual, critical manifestation capable of presenting and representing alternative temporal modes to those driving capitalism by which to inscribe people into different experiences of time. This temporal containment, however, delimits art’s relation to the future as representational or reflective material that eventually becomes confirmative of the future narrative that it speaks to.

I would like to propose a different temporal condition for art. Because, although art is situated in a specific temporal slot and has a particular duration, and although it might depend on the phone or a mobile device that enables specific temporal qualities of the experience, the work is not delimited to a temporal capsule. It is not delimited to exist “based in time,” as if in a form of a temporal container that we can individually step into for a direct experience with represented image or concept. The time-based conception relies on a direct experience between the human and the artwork. This does not correspond to the ways in which we experience and exist with temporalities through the ways in which most of us engage with technology today. Nor does the time-based conception account for the human-perceptual and technocultural effects of these temporal experiences. Time is articulated in technical systems but only in connection with human engagement with technics, as we learned from the writings of Gilbert Simondon.<sup>7</sup>

In the following, I will propose the contours of an alternative temporal conception of art to that of time-based; one that considers an intratemporal mode of art's existence. This involves the conception of time as something that the art is relationally entangled with, through which it evolves, and which the art contributes to generating.

## Art's Intratemporal Mode of Existence

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Art's intratemporal relation to the future today bears traces of future-orientations in art of the past. Along with the ongoing critical discourse in art continuing the critical occupation with the forwardness of the modern era that Ross locates in art of the 1960s, we recognize a trajectory from the futurist art movement of the early twentieth century that sought to capture in art the dynamism, energy and movement of the modern world and modern life. Preceding future-oriented movements unfolded in effect and response to a technological environment before the internet, social media networks, and data-driven distributions and accumulation of registrations of our behavior. Today, however, the technological environment conditions a different intersubjective condition than that of the 1960s.

An intratemporal perspective on art might immediately evoke Martin Heidegger's understanding of phenomena and objects in terms of temporal relations rather than substance, in *Being and Time*.<sup>(2)</sup> <sup>8</sup> Heidegger contrasts intratemporality with authentic temporality, seeing intratemporality as an existential structure to Dasein determined by calculation and measuring instruments. My use of the term "intratemporality" takes a different reference, in Yuk Hui's connection of intersubjectivity (subject-context relation) and interobjectivity (object-milieu-relation) in the term. In Hui's theory, intratemporality is a dimension of changing of temporal relations between objects and neurosensory evolution that happens through our networked and synchronous co-evolvement.<sup>9</sup> In my adaptation of this understanding of intratemporality to this inquiry on art, I consider art as temporally related with temporalities of technologies and technological cultures well beyond the medium, the art experience, and the discourse of the art environment.

In the following, I will draw some perspectives on how intersubjectivity, as a matter of temporal relations, is conditioned by the temporalities of digital objects and worldly connectivity as well as by deep temporalities of

our cognitive and cultural heritage from technocultural pasts. These temporal dimensions combine in art's intratemporal mode of existence and tie art to the concept of the future in new ways.

*Object temporality:* In Hui's account of the conditions of digital objects and extension on Heidegger's notion of intratemporality in this regard, he notes how data-driven temporal processes mediate between intersubjective and inter-objective relations and influence temporal experiences in our everyday lives. The ways in which things are quickly shared, behavior and ideas are quickly adopted, and experiences are synchronized, effects an organization of consciousness about how things are temporally related to each other. This reorganization of consciousness with object temporality is what N. Katherine Hayles addresses in *How We Think: Digital Media and Contemporary Technogenesis*.<sup>10</sup> Hayles writes about how the media interface (e.g., the screen), for example, might seem like it correlates directly to human modes of sensory experience and cognitive processing while it only indirectly correlates to these modes of experience, since it involves technical operations to which we lack a direct access. This is because different time scales of human cognition and machine cognition intermesh. As computational processes occur at time frames that are below the threshold constitutive of human perceptual experience and introduce levels of operability that impact our experience but do not have any perceptual correlate, we are not conscious of their consequences to our actions. The mutual interference between temporalities of machinic systems and human-temporal functioning of consciousness means that our creation of (abstractions, forms, content, systems, meanings) is not rooted in a direct human relation with what we create but depends on unconscious processes. This unconscious aspect of perception with object temporality connects us to worldly temporality.

*Worldly temporality:* Global effects—from economical dynamics at a macro level to machinic operations at a micro level—reach us through object temporality. The unconscious cognitive processes at work in our engagement with object temporality not only concern an engagement with digital objects (in and beyond art). They condition intersubjective experience as object temporality relates to the temporalities of networked media technologies, which is entangled with human experience. As Mark Hansen notes in *Feedforward: On The Future Of Twenty-First-Century Media*, with digital media, the external world has become a part of individual experience, while experience has become externalized and environmentalized in contemporary forms of mediation.<sup>11</sup> While we physically exist in the

phenomenal world, our thinking, behavior, and the effects of our actions are also of a worldly context, conditioned by mediating factors of different temporalities affected by environmental and global connectivity, and experienced across timespaces.

What this meshing of human and machine temporality results in are operational processes that function as a kind of technical “memory,” which becomes a cultural support structure, and which affects how perception and intersubjective imagination are at work. This technical support structure evolves from a long process of evolutionary adaptation of technical tendencies and their logics, whereby art is intratemporally entangled with a sense of deep temporality.

*Deep temporality:* Art’s experiences can amplify and resonate through volumes of people, connect us to our ancient past and memories of cultural rhythms, rituals, and practices, and throw us into uncertain futures. An intratemporal dimension of deep temporality links art to cultural patterns, which have shaped the ways in which we use and develop tools and technology since our human origin and the perceptual habits we have evolved and enact when experiencing something, including art. Collective memories, cultural programs and imaginations have been transmitted via habit and repetition through communities and historical epochs. With reference to technoanthropological ideas from the philosophical writings on human technogenesis of Bernard Stiegler<sup>12</sup> based on the anthropology of André Leroi-Gourhan that roots human co-evolution with technics in the origin of human civilizations,<sup>13</sup> we can consider how art has a part in the shaping of cultural memory, symbols and rituals that we have adapted from ancient pasts. These have formed through civilizations, cultures and generations to manifest in the cultural codes, meanings and logics we navigate by today. These cultural adaptations of technocultural aesthetics and behavior inform how human cognition meets machinic operations today.

With this intratemporal dimension of deep temporality, I wish to emphasize a technicity in the art as having a function with regards to our cultural evolution with technics. Art, as a human aesthetic expression, has evolved with evolutionary adaptations that carry the past into the present—and entwine with the future—through technological tools and the cultural and cognitive memory structures they engage. From studies on ancient human pasts, we know that art, and the technicity with which it operates, in the ancient shapes of rituals, ornamentation, craftwork traces of human gatherings, and more, has taken on various roles as a cultural transmitter and as an aesthetic mechanism of

societal organization. For example, as a kind of mediator of societal imaginaries; a vehicle for intelligence, memory, language, forms of expression and pattern recognition to travel through generations; as both depiction and facilitation of rituals (practical, cultural and spiritual); as a connector of human beings to their past and origin and a basis for collective consciousness and emotional intelligence; as a connector of humans to the materials and environments of our world and its ecosystems; as embodying conceptions and philosophies of science as a foundation for furthering civilizations, among many others. These are observations from my research on various intersubjective functions art has had in ancient societies.<sup>14</sup>

Intratemporality concerns temporalities that are within us, among us, beyond us and preceding us—and which entangle in our tenement towards the future. The intratemporal mode of art’s existence therefore cues a re-examination of art’s relation to the future.

## Art’s intratemporal relation to the future

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The current future orientation in art is not either confirming or resisting a utopian desire. What should interest us are also not the future destinations that art offers or is used to test, project, or speculate upon, which are ideas that inform scenario-based design and conceptual attention to “possible futures.” It is also not the critical comment on future-driven regimes. Future-oriented art of today does more than make room for reimagining the future.

My proposal here is that art’s intratemporal relation to the future concerns how art and its experiences are entangled with temporalities that relate us to our everyday engagement with (digital) technologies, with the flows and dynamics of worldly (data) processes, and which engage cultural adaptations and intersubjective evolution through intuitions and perceptions that precede our experience today. This perspective ties art’s relation to the future to contexts of technological cultures beyond that of Western rationalization. The intratemporal perspective on art concerns what kinds of temporalities the art engages and connects in our bodies, objects and surroundings, and in which ways (by the use of which techniques and aesthetic means). It concerns how art intervenes in our experience of those temporalities. This perspective writes art into a larger narrative in which human experience is changing with

technology and in which art has always played a role in the ways in which human beings have co-evolved with technics.

This reconception of time-based art can help us to grasp the new routes and roles art pursues through temporal engagements with technological innovation culture. When art collaborates with science and technology in the domain of innovation, it not only envisions, problematizes, or proposes but also *co-produces* our futures. This involves a change in perspective, from how art represents and responds to the future, to how art has a constitutive relationship to the future. This is because art engages with human intuitions, desires, and aspirations from where our futures emerge. Art becomes a part of larger intratemporal processes of human co-existence and co-evolution with technology. This calls for further examination of futurity in art, how the art's techniques and experience is temporally entangled with future-driven systems and processes of human co-evolution with technics.

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(1) Some of the many recent future-oriented exhibition contexts. I've come across in my research, which exhaust and understate my argument that the attention to and conceptualization of the future in art is momentous: Possibles (ISEA2022); Futures Implied (Media Architecture Biennale 2020); Writing the History of the Future (ZKM – Center for Art and Media Karlsruhe 2019); Futures (Smithsonian 2022); Future and the Arts: AI, Robotics, Cities, Life - How Humanity Will Live Tomorrow (Mori Art Museum 2019); The Future Starts Here (V&A South Kensington 2018); Possible Spaces (Danish Architecture Center 2018); Future Shock (180 Studios 2022); WHO Futures Art Exhibition: Envisioning the Future of Health in 2050 (World Health Organization 2022); Future World (Art Science Museum Marina Sands 2022); Future U (RMIT Gallery 2021); Hope for the future & meaning of life (Kawaguchi Art Museum 2021); Sampling The Future (National Gallery of Victoria 2022); Edible Futures (The Dutch Institute of Food & Design 2022); Future Food Today (Space10 Gallery 2022); The Future We Create (Art Works for Change 2022); Remembering the Future: 100 Years of Inspiring Art (Heard Museum 2022); Future Perfect (worldwide 2019/2022); Future Retrieval: Close Parallel (Cincinnati Art Museum 2021); TECH/KNOW/FUTUREU/ From Slang to Structure (Montclair State University 2021); Past Present Futures: Notions of Time in Twentieth-Century Art (Blanton Museum of Art 2001); Future Is Today (Al-Tiba9 Global 2020); Decriminalised Futures (Institute of Contemporary Arts 2022); Futureritual (Institute of Contemporary Arts 2022); The Future of Now;;

Contemporary Art in Our Unstable World (Emmanuel Art Gallery 2022); Designs for Different Futures (Philadelphia Museum of Art 2020); The Future States (Latvian National Museum of Art 2018); Remember the Future Orleans House Gallery 2021); Designs for Different Futures (Walker Art Museum 2021).

(2) Heidegger's attention to intratemporality concerns an existential structure of Dasein that is inauthentic and measured by technological instruments and by calculation. In Heidegger's optics, intratemporality denotes an inescapable horizon for Western history of being.

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