

INTERNATIONAL
SOCIETY FOR THE
STUDY OF TIME

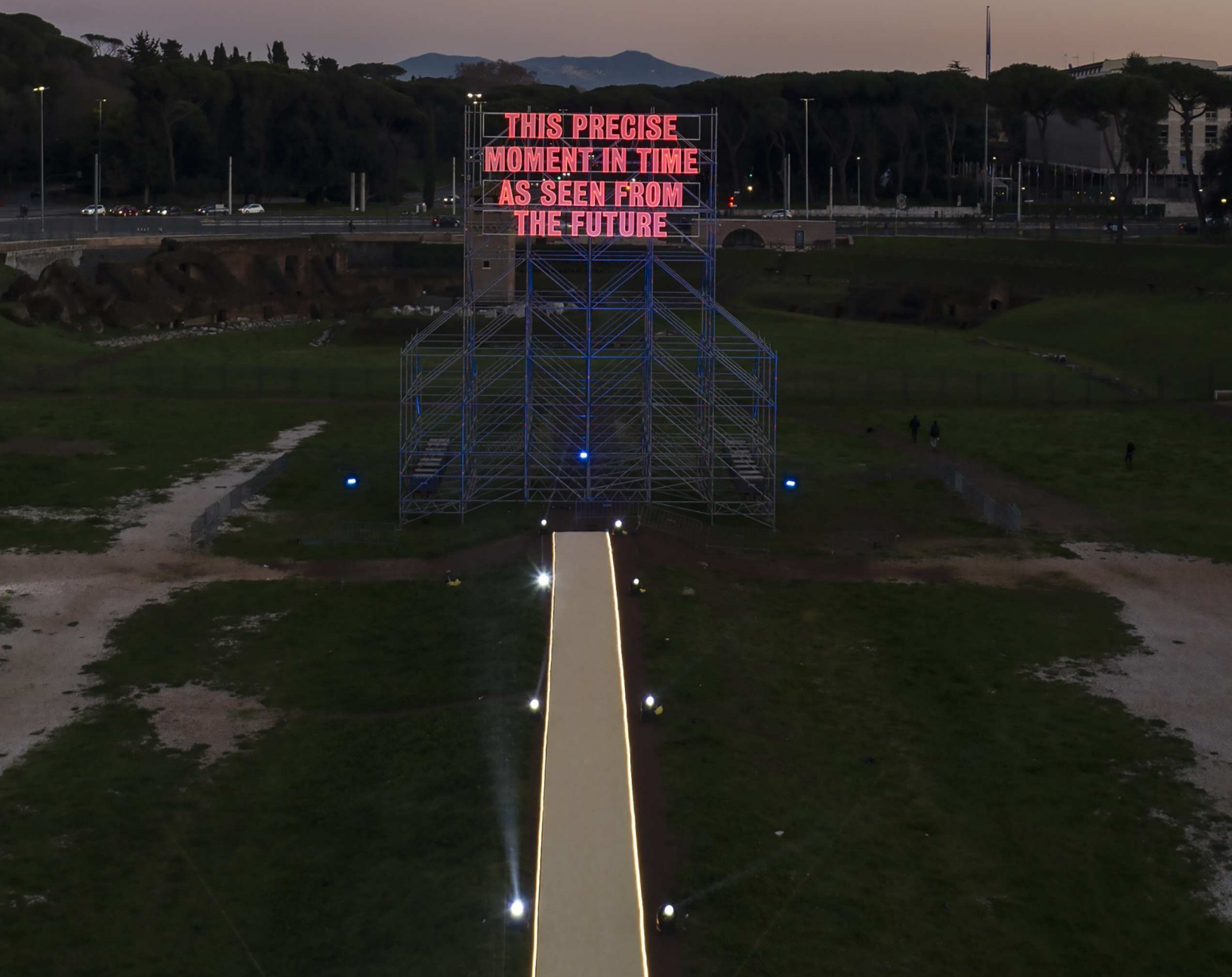
TIME'S

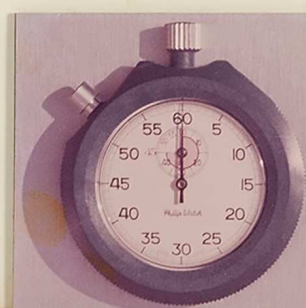
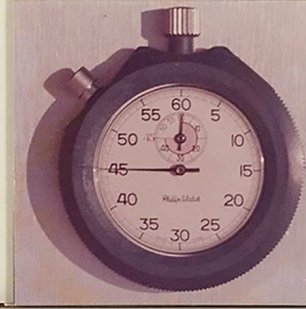
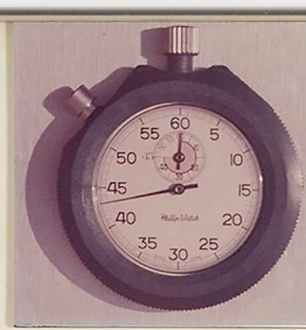
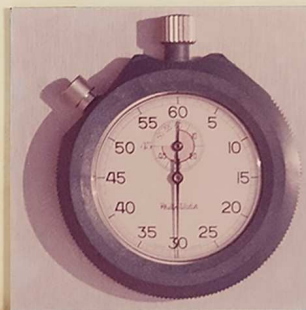
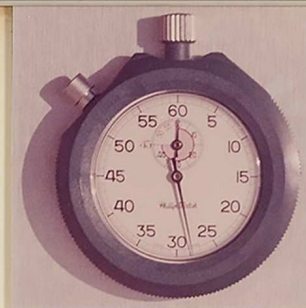
No. 52

2021

NEWS

THIS PRECISE
MOMENT IN TIME
AS SEEN FROM
THE FUTURE





CONTENTS

5

PRESIDENT'S MESSAGE

Raji Steineck

6

THE COUNCIL

10

A GLOSSARY OF EMERGENCE

Paul Fishwick, Laura Kim, Roger Malina,
Robert Stern and Fred Turner

12

ARCHIVE

ISST Aperiodic Newsletter, 1982
ISST Aperiodic Newsletter, 1984

14

VISUALIZING TIME

Laura Leuzzi & Antonella Sbrilli

28

POEMS

Eric Kincanon

30

STONES ON STOOLS

Paul Harris

37

HARD TIME

Michael Flaherty

40

SPOTLIGHT

Jo Alyson Parker
José Lino Oliveira Bueno
Hazhir Teimourian
Gus Koehler
Peter Hancock
Bob Frishman
Emily DiCarlo

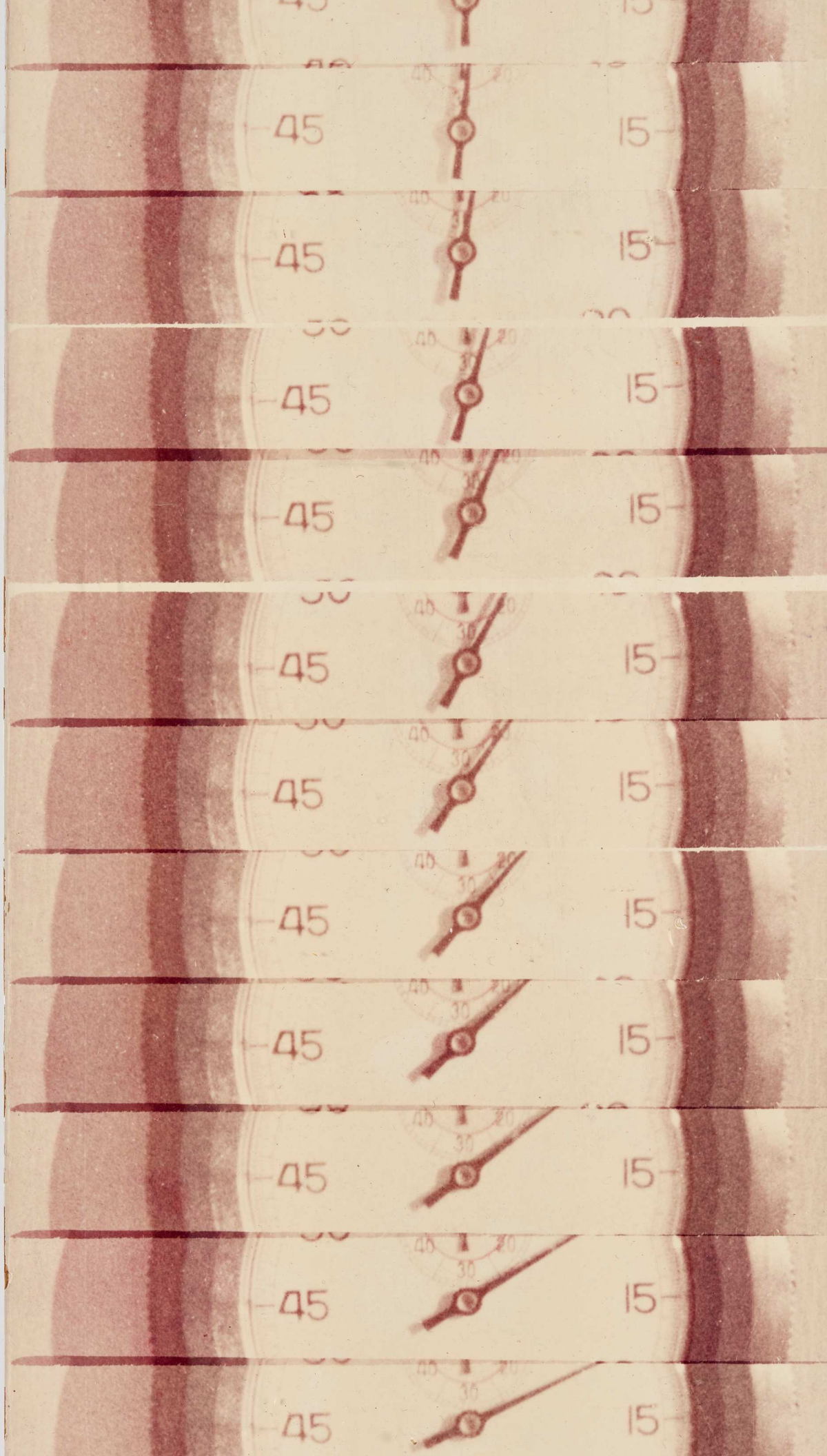
45

THE LAYERS OF TIME

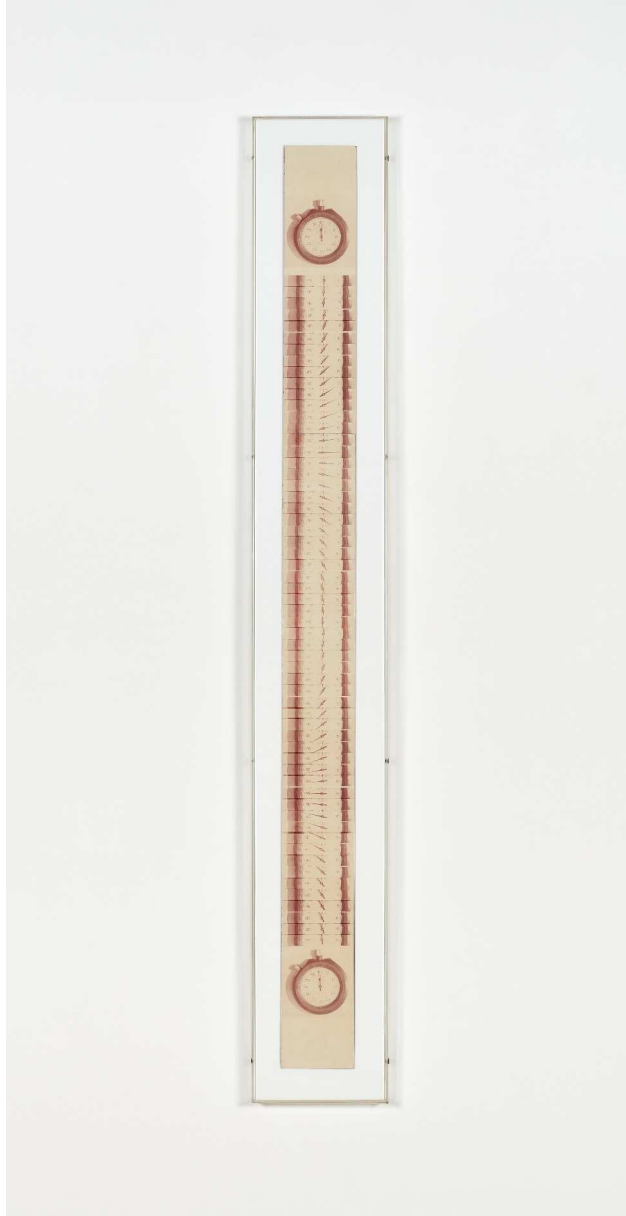
Antonella Sbrilli



country plank stool with stone
circa 1880
COURTESY PAUL HARRIS



ISST COUNCIL



MAGAZINE COVER
Tim Etchells, *Precise Moment*, 2020
public art installation
COURTESY ARTIST
PHOTO SIMONE PAGANO

ABOVE/OPPOSITE
Laura Grisi, *Tempo Reale* 1975
photo collage, 173 x 23.5 cm
INSIDE COVER
Laura Grisi, *Hypothesis about Time*
(Ipotesisul tempo), 1975
360 photos mounted on board
20 parts, 28 x 120 cm each
COURTESY LAURA GRISI
ESTATE, ROME & P420,
BOLOGNA
PHOTO CARLO FAVERO

OFFICERS

President	Raji Steineck
Vice-President	Jo Alyson Parker
Treasurer	Carol Fischer
Executive Secretary	Daniela Tan
Managing Editor, <i>KronoScope</i>	Dennis Costa
Communications	Emily DiCarlo
Senior Editor <i>The Study of Time</i> , Volume XVII	Arkadiusz Misztal
Immediate Past President	Paul Harris

AT-LARGE COUNCIL

Robert Daniel	Sonia Front
Stephanie Nelson	Walter Schweidler
Eve Isham	

CONNECT

www.studyoftime.org
membership@studyoftime.org
[@InternationalSocietyfortheStudyofTime](https://www.facebook.com/InternationalSocietyfortheStudyofTime)
[@StudyofTime](https://twitter.com/StudyofTime)

© 2022 by Time's News, Inc.
All Rights Reserved. Reproduction in whole or in part without permission is
prohibited. Printed in Canada through Blurb Publishing.



PRESIDENT'S MESSAGE

Raji Steineck

One of the most memorable events of this past year was a nightly rainstorm I witnessed from the safety of our apartment in central Zurich. A safety that, for two or three minutes suddenly felt less secure, as all I could see outside was a grey wall of water. The rain did not fall from the sky, it was blown sideways and upwards by the storm, with leaves torn from trees below slashing at our windows on the building's 5th floor. When the worst blast subsided, gully covers in the streets had turned into waterspout fountains. The next day I learned that the storm had destroyed up to half of the trees in Zurich's parks.

I have seen quite a number of heavy storms in my life. I grew up in southern Bavaria, close to the mountains. In summer and fall, we could often watch several thunderstorms clash with each other, with lightning bolts all over the horizon. I developed a sense of when to leave from the lakes where I used to swim in summer so that I would get home on my bicycle in time before the rain and storm started (it works still today). Much later, I spent half a year on an island in southern Okinawa. From late August to Mid-October, the island was hit by typhoons every week. Long before that, in mainland Japan, my friends for a time used to joke that there was always a typhoon when I showed up. (Sheer coincidence, due to the academic calendar that made me visit Japan in the typhoon season.) Friends from ISST Council will remember the council meeting in Strathmere, New Jersey in 2012 that was held while hurricane Sandy barreled its way to the shore.

But I have never seen anything like these three minutes. It felt like some law of nature was being broken. Only that it wasn't, of course. It was my sense of what was to be expected that was being broken. Suddenly, the idea that the world I know might change to an extent entirely beyond recognition—something we've been warned about for quite some time now—became much more palpable.

I assume that quite a few of us have had similar experiences over the past few years, some more powerful and some on a less salient degree. Apart from the extreme weather conditions that are increasing in number and scale because of global warming, the

Corona pandemic and social responses to it have disrupted many routines, even within the fairly protected sphere of academic life. In one way or another, we have had to adjust to living with the unexpected on a new scale. With so much in our lives built on structures that require co-ordination and planning, this came with a strong sense of lost time to many. This sense was only exacerbated as hopes for swift recovery after the first waves of the pandemic and the quick introduction of vaccines have been thwarted again and again. On ISST's council, we were looking forward to hold a full in-person meeting again after two years in fall. Being able to meet in person seemed especially important because this year's main topic on the agenda was the vetting of proposals for our next conference in Yamaguchi. By summer we had learned that travel restrictions were still in place, preventing us from coming together in one place. In the end, some of us convened in Cayucos, at our Treasurer Carol Fisher's place, while the rest (myself included) participated remotely.

Later, versus the end of the year, we learned that we would need to postpone our Triennial Conference. Japan continues to restrict incoming travel to a minimum, and our partners from the Japanese Society for Time Studies and the Research Institute for Time Studies in Yamaguchi warned us that the prospects for summer 2022 were insecure. In light of news about yet another variant of the virus, we decided, together with them, to hold the conference in summer 2023. Furthermore, it will include an online component in order to enable remote participation by a certain number of presenters. Still, we want to keep our triennial conference as an opportunity for our members to meet in person, to make new acquaintances and, for once, enjoy the unexpected and explore what our conference site has to offer. Let me just note in advance that, thanks to the energy and dedication of our friends from JSTS and RITS, our conference in Yamaguchi will provide the opportunity to visit one of the most important historical sites in Japan on our breakout day—a site much remembered over the centuries in literature, drama, and art, and to watch a Noh theater performance as part of the welcome reception. So I sincerely hope that we can all navigate the insecurities still ahead and that many of us will be able to meet in Yamaguchi in July 2023.

THE COUNCIL

THE INTERNATIONAL SOCIETY FOR THE STUDY OF TIME



RAJI STEINECK

President

"I am a Professor of Japanology at the University of Zurich, Switzerland. This past year, I have been working closely with our Executive Secretary Daniela Tan, as well as with our council members and friends at the Japanese Society for Time Studies (JSTS) and the Research Institute for Time Studies at Yamaguchi University to prepare our next triennial conference on "Time and Measure." Recently, I wrote the final chapters of a monograph on time in the works of the medieval Japanese Zen master Dōgen, and I am now preparing an edited volume on "Time in Medieval Japan." Last but not least, my thoughts revolve around the relation of time and symbolic form—the subject of my next book, which I am eager to start writing. In between, I like to spend time in nature and went to see (not climb!) the Eiger for the first time."

JO ALYSON PARKER

Vice-President

"After nearly 25 years of serving in various capacities in the ISST (*Time's News* editor, *KronoScope* managing editor, "Time's Books" editor, *Study of Time* co-editor), I'm currently serving as the vice president/membership chair of the society. One of the great pleasures of this job is connecting with new members and welcoming them into the society. Generally, the initial contact is through email, so it's always a plus to meet those new members in person when they present at the triennial conferences. This past year, one of my happiest achievements was working with Arek Misztal and Paul Harris to bring forth the seventeenth volume of *The Study of Time* series: *Time in Variance*. I have also continued to work on my ongoing time and narrative project, including my recent publication of "Ted Chiang's Braided Stories of Memory, Narrative, and Technology: 'The Truth of Fact, the Truth of Fiction,'" in *Performing Memories. Media, Creation, Anthropology, and Remembrance*, edited by Gabriele Biotti (Cambridge Scholars Press, 2021)."



DANIELA TAN

Executive Secretary

"I research and give lectures on Japanese literature at the Institute of Asian and Oriental studies of Zurich University. For my current research on body time, I investigate medical knowledge, religious concepts, and literary texts about menstruation in medieval Japan and the impacts this had on women in their daily lives. I love this research, enabled by an ERC research grant, as it expands my investigations in Japanese literature back to 12th century Japan and opens up a rich field of women's history. My PhD thesis dealt with narrative strategies in the work of writer Oba Minako, who creates unique temporalities in her novels. Further, I have translated Japanese literature, a few short stories and a novel by writer Shibasaki Tomoka. I love reading, music, hanging out with family and friends, and DIY projects. I have served as the executive secretary for the ISST since 2016, and I enjoy the experiences and learning that this work brings. Time can be magic."



CAROL FISCHER

Treasurer

Carol Fischer, a council member since 2016, is currently the treasurer for ISST and book review editor for *KronoScope*. Her first contact with ISST was at the conference in 2007 while she was a Theatre Studies graduate student working on a dissertation connecting theatre theory and quantum physics theory. Theatre work re-started in August 2021 at West Valley College where she has worked part-time since 1995. This fall she directed one play, executed light design for three performances and sound design for two – all jobs that involve much delicacy regarding time and measurement.

"The adventure of sitting alone in a dark theatre, in the quiet, and courageously putting magical lights on stage to expose the heart of a play is one favorite part of my varied theatre jobs."



STEPHANIE NELSON

At-Large Member

Stephanie Nelson is an at-large Council member who teaches in the Department of Classical Studies at Boston University. She has been particularly interested in questions of time and identity, leading to a monograph, *Time and Identity in Ulysses and the Odyssey*, essentially on the question of how anyone can be the “same person” when twenty years have passed. The book is due to come out spring 2022. Meanwhile her interests in narrative time have led to projects on Joyce’s *Finnegans Wake* and Plato’s use of contemporary time in his philosophic dialogues. From here she continues work on a new project, time in Ovid’s *Metamorphoses*.



ROBERT DANIEL

At-Large Member

Robert teaches at Saint Joseph's University (Philadelphia, USA) in the Department of Modern and Classical Languages and is an at-large member of the Council whose term comes to its end next year. He previously served the Society as treasurer from 2004-2009, and as co-editor of ISST's conference volume “Time’s Urgency,” *The Study of Time XVI*. His scholarly and pedagogical work in recent years has focused on the intersection of cognitive science, digital technologies, and ethical education. During the pandemic, he facilitated in-person and virtual workshops for teachers about how to promote learner engagement in critical thinking using digital technologies.



SONIA FRONT

At-Large Member

"I'm an at-large member of the ISST Council and work at the English Department of the University of Silesia, Katowice, Poland. My research interests are time, temporality and representations of consciousness in twenty-first-century literature, film and television series. In 2021 I had my chapter “In the Forest of Realities: Impossible Worlds in Film and Television Narratives” published in the ISST conference volume “Time in Variance,” *The Study of Time XVII* (edited by Arkadiusz Misztal, Paul A. Harris, and Jo Alyson Parker); I was on an Erasmus exchange at the University of Verona, Italy; and I'm going on a research trip to London to work on the project 'metaphors of memory in literature.'"



EVE ISHRAM

At-Large Member

"My research focuses on the cognitive and neural basis of time perception. This year, my lab has explored various forms of temporal experiences including the subjective experience of how fast or slow time is passing and how the absence of temporal landmarks affects the feeling of day loss. We are also investigating various physiological and mental health factors that contribute to time perception. In addition to time perception, my lab is also interested in temporal consciousness and free will. Our most recent work examines how present, past, and future time orientations influence our beliefs in free will and behaviors. I am very much looking forward to what the new year brings, and especially to the opportunity to eventually connect with everyone at our meeting at Yamaguchi 2023. Meanwhile, sending you warm and wonderful wishes from Tucson, Arizona!"



WALTER SCHWEIDLER

At-Large Member

"I've been working on the phenomenological theory of revelation, participating in the Singer-Polignac foundation's colloquium on Jean-Luc Marion's book "D'ailleurs, la révélation" and writing a contribution to the conference volume edited by Vincent Carraud, and an article about the concept of revelation in Heidegger and Marion in the Salzburger Jahrbuch Philosophy and Theology 2021 with the title "Das Fragen nach Gott in seiner Zeit." I finished the edition of the conference volume "Mirabilis scientiae fundamenta" based on the colloquium with the same name in Neuburg 2019. Primarily, I have been working on the second volume of my book *Wiedergeburt* after the publication of the first volume in December 2020. I am currently the Chair of Philosophy at the Catholic University of Eichstätt-Ingolstadt."



DENNIS COSTA

At-Large Member

"I am an Emeritus Professor of Italian and Comparative Literature at Boston University. I'm a member of the ISST Council ex officio, by virtue of my work as Managing Editor of *KronoScope*. In addition to editing our scholarly journal, I am presently at work on two articles: one on the 18th century English poet Christopher Smart (concerning his poetical ideas on what we might call 'appropriate technology'); the other is on Igor Stravinsky's 1940 Harvard Norton Lectures, which he titled *Poétique Musicale*."



EMILY DICARLO

Communications

"I've been a member since 2009 and have acted as ISST's communication officer since 2016. Since then, I have designed and edited ISST's member-based publication *Time's News* magazine, managed their social media accounts and last year co-edited "Anthropocenic Temporalities," a special issue of *KronoScope* with Paul Harris. I have also been overseeing the redesign and migration of ISST's website.. My essay, "Transcending Temporal Variance: Time Specificity, Long Distance Performance and the Intersubjective Site," can be found in the most recent volume of *The Study of Time*. A little more about me: I am a Canadian visual artist and writer whose interdisciplinary practice considers site, poetry and collaboration as the foundational principles in my practice. I do this through installation, video, performance and text, where my work aims to connect the infrastructure of time with the intimacy of duration. I most recently exhibited at the Art Museum in Toronto and SÍM Gallery in Reykjavik, Iceland as part of their artist-in-residence program."



ARKADIUSZ MISZTAL

Senior Editor, *The Study of Time*

"I am a Professor in American Studies at the University of Gdańsk, Poland. I'm a member of the ISST Council *ex officio*, by virtue of my work as Senior Editor of the Study of Time volume *Time in Variance* (published by Brill in September 2021), co-edited with Paul A. Harris and Jo Alyson Parker. I'm also an Associate Editor of *KronoScope* and have been Special Editor for the 21.1 and 21.2 issues. I am currently working on a monograph on modality and narrative articulations of temporality."



PAUL HARRIS

Immediate Past President

"Since joining ISST in 1992, I have served three terms as President (2004-2013) and co-edited four volumes in *The Study of Time* series, most recently *Time in Variance The Study of Time XVII* (Arek Misztal and Jo Alyson Parker, co-editors). I treasure the combination of conviviality and intellectual vitality unique to ISST conferences and am grateful to have learned from colleagues while forging lasting friendships through the years. This year, I also published an essay on "Rocks" for *The Cambridge Companion to Environmental Humanities* (Jeffrey Jerome Cohen and Stephanie Foote, eds.). Interdisciplinary collaborative projects in progress include co-editing volumes on *Time and the Sciences* with former ISST President Rémy Lestienne for Cambridge Scientific publishers, and assembling a special issue of *SubStance: A Journal of Theory and Literary Criticism* called "Breaking Earth" with co-editor Alexis Rider (History of Science, University of Pennsylvania)."



BRILL *Over three centuries of scholarly publishing*

Time in Variance

Editors: Arkadiusz Misztal, Paul A. Harris, and Jo Alyson Parker

This interdisciplinary volume of essays explores how the notion of time varies across disciplines by examining variance as a defining feature of temporalities in cultural, creative, and scholarly contexts. Featuring a President's Address by philosopher David Wood, it begins with critical reassessments of J.T. Fraser's hierarchical theory of time through the lens of Anthropocene studies, philosophy, ecological theory, and ecological literature; proceeds to variant narratives in fiction, video games, film, and graphic novels; and concludes by measuring time's variance with tools as different as incense clocks and computers, and by marking variance in music, film, and performance art.

Readership

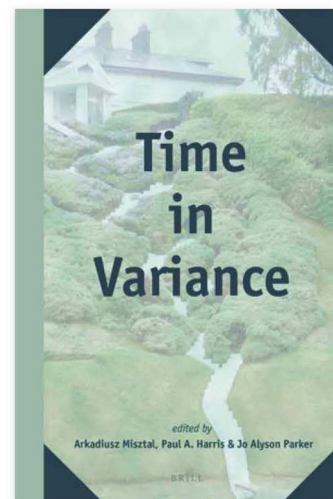
All interested in the interdisciplinary study of time, from the physical and social sciences to the arts and humanities.

For more information see brill.com

Order information: Order online at brill.com

The Americas: 1 (860) 350 0041 | brillna@turpin-distribution.com
Outside the Americas: 44 (0) 1767 604-954 | brill@turpin-distribution.com
Submission information: brill.com/authors

Titles published by Ferdinand Schöningh, Wilhelm Fink and mentis:
+49 (0)7154 1327 10 | brill@brocom.de



Pages: xvi, 325 pp.

Language: English

Subjects: General, Art History, General, Literature and Cultural Studies, General, Philosophy, General, Social Sciences, General, Biology

Publisher: Brill

Series:

The Study of Time, Volume: 17

E-Book (PDF)

Publication Date: 20 Sep 2021

ISBN: 978-90-04-47017-0

List price

EUR €99.00 / **USD** \$119.00

Hardback

Publication Date: 23 Sep 2021

ISBN: 978-90-04-47016-3

List price

EUR €99.00 / **USD** \$119.00

A GLOSSARY OF EMERGENCE

WRITTEN BY PAUL FISHWICK, LAURA KIM, ROGER MALINA
ROBERT STERN & FRED TURNER

An informal group at the University of Texas—Robert Stern (Geology), Roger Malina (Humanities, philosophy of science), Laura Kim (Art), Paul Fishwick (Computer Science), and long-time ISST member Fred Turner— have put together this short glossary of Emergence Studies.

Affordance: what a **system** can do or experience.

Art: Emergence in the cultural domain. The process by which the multitude of inputs into a work of art—physical, technical, sensory, aesthetic, psychological, sociological, economic, historical, social, philosophical, formal, ethical, cultural, etc—are integrated into one epitomizes emergence at its most comprehensive level.

Attractor: the notional form that a given **nonlinear dynamical system** or algorithmic process explores through its **iterations**. "Strange" attractors are ones that provide no terminus or point of rest for their enactment or their computation. Their characteristic shape is **fractal** and **self-similar**, and they display **scaling** features.

Autocatalysis: (see **catalysis**) a key element in **self-organizing systems**, where a **system** itself generates a structure that acts as a **catalyst**. Example: a hurricane whose rotational structure creates high energy or moisture gradients that in turn maintain the hurricane itself. In biological systems the practice of eating is itself **autocatalytic**. See **feedback**.

Autopoesis: the condition of any **self-organizing** system, literally "self-making."

Basin of attraction: describes the condition of a **system** all of whose possible behaviors return to a common set of outcomes. **Emergence** happens when a threshold is crossed through an **iterative** accumulation of some parameter, and the **system** finds a lip over which some of its outcomes can escape. Example: convergent **evolution** in sharks and dolphins, and in anteaters, pangolins, and aardvarks, where different genetic lines enter the same ecological **basin of attraction**.

Bifurcation: the crisis in which a **threshold** is crossed and two possible futures for a **system** divide from each other and must coexist or be destroyed.

Blob: Laura Kim's useful term for an unorganized collection of connected elements (?). It avoids terms like "group," which implies a certain regularity, and "**system**," which is already organized, and "collection" itself, which implies a collector. **Blobs** cross **thresholds** to create **emergent systems**.

Branchiness: a term loosely applied to a conception of time in which a given state of affairs can have more than one outcome, that one cause can have different effects, and that the future is inherently

different from the past. Opposed to the one-line deterministic universe envisaged by Laplace: any Laplace calculator must compute the information state of a future universe that has more information states than its own, since it now must include the history of its own computational process.

Catalysis: the process by which an extraneous element in a group, blob, or emergent system enables paths or **affordances**, such as viable energy paths or new combinations that would otherwise be closed, to take place. The term originates in chemistry but is readily applicable to many fields from physics to the ecological, social, and aesthetic disciplines.

Complexity: (Wikipedia) "characterizes the behavior of a system whose components interact in multiple ways and follow local rules, meaning there is no reasonable higher instruction to define the various possible interactions. The term is generally used to characterize something with many parts where those parts interact with each other in multiple ways, culminating in a higher order of emergence greater than the sum of its parts." the general term for all **systems**, i.e. **blobs** that involve multiple components with **feedback** among them.

Dynamical system: a system whose changes maintain its form as a system, i.e. its components interact so as to preserve their continued interaction. Dependent upon whether its **feedbacks** are positive or negative or both, such a system can be homeostatic or **evolutionary**.

Emergence: "Emergent" describes the propensity for any high energy, far-from-equilibrium system to self-organize in ways that cannot be predicted from knowing its individual components (Ablowitz, 1939; Pines, 2014). Emergence is closely related to self-organization and complexity and synonymous with evolution. Spiral galaxies, hydrothermal systems animals, ecosystems, oceanic currents and tides, hurricanes, civilizations, political systems, economies, and war are some of the many examples of emergent phenomena, where low-level rules give rise to higher-level complexity. Entirely new properties and behaviors "emerge," without direction and with characteristics that cannot be predicted from knowledge of the constituents alone. The whole is truly greater than the sum of its parts. Morowitz (2002) outlines the emergence of 28 things, beginning with the Big Bang and ending with civilization. There is no theory of Emergence; our conceptualization of it is itself emergent.

Epiphany: perhaps the experience of emergence when **threshold-crossing** occurs in the synaptic regime of the human brain at a certain point in time, and a vision or concept or realization **self-organizes** or **sinters** itself out of an existing state of metastability.

Evolution: Synonym for Emergence but more common for life. The **iterative feedback system** of inheritance, mutation, and selection that characterizes all biological phenomena.

Feedback: (Merriam-Webster) "the return to the input of a part of the output of a machine, system, or process (as for producing changes in an electronic circuit that improve performance or in an automatic control device that provide self-corrective action)." Originally, an engineering term for any system whose elements control each other and/or themselves.

Fractal: describes the whole class of shapes--different from Euclidean straight lines or Newtonian curves--that are ordered, **self-similar**, but non-repeating, characteristic of **nonlinear** dynamical processes in physical and biological processes or **iterative** self-referential computational procedures.

Hierophany: emergence in the spiritual domain. The experience of *chairoi*, the sense of all times contracted into a moment, often described by anthropologists as the crossing of a shamanic threshold into the state of "*illo tempore*," can be described as an intense form of psychological emergence.

Holon: any grouping that exceeds the sum of its parts. Adjective: **holistic**.

Iteration: the fundamental element of reality in time, variously characterized as waves, repetition, rhythm, harmonics, vibration, temporal succession, history, endurance, etc. Iteration can simply maintain a state of affairs or provide a basis for repetition-with-a-difference, enabling **bifurcation**, **autopoiesis** and thus **emergence** to take place.

Linear: in emergence circles, "linear" is a loose term for sequential processes or reasonings that are bound by logical rules of inference or causal constraints that allow no alternative results.

Metastability: the condition of readiness or approach to a **threshold** required for emergence to take place.

Network: describes various structures of connection among the elements of a system, such as nodes, hierarchies, etc.

Nonlinear: in Emergence, a loose term for transformations or implications that are global, offer more than one degree of freedom, or cross **thresholds of complexity**.

Onto-epistemological: a philosophical term describing an entity or **system**, whose state of information or knowledge is a necessary element of its existence. Example: quantum coherence and wave-function collapse as described by Heisenberg and Schroedinger. The term implies that in some sense the universe mutually "knows" itself into existence (since the fundamental unit of information is the photon, and all matter and energy is resolvable into light).

Paradigm change: emergence in the cognitive domain.

Partial dimensionality: the degree to which an entity with a given number of dimensions, like a line or plane, can by **iteration** of its shape amount to something of a higher dimensionality. Example: a Sierpinsky carpet. Example: a flower-petal whose rim is populated with more new cells than would make a plane, and must then frill into a shape with three, not two, dimensions. The degree of such an increase of dimensionality is quantifiable and a useful metric. Such an increase often plays a central role in **emergence**.

Phase change: in thermodynamics, the crossing of a **threshold** between any of the four phases of matter--solid, liquid, gas, and plasma. The concept carries over to changes among crystalline, amorphous, glass, colloidal states, etc.

Scaling: the relation between larger structures of a system and the smaller ones of which they are composed, down to the minimum level of the system's **affordances**.

Self-similar: describes shapes with internal symmetry, i.e. their microcosmic detail more or less resembles their macrocosmic organization across **scales**.

Self-organization: the differentiating of function that occurs in an **autopoietic system** among its components that enables stability or controllably gradual change, preserving key identifying characteristics of its **umwelt**.

Sintering: one type of threshold-crossing, in metallurgy literally a process of annealing a material by heat and pressure, in principle driven by the excess of free energy of a system triggering several transport paths. Sintering is the process of fusing particles together into one solid mass by using a combination of pressure and heat without melting the materials. Common particles that are sintered together include metal, ceramic, plastic, and other various materials. Sometimes used to describe the quantum computation of factors. The key idea is that transformations by sintering are global rather than **linear**.

Social evolution: emergence in the social domain. ("Revolution" can apply either to emergence or to the destructive collapse of emergent order.)

System: any **blob** whose components stably affect each other in some way.

Temporal umwelt: what kind of temporal distinctions apply to something; can it have an earlier or later state; does it have a direction in time, and if so, which; can it have a past or history, a distinct present, and a possible future?

Thermodynamics: (Brittanica) "The science of the relationship between heat, work, and energy [...] thermodynamics deals with the equilibrium transfer of energy from one place to another and from one form to another." Thermodynamics is the antithesis of Emergence because it focuses on equilibrium processes and these systems are predictable.

Threshold: a point where a quantitative change in a collection (see "**blob**") transforms into a qualitative change. Example: wetness is not a property of water molecules until a sufficient number of them is present together. Boiling is an important fluid-gas threshold.

Umwelt: the world of a given entity or organism: what it can do and what it can experience: its **affordances**.

Cited Works:

Ablowitz, R. "The Theory of Emergence." *Philosophy of Science*, 1939, vol. 6, pp. 1-16.

Morowitz, H. L. *How the World Became Complex: The Emergence of Everything*. (Oxford University Press, 2002), 209.

Pines, D., 2014. "Emergence: A unifying theme for 21st Century Science." *Foundations and Frontiers of Complexity*, 2014, vol. 28, no.2. <https://medium.com/sfi-30-foundations-frontiers/emergence-a-unifying-theme-for-21st-century-science-4324ac0f951e>

THE FOUNDER'S COLUMN

When our first conference was held in 1969 in Oberwolfach, the Society was still in its infancy. Our membership was perhaps forty-two, the number of invited papers around forty. Everyone knew everyone else, everyone spoke and everyone listened.

Hopefully, by the time the 1983 conference is over each participant will have met every other participant and we all will have listened and participated in the discussions. This time, however, it will not be possible to extend an invitation to all present to deliver papers. The vitality of the idea of a multidisciplinary study of time has made the Society grow too large to do so, in spite of the fact that it has never actively sought new members.

We could have remained a more or less closed group but, following the desires of the membership expressed in a change in our constitution, we are now open to all qualified professionals who, in the judgement of the Membership Committee, can profit from our work and contribute to it.

The Study of Time IV (see Secretary's Report) carries an introduction entitled, "A Backward and a Forward Glance: the Uses and Problems of the Study of Time." The following quotation from that introduction points to the reasons why, in my view, our work has been attracting so many fine people.

The suspicion has often been voiced that fascination with the study of time has its roots in the insight which it provides into man's destiny or, perhaps, absence of destiny. Therefore, even the most abstract scientific analysis of time harks back to fundamental issues relating to the existence of man.

Perhaps what a meaningful multidisciplinary study of time demands is an intellectual climate, rather than simply a new method of argument. Such a climate should permit creativity, common to all knowledge, to flourish, and aspects of reality previously separately understood, to produce their synthesis, by interacting through the idea of time. The task is difficult, but human aspirations seem to call for it. For, as in the quiet countryside of Robert Frost's New Hampshire so also in the countryside of the intellect:

"Something there is that doesn't
love a wall,
That sends the frozen-ground-swell
under it,
And spills the upper boulders in
the sun."

J. T. Fraser

#8

No. 12

November, 1984

THE FOUNDER'S COLUMN

In the course of its development, a fertilized egg divides into two, into four, then, eight, sixteen, thirty-two cells. After a few more divisions there are too many cells to be counted. Both the nature of the organism and the way biologists deal with it change. The human body contains about 10^{14} cells. How the body gets from, say, 128 to 10^{14} has not been worked out in all detail but unless it does, there is no viable organism.

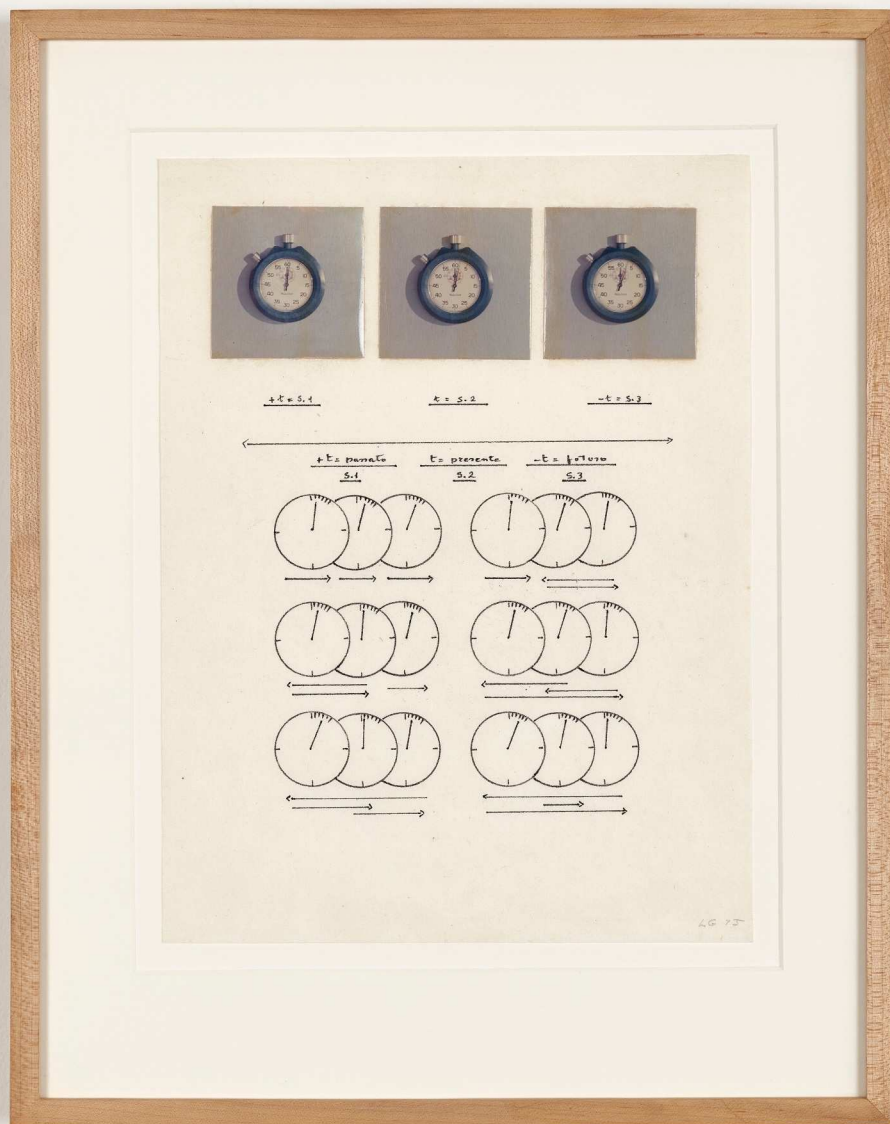
In 1986 we will celebrate the twentieth anniversary of the founding of ISST. In 1966 first two, then four, then eight people shared the vision of a professional society dedicated to the study of time. Our membership passed 128 two years ago on its way to 256 and well beyond, though there are no present plans for soliciting 10^{14} applicants. By the time we meet in 1986, our membership will probably be over three hundred.

With this growth, the nature of our organization must change, as must the ways in which it is to be run. For unless it does so through a division of labor, there will be no viable ISST. This Apernews reports on some of those necessary changes.

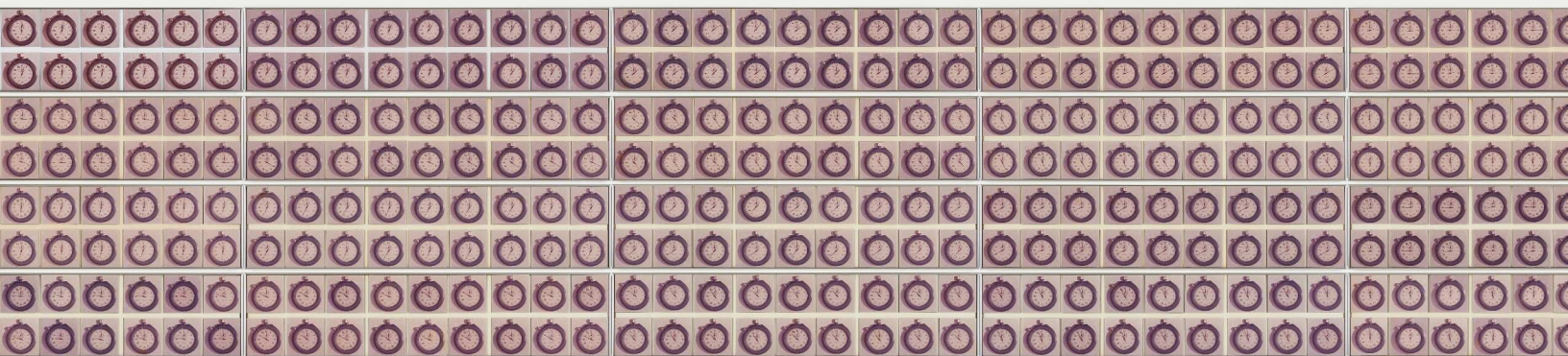
J. T. Fraser

VISUALIZING TIME

A RECENT SURVEY OF TIME-FOCUSED ART



CURATED BY ANTONELLA SBRILLI & LAURA LEUZZI



LAURA GRISI

The Measuring of Time

Drawing for Time, 1975
ink and photo collage on
paper, in 20 parts
31 x 23 cm each (detail)

OPPOSITE:
Hypothesis about Time
(*Ipotesi sul tempo*), 1975
360 photos mounted on
board, in 20 parts
28 x 120 cm each
COURTESY LAURA
GRISI ESTATE, ROME
& P420, BOLOGNA
PHOTO CARLO
FAVERO

"Three hundred and sixty photographs of a clock were taken at an interval of a second. The work is based on a mathematical system of permutation applied to seconds: the unit of measure of the intervals of time. The distinction that we perceive between the past, the present, and the future is related to the classic notion of time as a serial, homogeneous order. But time can be considered in relation to infinity in a different aspect, in which future, present, or past can succeed each other in another order. The seconds of the clock go forward as well as backward in a passage of time in which future and past switch order and direction." — Laura Grisi



TIM ETHELLES

Precise Moment

"Etchells' work is a playful invitation into the viewer's experience of time – an invitation to think about the circumstances we find ourselves in and how those circumstances might seem when we reflect on them at a later point. Commissioned for Festa di Roma in the spectacular location of the Circo Massimo as part of the event Oltre Tutto on New Years' Eve 2020, Etchells' work playfully combines an invitation for broad philosophical thinking with an opportunity for intimate personal reflection. It draws the viewer into a simultaneous process of looking forwards and looking back in time, projecting ourselves into the distant future and at the same time imagining the present as the past." — Tim Etchells

Precise Moment, 2020
neon letters mounted
on dibond, individual
letters 1m high, install
dimensions (four line
arrangement 5m high x
8.91 m)
COURTESY ARTIST
PHOTO SIMONE
PAGANO

this precise moment in time
as seen from the future





PABLO RUBIO

Autobiografía para un presente continuo

This installation of “luminous bodies” was exhibited in the lobby of Reina Sofía University Hospital in Córdoba to commemorate and thank healthcare professionals for their dedication throughout the Covid-19 pandemic. The work talks about memories as shelters that breathe, expand, and that we embrace. Once we enter this space, we inhabit the security and beauty of a caress, in a smile already narrated; a present continuous like a reflection of what we were, what we are and what we will come to live, never to turn off the light - not even the last one.

*Autobiografía para un
presente continuo*, 2021
installation at Vestibulo
Hospital General
Córdoba, Argentina
COURTESY ARTIST



WAYNE BINITIE

Polar Zero

1765. *Antarctic Air*, 2021
cast glass, air, liquid
silicone, 18 x 10 cm
Polar Zero exhibition.
COP26. Glasgow
Science Centre.
COURTESY BAS

"The exhibition features an original glass sculpture encasing Antarctic air from the year 1765 – the date that scientists say predates the Industrial Revolution – and an Antarctic ice core containing trapped air bubbles that reveal a unique record of our past climate. Locked deep in Antarctic ice is a unique archive of the Earth's history reaching back 800,000 years. Tiny bubbles of air that were trapped as snow fell reveal the astonishing rate of increase in atmospheric carbon dioxide since the start of the Industrial Revolution. As you move around this exhibition you will become an integral part of the story. *Polar Zero* invites you to take a moment to reflect on what our past means for the present and future climate." — British Antarctic Survey



DANIEL ARSHAM

Time Dilation

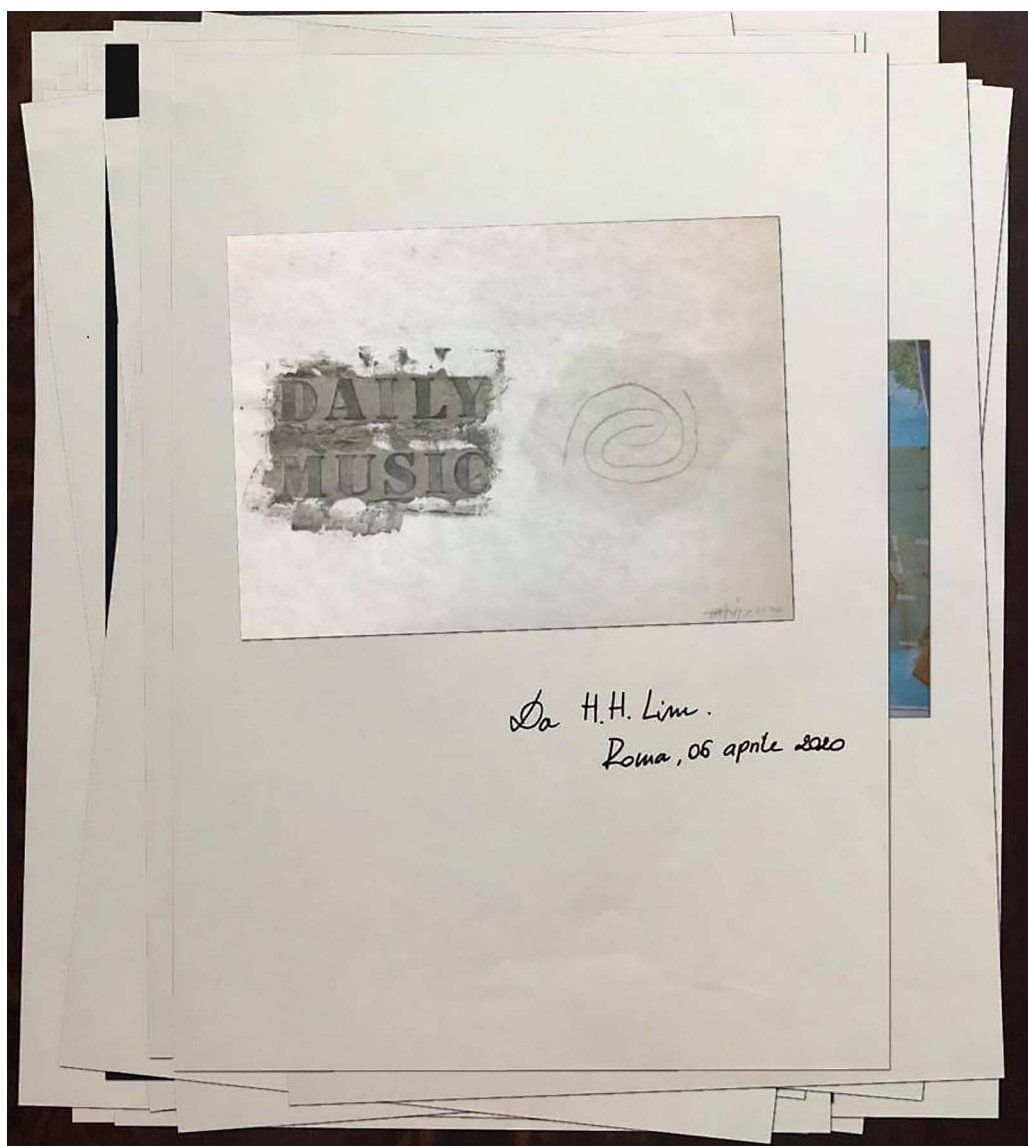
“CERN’s operations and Daniel Arsham’s career have been roughly contemporaneous, rather like Einstein’s Relativity and Cubism. Arsham is no scientist, but his quarry, too, is the nature of temporality itself; and he applies a pin-sharp exactitude to his many experiments. For the present exhibition at Perrotin, he has brought together multiple pathways of his creativity, groups of objects that would usually remain discrete. It’s another type of collision. And it warrants analysis... Arsham’s work explodes our furiously time-space-compressed era outward, into a Big Bang of narrative possibilities. The paintings included in the present exhibition are the perfect vehicle. They may be a surprise to some, who have come into contact with Arsham only in the past few years. But he was trained as a painter, and the first works he showed with Perrotin were in this medium. The disrupted circumstances of 2020 all but forced him back to the easel, as social distancing made his usual studio operations impossible.” —Glenn Adamson

Blue Calcite Eroded Ariadne Sleeping, also known as Cleopatra, 2020
blue calcite, quartz, hydrostone

OPPOSITE ABOVE:
Cave of the Sublime, Iceland, 2020
acrylic on canvas panel

OPPOSITE BELOW:
Untitled, 2020
resin, LED backlight
COURTESY ARTIST & PERROTIN
PHOTO GUILLAUME ZICARELLI





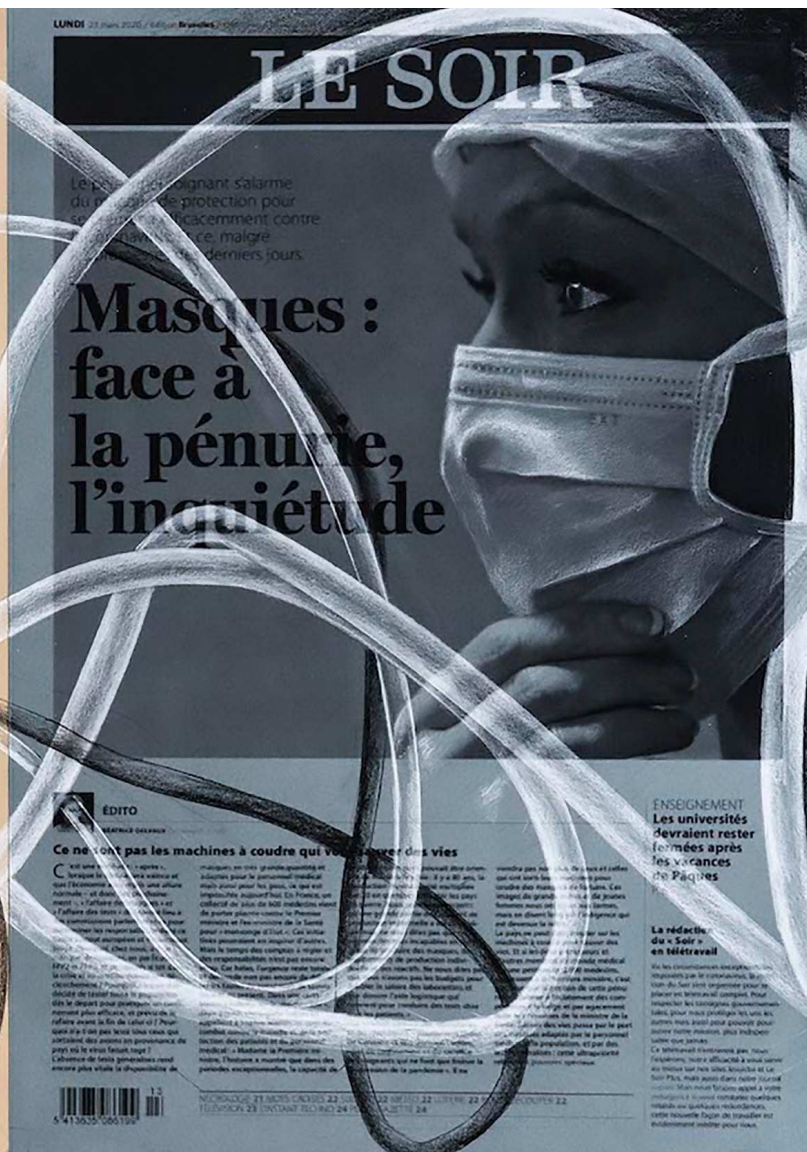
H.H. LIM

Timeframe

Derived from the Lim's wider reflection upon time during the COVID pandemic, he made musical video performances for several museums including MAXXI in Rome and MADRE in Naples, as a strategy of communication and this drawing developed from that experience. This grows out of his ongoing project *Ten Years Of Daily Music: Daily Music* (2010-ongoing), that is described as a "fragmented and random collage – clips from the news, adverts, variety shows [...] the cacophonous zapping of the abnormal flux of sound from the television, now having almost become the background music of daily life."

— Anna Cestelli Guidi

Timeframe, 2020
mixed technique on paper
COURTESY ARTIST &
RADIOARTEMOBILE

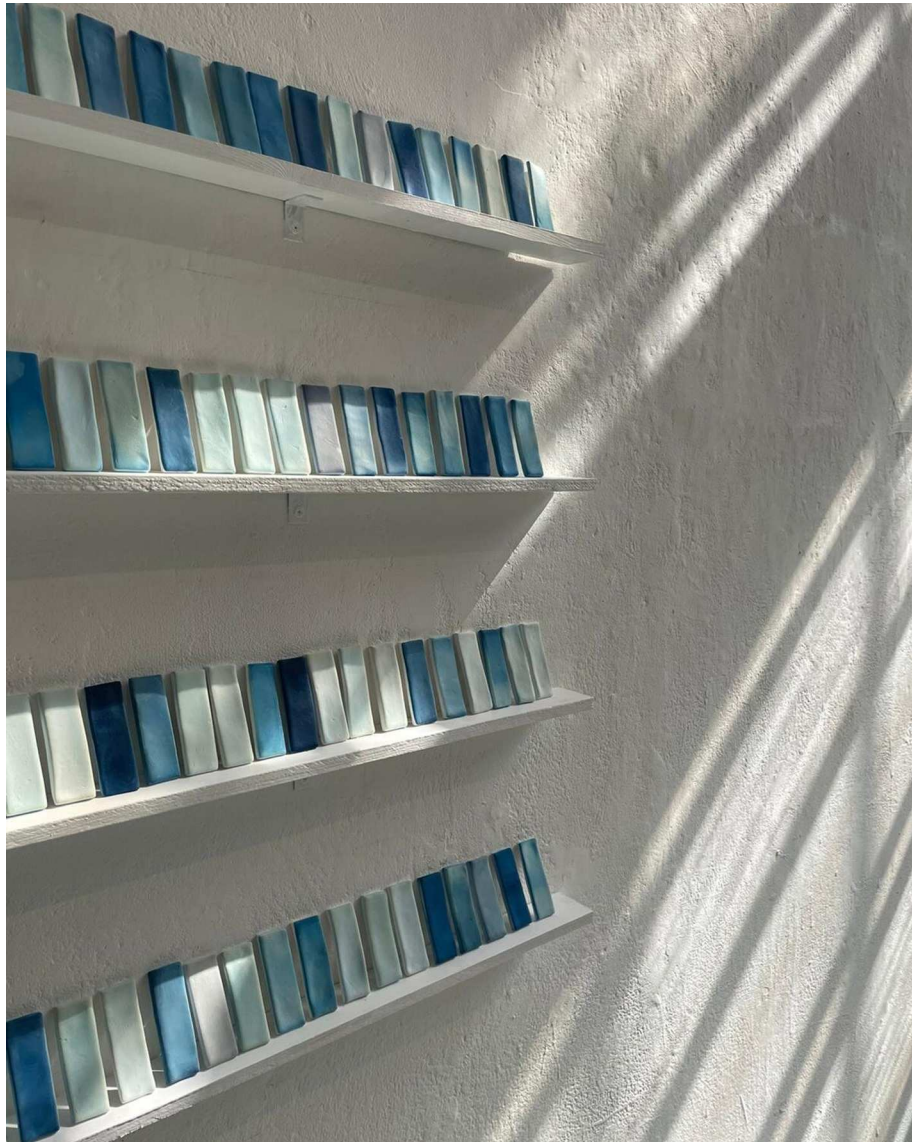


TATIANA TROUVÉ

From March to May

March 23rd, *The New York Times*, USA; *Le Soir*, Belgium, 2020
inkjet print, pencil, linseed oil on paper
COURTESY GAGOSIAN NEW YORK

"When quarantine was announced, newspapers from countries around the world that were being ravaged by the pandemic took on new meaning. I began, each day, to draw on the front page of a newspaper—it was a way of escaping the confinement, and of being connected to the strange atmosphere that was spreading around the globe with the virus. This world tour via headlines and front pages was like a journey in reverse. Suddenly, I could no longer meet the world unless the world came to me, through the newspapers." — Tatiana Trouvé

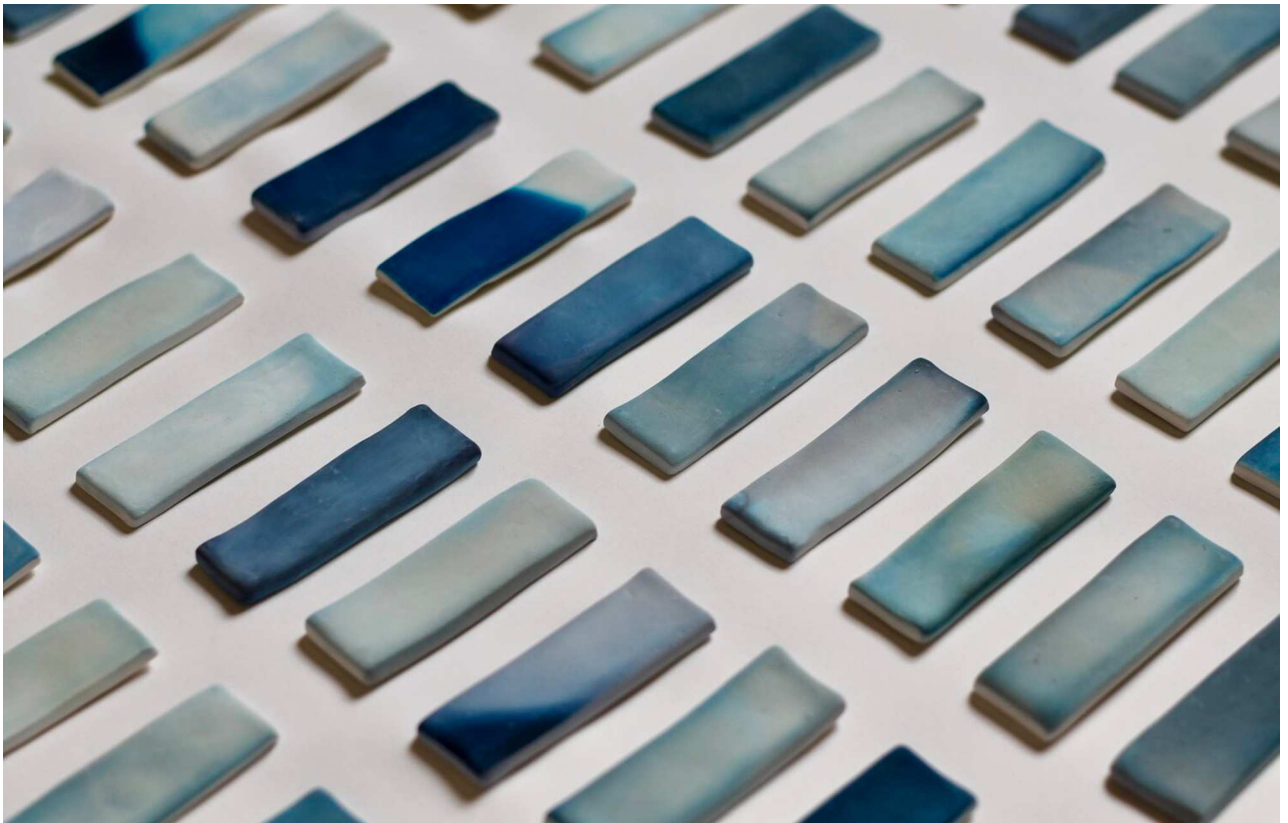
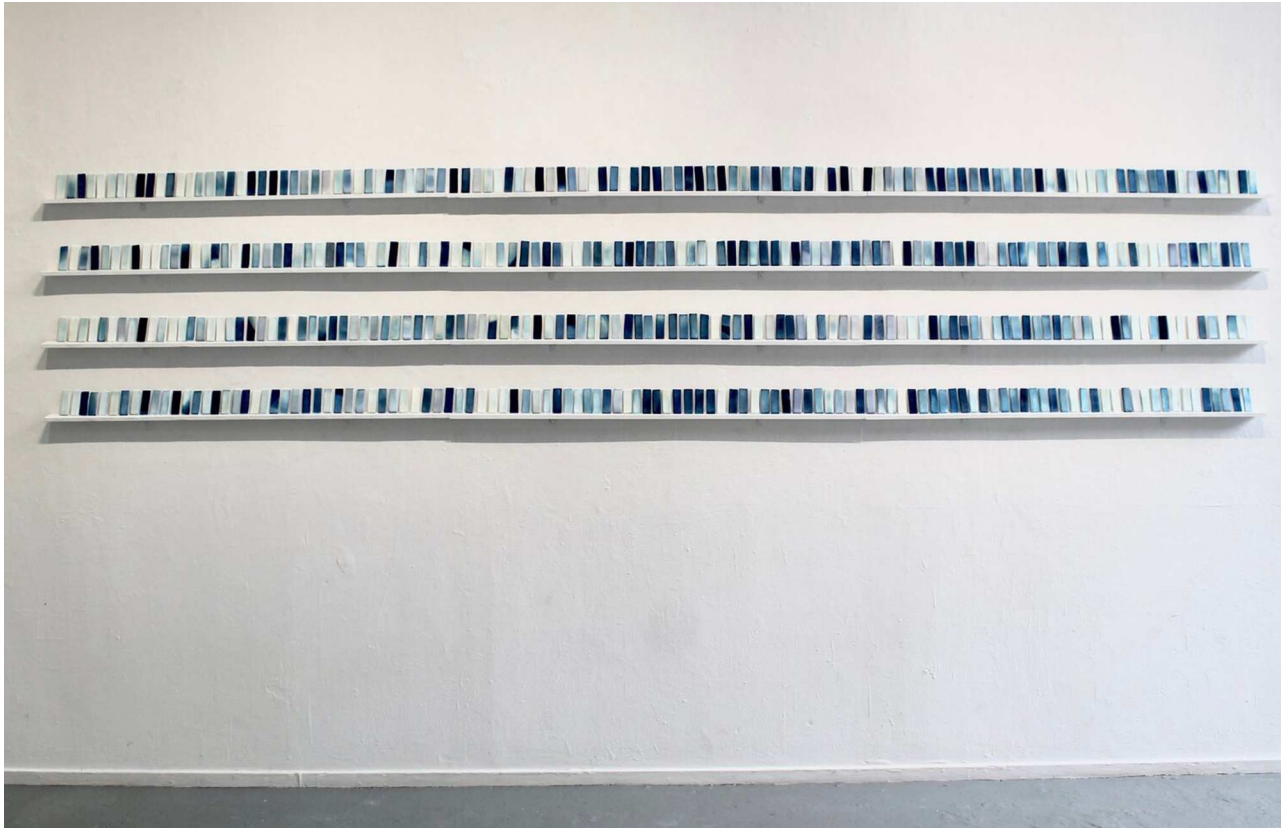


SUSAN ROSE DALTON

Flare

"This work investigates the transformative impact of social isolation. Like many, the artist spent the vast majority of lockdown alone in her home, with only sunlight as a physical companion. Using bisque-fired porcelain tiles placed throughout her living space and chemicals which turn blue in sunlight, the artist created a permanent record of this companionship and the passing time. The number of tiles (459) reflects the number of days since pandemic restrictions were introduced to the beginning of the work's first exhibition in June 2021." —Susan Rose Dalton

Flare, 2021
porcelain treated with
cyanotype chemicals
COURTESY ARTIST



POEMS



WRITTEN BY ERIC KINCANON

Here

Hold me close

Hold on to this instant
that we collide, sweat
and become the beast
Hold on to this moment
as we shudder, quiver
and come together
Hold on to our time
before the second law
scatters our lust

Late Autumn

It's not good.

They broke the branch past the collar.
Motionless just inside the back door, shoulders pulled forward
They know they've done a bad thing.

As I peel the splintered wood away,
I try to remember they should be punished, must be punished,
And ignore the ache of my hands and back.

While we patch the scar they begin to cheer up.
Feeling I am no longer angry they find redemption, think they are saved,
And ask if we're still going to the game.

But it's no good.

They don't see that the tree may die,
That soon Daddy will not be here,
That not every winter has a spring.

STONES ON STOOLS



WRITTEN BY PAUL HARRIS

The works in this series match footstools from my mother Paula Trepanier Harris's collection with rocks I have collected around the world. The aesthetic pleasure I take in gazing at individual stones grows out of looking at furniture with her growing up, going to antique shops with her in search of distinctive pieces. "Does it have *the look*?" she would ask, as she deliberated buying a chair or stool. Each composition in this series marks the culmination of many hours spent trying out different stones on the stools, playing with them until a pair would pop with some form of '*the look*,' at least to my eye.

Produced in the period after Paula's passing, the project explores mortality, mourning, and material forms of memory. These works also reference and riff on viewing stones, individual rocks mounted on carved bases (such as Chinese scholars' rocks).

Stones and stools are humble, often overlooked objects; beneath our feet or seat, they are often beneath our notice. Scrutinized closely, though, they expose material archives of wear and tear over human and geologic timescales. The textures inscribed in paint and patina record traces of minute events and infinitesimal encounters. These temporal repositories are tantalizing in that simultaneously reveal and conceal the past, providing tangible but taciturn testimonies of untraceable histories. In addition, I have

only limited records of the provenance of the stools and petrology of the stones: a few notes my mother left about some of the stools (e.g., "ca. 1800, original paint") and scattered insights gleaned from geologists into the likely origins of certain stones. Yet I also discovered that digging for facts about the objects in fact moved me further away from them, interfering with the immediate intimacy I felt with them.

In working on this project, I found mourning to be haunted by virtual ghosts, the regrets of words not spoken or opportunities not taken. One begins imagining retroactive versions of things as they might have been, people as one would have wished them to be, relationships as they may have been otherwise. I learned that mourning is about letting go, including letting go of retrospective revisioning and owning the irreducibility of one's fallibility.

Collecting can be a lifetime practice. The creation of a collection produces pockets of order amid life's randomness and temporarily staves off the world's chaos of contingencies. Since these constructions represent intersections of two collections, they constitute even more radical reversals of time's entropic erosion and scattering of matter. They therefore lodge protests against the very loss of time that their components register; they are also gestures made fully cognizant that what a human joins together, time will inevitably put asunder.



Stones on Stools, 2021
 "Coming Together"
 Long Beach Creative Group
 Rod Briggs Gallery, California
 July 10 - August 14, 2021
 COURTESY ARTIST









BRILL *Over three centuries of scholarly publishing*

KronoScope

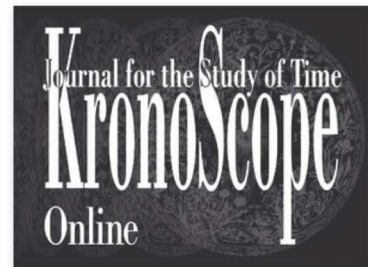
Journal for the Study of Time

Time bears a unique and direct pertinence to all human concerns. Time is a fundamental feature of the physical universe, of the life process, of the functions of the mind, and of collective behaviour. Time is an all-pervasive, intimate and immediate part of human experience. Time has been the subject of much study and debate in the arts, the sciences, the social and behavioral sciences and the humanities.

Since 1966, the International Society for the Study of Time (ISST) has been providing a framework for an interdisciplinary dialogue about the nature of time. KronoScope, edited by an international board of scholars, carries forward the work of ISST. It offers a forum for the cross-fertilization of scholarly and scientific study about the nature of time as seen from a range of...

[See More](#)

For more information see brill.com



Available Formats:

[Online](#)

[Print Only](#)

[Print + Online](#)

Language: English

ISSN: 1568-5241

Print ISSN: 1567-715X

Publisher: Brill

Subjects: [Applied Social Sciences](#),
[Social Sciences](#), [General](#), [Biology](#)

2021: Volume 21, in 2 Issues

Order information: Order online at brill.com

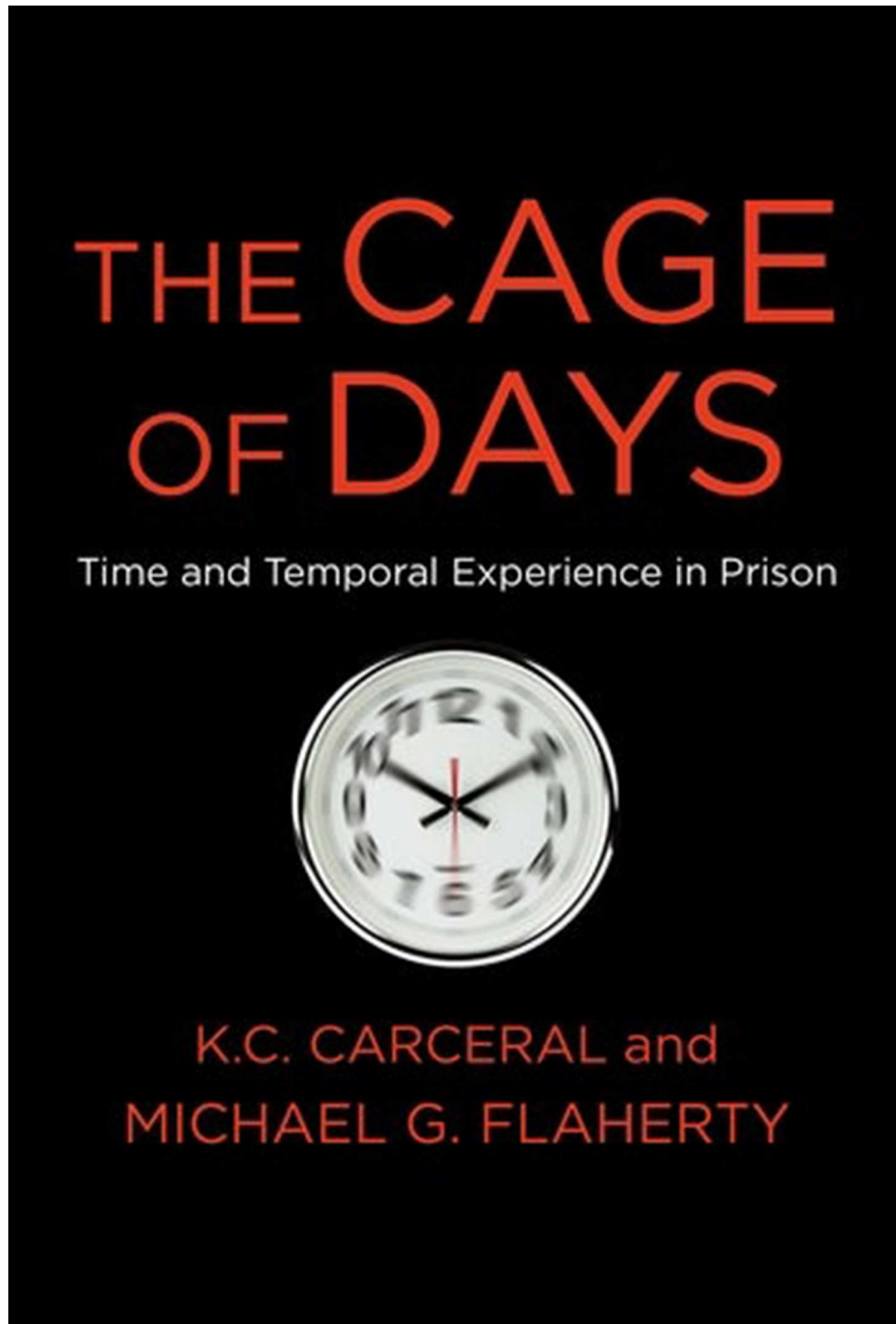
The Americas: 1 (860) 350 0041 | brillna@turpin-distribution.com

Outside the Americas: 44 (0) 1767 604-954 | brill@turpin-distribution.com

Submission information: brill.com/authors

HARD TIME

ISST MEMBER MICHAEL FLAHERTY COLLABORATES WITH K.C. CARCERAL TO
DETAIL "PRISON TIME" IN NEW BOOK



REPRINT FROM ECKERD COLLEGE NEWS

The letter showed up in the mail. Regular mail. The kind that takes days and involves something called a postage stamp. It was from a prison inmate—a man who had spent more than 30 years behind bars for murder.

“He wrote to me in 2010 and asked if I’d like to do a book with him,” says Michael Flaherty, Ph.D., a professor of sociology at Eckerd College. “He said he’d done research on time in prison. I looked him up and found out what he was in for. I was hoping for some white-collar crime like embezzlement. But I should have known ... they don’t give you a life sentence for that.”

The result of their collaboration is *The Cage of Days: Time and Temporal Experience in Prison* (Columbia University Press), a detailed look at what time does to prison inmates, and how the inmates try to find normalcy. The book is scheduled to be published in February and was co-written by K.C. Carceral, who uses a pseudonym and was incarcerated for 31 years in 12 different prisons. He was 19 when he was convicted of murder and given a life sentence. After his 17th parole hearing, he was released in 2013.

“I hope the book lets people know what it’s like to be in prison,” says Flaherty, who keeps an hourglass on his office desk along with two vintage clocks. One of the central messages of the book, he says, is that something as seemingly innocuous as time can be a cruel and potent weapon.

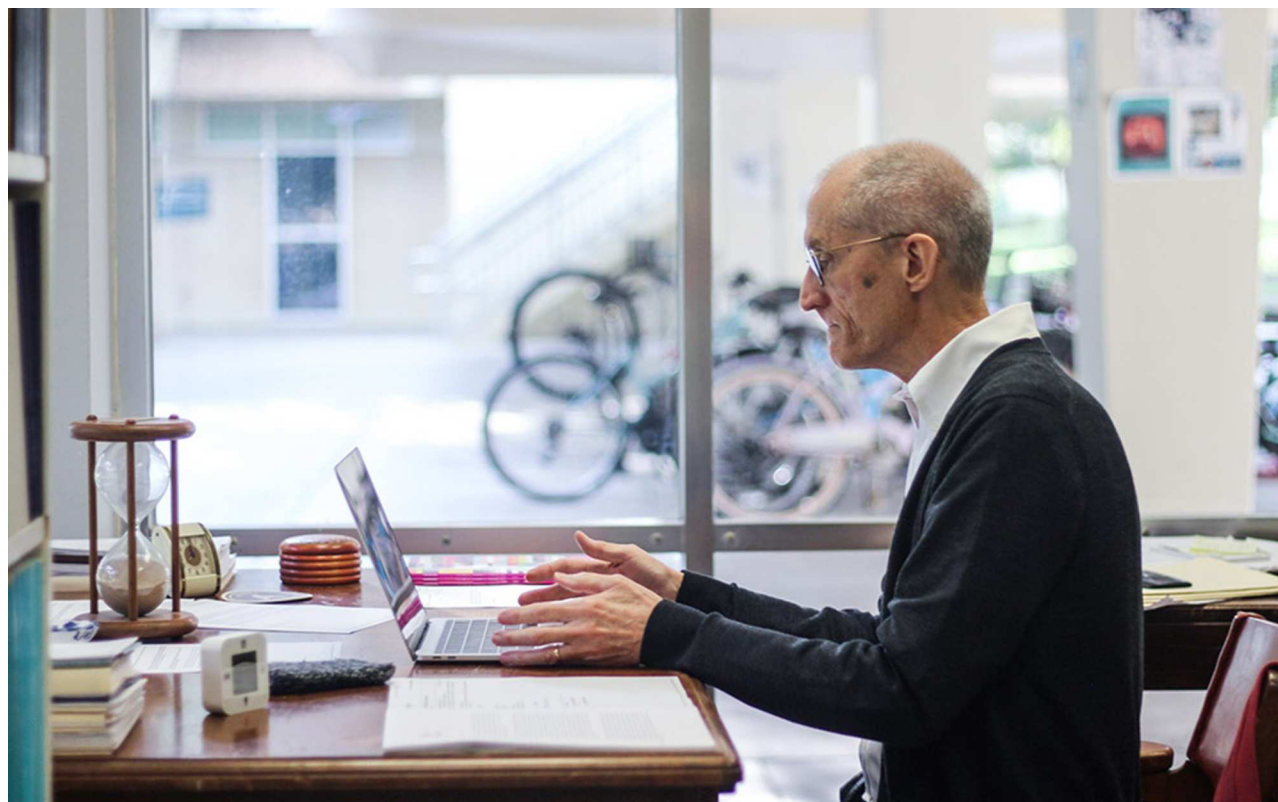
“Prisons impose strict rules,” Flaherty says. “They tell you when to sleep, wake up, eat, shower ... prison is all about carefully controlling the time that prisoners have. So after a while, those controls really distort their sense of time. A day for them seems longer than a day for us because of all the repetition. If nothing is happening, every day is the same. There’s a real molasses-like quality to the whole thing.”

“The techniques the inmates use, like calling a sentence a ‘spot’ or referring to 10 years as a ‘dime,’ are ingenious,” he adds. “But time in prison is excruciating and takes a toll on them.”

Flaherty, who will be teaching a new course this spring titled *Prisons in American Society*, says the isolations and lockdowns of the COVID pandemic provide somewhat of a glimpse into prison life. “The days blur together,” he says, “and you lose track of time.”

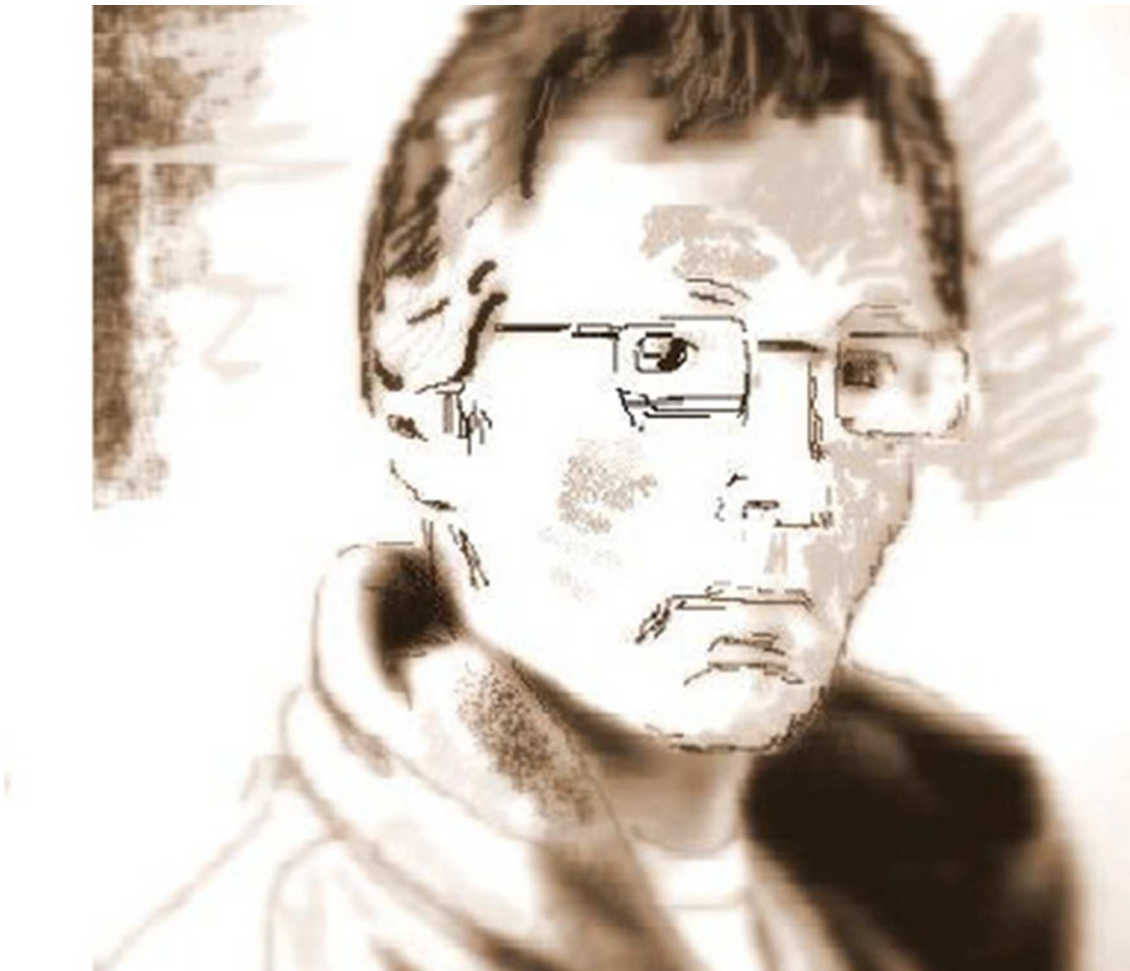
It gets worse. Inmates can also have difficulty making decisions. “One female inmate reports she became fearful of leaving her cell without being told to,” Flaherty says. “She lost her ability to take the initiative.”

Centuries ago, Flaherty explains, there were no prisons. People who committed crimes were either tortured or executed. “Prisons were a reform,” he adds. “But it’s punishment of the mind rather than punishment of the body. You wait for everything. Subordinate people do that. They wait for everything.”



Professor of Sociology
Michael Flaherty
COURTESY ECKERD
COLLEGE

OPPOSITE
sketch of K.C. Carceral



If that's the case, America has a lot of people waiting. "We imprison more people per capita than any other developed country," Flaherty says. "In 2008, one out of every 100 Americans was in prison or jail. There has been a slight decrease, but it's basically the same. The incarceration rate [the number of people in prison or jail] is 707 per 100,000 people in the U.S. It's 148 per 100,000 in the U.K. and 77 per 100,000 in Germany.

Flaherty argues that a large increase in the number of people incarcerated in the early 1970s was a direct response to the Civil Rights Act of 1964. "It's how we deal with racial and ethnic minorities," he says. "Saying you're going to get tough on crime became code for coming down on minorities.

"But Americans are good at looking away. Some say these [incarcerated] people deserve it, and we have to remember the victims of crimes. But 60 to 70% of inmates in the U.S. return to prison. Prisons assume the inmates can't be rehabilitated, so they put no effort into it. Prisons are just schools for crime."

But not always. Carceral, Flaherty's co-author, has been free for eight years and today is working in the Chicago area. "But when he first got out," Flaherty adds, "he was like Rip Van Winkle because he re-entered a very different world."

K. C. Carceral (a pseudonym) was incarcerated for thirty-one years in twelve different prisons until his parole in 2013. He is the author of *Behind a Convict's Eyes: Doing Time in a Modern Prison* (2004) and *Prison, Inc.: A Convict Exposes Life Inside a Private Prison* (2006).

Michael G. Flaherty is professor of sociology at Eckerd College and the University of South Florida. He is the author of *A Watched Pot: How We Experience Time* (1999) and *The Textures of Time: Agency and Temporal Experience* (2011). He is a coeditor of *Time Work: Studies of Temporal Agency* (2020).

SPOTLIGHT

MEMBERS OF THE INTERNATIONAL SOCIETY FOR THE STUDY OF TIME

JO ALYSON PARKER

"Ted Chiang's Braided Stories of Memory, Narrative, and Technology: 'The Truth of Fact, the Truth of Fiction'"

Performing Memories. Media, Creation, Anthropology, and Remembrance

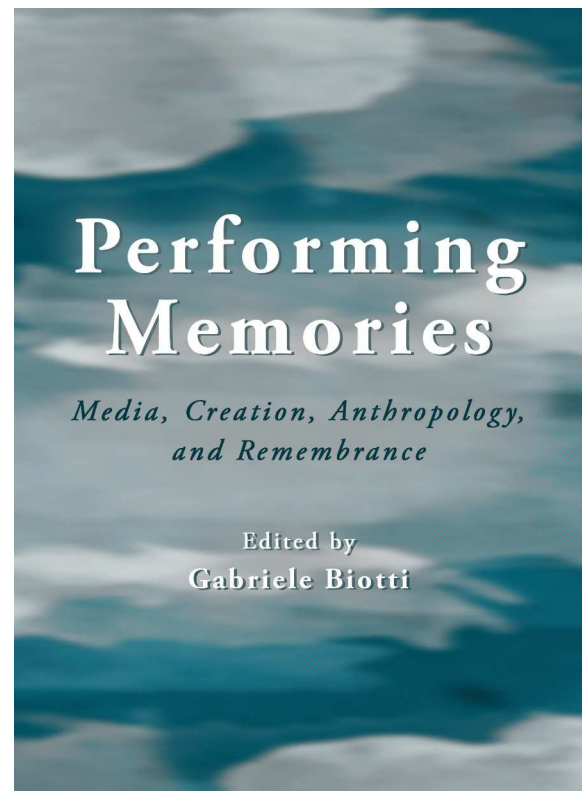
Cambridge Scholars Press, 2021, pp. 184-98.

Edited by Gabriele Biotti

The essay argues how a writer such as Chiang provides insights into the connection between memory and the narrative construction of self, as well as the impact of technology upon that construction. His braided stories (a futuristic one dealing with personal video logs that record every moment of a person's life and a historical one dealing with the introduction of writing into the Tiv culture) enable him to address both individual memory and cultural memory. Parker also wrote the foreword for Andreas Van Rompaey's *Verhalen in perspectief* (Stories in Perspective, Eburon, 2021), which explores various critical approaches to texts from the Low Countries.

What is memory today? How can it be approached? Why does the contemporary world seem to be more and more haunted by different types of memories still asking for elaboration? Which artistic experiences have explored and defined memory in meaningful ways? How do technologies and the media have changed it?

These are just some of the questions developed in this collection of essays analysing memory and memory shapes, which explores the different ways in which past time and its elaboration have been, and still are, elaborated, discussed, written or filmed, and contested, but also shared. By gathering together scholars from different fields of investigation, this book explores the cultural, social and artistic tensions in representing the past and the present, in understanding our legacies, and in approaching historical time and experience. Through the analysis of different representations of memory, and the investigation of literature, anthropology, myth and storytelling, a space of theories and discourses about the symbolic and cultural spaces of memory representation is developed. - Cambridge Scholars Press



JOSÉ LINO OLIVEIRA BUENO

*Subjective time and altered states of consciousness
under the influence of ayahuasca*

Department of Psychology
University of São Paulo, Brazil

Ayahuasca, classified as a classic psychedelic, is a tea used for millennia in a ritual context, developed by native peoples of the Amazon basin, prepared from native plants. Recently, ayahuasca has also been used in a ritualistic context by urban center populations.

In a laboratory context, subjective effects have been found in studies involving classic psychedelics, such as psilocybin and LSD. Such studies seek to understand, for example, the effects of altered states of consciousness on human psychological processes, assessed by recording subjective estimation changes over time. Our group has been working with the effect of ayahuasca on ritual, involving temporal reproduction tasks. We showed that usually registered distortions in musical temporal estimation did not occur to shamanic ritual participants using ayahuasca substances (Campagnoli, Pereira, and Bueno, 2020). This result shows the relevance of analyzing temporal subjective distortions with ayahuasca substances in the socio-cultural setting of shamanic rituals.

Ana Campagnoli and Leandro Pereira, under the advisement of José Lino Bueno and Marc Wittmann (Freiburg), are running researches in the Psychobiology graduate program of Universidade de São Paulo, examining the ayahuasca doses effects, altered states of consciousness, meditation and the subjective time during rituals.



HAZHIR TEIMOURIAN

The Rubaiyat of Omar Khayyam

Peach Publishing, 2021

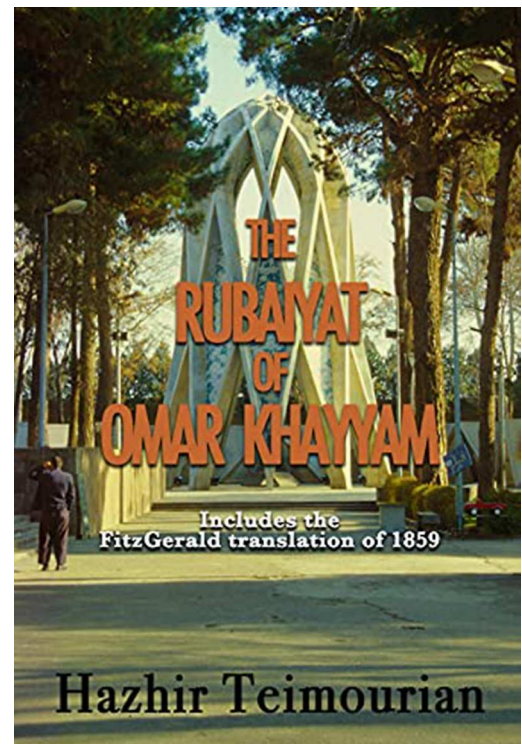
Kindle Edition

The lives and works of two world-renowned geniuses. One thrived in Persia at the end of the eleventh century, the age of the First Crusade and perhaps the foundational decades of the European Renaissance. As a mathematician and astronomer, he admired the ancient Greeks and, so, zealots issued a fatwa of death against him. The other lived at the height of Victorian creativity, a contemporary of Dickens and Darwin, but eluded all publicity.

Omar Khayyām of Nishāpūr, is sometimes described as the world's favourite poet, but he wrote his philosophical, witty quatrains, or rubaiyat, only occasionally, to amuse his friends. The latter, Edward FitzGerald, "the gentleman recluse of Woodbridge," Suffolk, England, translated those poems into an English work of art and made his idol the toast of the world.

The main source of this short new book is a detailed biography of the two men by the same author, HAZHIR TEIMOURIAN. When first published, it was hailed by Britain's main radio and television channels and the *Spectator* praised it as "a work of considered scholarship and tremendous imaginative sympathy."

All sale proceeds will be donated to the Boulge Church in Suffolk, UK, home to Edward FitzGerald's final resting place.



GUS KOEHLER

"Invisible Threads and Hidden Walls of Time"
The Renaissance Society, Sacramento State University

The theologian and philosopher St. Augustine nicely summarized the core seminar dilemma. "What is time? If no one asks me, I know, but if I wanted to explain it to the one who asks me, I plainly do not know." A second seminar starting point was that many disciplines have theories of time, but there is no accepted grand theory of time today with multiple time theories were offered, ranging from the philosophical to that of physics and JT Fraser, to the psychological, social, warfare, disasters, and global warming. Video recordings are still available from me.

The second course, "As Long as Space/Time Endures: A Buddhist Meditation Course", offered three meetings, each two hours, as Zoom seminars in the Fall of 2021 and Spring of 2022, and will be presented to a total of 75 people. Video recordings will also be available. Selected course bibliographies are available for both courses and lecture notes and power points upon request.

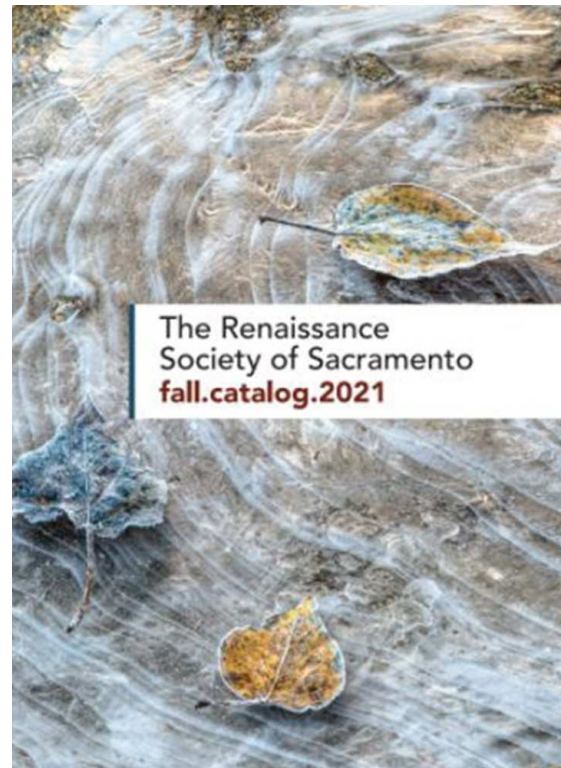
Frederic Abraham invited me from the Blueberry Institute to give my paper "Three Forms of Integrated Knowledge are Necessary to Achieve and Maintain Reconciliation" at its annual 2021 Snowflake Complex Systems Conference. This paper builds on a 2017 paper, "Essay: An Investigation of a Possible Foundation For New Poetic-Scientific Research Instruments," and on an earlier 2016 paper, "Temporal Space Mysteries of a Complex System: Performance in an Instant in Time." given at the Society for Chaos Theory in Psychology & Life Science, 2016 Annual Conference. A revised version of this paper is being considered for publication in the Conference Proceedings and was submitted to two academic journals. Copies of the papers are available upon request.

Indra's Net offer may provide a background-independent foundation for a more useful concept of time that aligns well with the range of knowledge I've developed above. Issues identified by the physicist Smolin's discussion on the problem of reconciling Quantum Theory and Relativity are suggestive, particularly when opened up with Longchenpa Rabjam's concepts of space-time.

PETER HANCOCK

"Time to Think of Time"
Paul B. Baltes Lecture, Berlin-Brandenburg
Academy of Sciences and Humanities

Dr. Hancock, from the Department of Psychology & Institute for Simulation and Training, University of Central Florida, presented a series of lectures under the theme of *Time to Think of Time* via Zoom for a group in Berlin. This series included one main one-hour lecture and eight shorter lectures in which he expands upon certain topics covered in the main lecture. The lectures covered topics like displacement in space, the application of writings by St. Augustine, psychophysics and life space, and the brain's involvement in time perception. He discussed how perceptions of normality and reality vary between individuals, conceptions underlying time series, and the work of distinguished individuals like John McTaggart and Bertrand Russell. Dr. Hancock's presentation of this lecture series was both engaging and thought-provoking through his use of cognitive tests, reference to philosophical discourse, and the inclusion of audiovisual elements throughout.



BOB FRISHMAN

"Horology 1776" symposium
National Association of Watch and Clock
Collectors (NAWCC)
October 7-10, 2021

In the long sleepless night before the "shots heard round the world" were fired on Lexington Green on the morning of April 19, 1775, a solemn group of patriots sat in that Colonial town's Buckman Tavern awaiting the arrival of British soldiers from Boston. Diaries reported that these freedom-fighters heard ticking and ringing of the advancing hours from a Nathaniel Mulliken clock standing in the tavern.

That historic timekeeper still stands today, in an authentic reproduction case because the original wood case has not survived, in the galleries of the Concord Museum in Concord, Massachusetts. Made in adjacent Lexington by a member of the famed Mulliken clockmaking family, the clock was discussed in one of the seventeen lectures delivered during the "Horology 1776" symposium sponsored by the National Association of Watch and Clock Collectors (NAWCC).

This three-day conference, the first to address timekeeping and timekeepers during our War of Independence, took place October 7-10 in Old-City Philadelphia. Presentations during the opening evening session were delivered in historic Benjamin Franklin Hall of the American Philosophical Society. Dr. Sara Schechner, head of Harvard University's Scientific Instrument Collection, delivered the James Arthur Lecture titled "Sundials and Clocks behind Enemy Lines." She was the first woman to receive that honor since these time-related lectures were initiated in 1932.

For the next two full days, the programs continued across the street in Liberty Hall of the Museum of the American Revolution. Eminent speakers included many horological scholars and authors, and also extended to experts on 18th-century furniture and American Revolution history. It was Damon DiMauro, by day a language professor at Gordon College, who spoke about the Mullikens as "Eyewitnesses to a Revolution" and about Nathaniel's Lexington clock.

At the concluding banquet, the surprise guest was "Benjamin Franklin", superbly portrayed by longtime Franklin scholar and professional re-enactor Mitchell Kramer. Franklin had a great interest in timekeeping — "Time is Money" — and was a lifelong close friend of Colonial Philadelphia clockmaker Edward Duffield. Symposium organizer Bob Frishman delivered the final lecture of the conference, speaking about his forthcoming comprehensive biography of Duffield.

Attendees also enjoyed special small-group tours. These included clock-focused behind-the-scenes visits to Independence Park, the Philadelphia Museum of Art, Drexel University and the University of Pennsylvania, and on Sunday a day-long excursion to the NAWCC museum in Columbia, Pennsylvania, and to Historic Rock Ford in Lancaster where a large collection of early Pennsylvania tall clocks are displayed.

All details about the symposium are at www.horology1776.com where video recordings of each presentation soon will be available for streamed viewing. The NAWCC has sponsored an annual time symposium since 1984. Next year's will be in November in New York City and will focus on great horological collectors.



Eight-day brass-dial tall clock by
Nathaniel Mulliken, Lexington,
made in 1769 for tavern-keeper
John Buckman. Concord
Museum Catalog #F2512.

EMILY DICARLO

we imitate sleep to dream of dissent

FADO Performance Art Centre

Toronto, Canada

Participating artists: Jacqui Arntfield, Ellen Bleiwas, Simon Fuh
Chris Mendoza, Dana Prieto, Matt Nish-Lapidus, Mehrnaz Rohbakhsh
St Marie & Walker

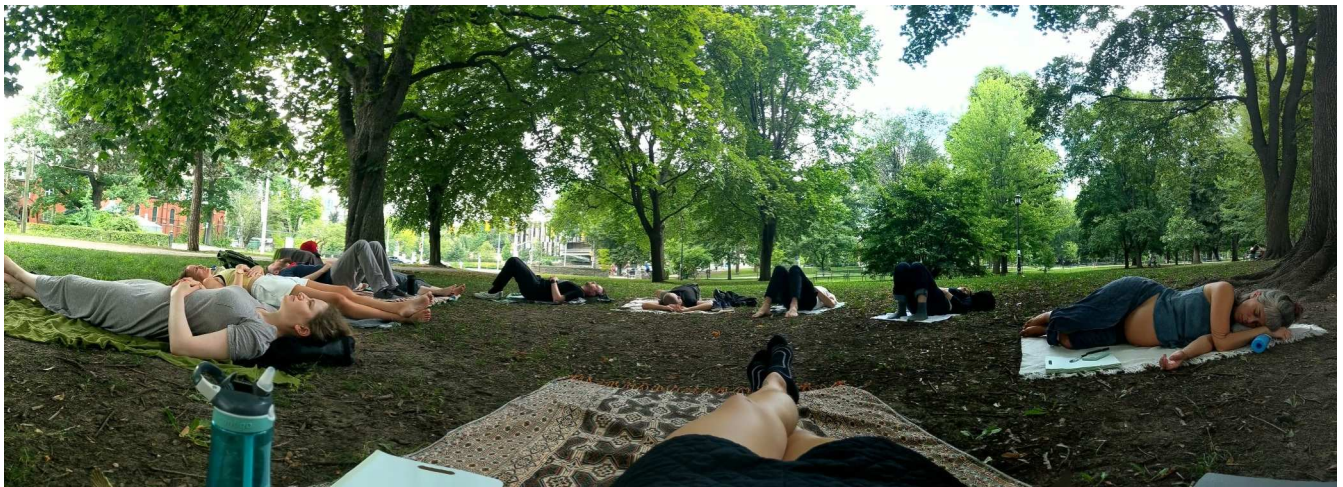
When I was prompted to think through the effects of the pandemic, the one thing I optimistically noted was how it afforded some of us moments of deceleration – extended intervals to reflect on what was and the potential of what could be. In uncertainty, we can dream of possibility. In his book *24/7: Late Capitalism and the Ends of Sleep*, Jonathan Crary outlines how the conditions of living in a neoliberal, technocratic society has led to the contemporary cult of productivity and the eventual erosion of sleep. As we know already, the social and mental effects are devastating and result in a flattening of time – a 24/7 non-stop present state – leaving little room to catch our breath and reflect.

But as the pandemic proved, when given permission to pause, we assess, organize and mobilize. Crary proposes that “the imaginings of a future without capitalism begin as dreams of sleep [or] intimations of sleep as a radical interruption, as a refusal of the unsparing weight of our global present.” An ‘imitation of sleep’ points to activities such as daydreaming, meditative thinking and imaginative world-making, which function as conscious interventions into 24/7 globalized time. When reframed this way, these gestures serve as radical acts of resistance.

By using rest as radical non-action as our guiding principle, *we imitate sleep to dream of dissent* brought together ten ‘dreamers’ for a (s)low-residency that centred around futurity and imaginative worlding. Guided by five themed prompts (Refuse, Rest, Attend, Wander, Extend) to be completed at their own pace, each participant engaged with short readings, various media, and creative exercises to steer their performative responses. Intended to function as alternative approach to traditional research, I encouraged the participants to trust their intuition, lean into play and follow their feelings to experiment with the ephemeral.

The residency kicked off on Friday, August 6, 2021, in Queen’s Park, a famously known location for public protest in Toronto – notably the Printer’s Strike in 1872 when workers walked off the job and rallied to decrease workdays to nine hours instead of the expected 12 hours. After a series of readings and discussions, we laid down in the park to partake in a collective nap, performing our first action together, *Refuse*.

The performance series will be published in a collection of small-run artist books later in the fall 2022.



we imitate sleep to dream of dissent
2021-2022
participatory performance residency
COURTESY ARTIST

THE LAYERS OF TIME

A WORKSHOP: FROM BAROQUE TO CONTEMPORARY



WRITTEN BY ANTONELLA SBRILLI

In the Papal Bull “Inter gravissimas,” with which in 1582 Pope Gregory XIII established the reform of the calendar, the year 2000 is explicitly mentioned (“Anno vero MM”), to exemplify the new rule of calculation of leap years. When that date, from a future that seemed very remote, became present, it was greeted by a global network of exhibitions, whose titles are a repertoire of statements about time: *Tempus fugit* (Kansas City), *Calendars and Time in Asia* (Singapore), *Le temps, vite* (Paris), *Tempo!* (Rome). As well as to the exhibitions, the passage of the millennium gave new motivations to the creation of artworks based on calendar grids, ephemerides, paradoxical calculation devices, temporal détours, montages; also to new studies of time representations. Even currently, attempts to map out paths from past to present, trying to find ascendancies and evolutions in time treatment are as relevant as ever.

In Rome, two major exhibitions were held in 2021: the first is *Tempo barocco* (*Baroque Time*) at Palazzo Barberini, where they were in display 17th century paintings, drawings, artifacts of great mechanical skill such as “night watches;” the second one is *Damien Hirst. Archaeology Now* at Galleria Borghese, where – alongside the masterpieces of Bernini, Caravaggio and Titian kept in the Roman museum – Hirst showed more than 80 works of the *Treasures from the Wreck of the Unbelievable* series, sculptures and objects pretending to come from a distant past.

Starting from these two exhibitions, the many connections between contemporary creative attitudes towards time and Baroque

considerations of this dimension has been the focus of the interdisciplinary workshop *Baroque Contemporaneity. Cross –Readings of two current exhibitions* (*Contemporaneità barocca. Riletture incrociate di due mostre attuali*, September 20th, 2021).

Organized by the Max-Planck-Institut für Kunstgeschichte – Bibliotheca Hertziana, directed by Tristan Weddigen, the workshop was held inside the two museums, in collaboration with their directors, Flaminia Gennari Santori and Francesca Cappelletti, respectively. There – in front of the artworks of Van Dyck, Poussin, Pietro da Cortona, Bernini, and Damien Hirst – speakers and respondents discussed around the notions of temporality and historicity as visualized in art. Experts of different disciplines (art history, literature, history of science, museum display) exchanged experiences and ideas about these main topics: the concept of time and its measurement between art and science; representations and allegories of time; materiality of the work and its caducity or durability; actualization and anachronism; contextualization and construction of the past through the themes of collecting and museum display; reuse and actualization of the ancient.

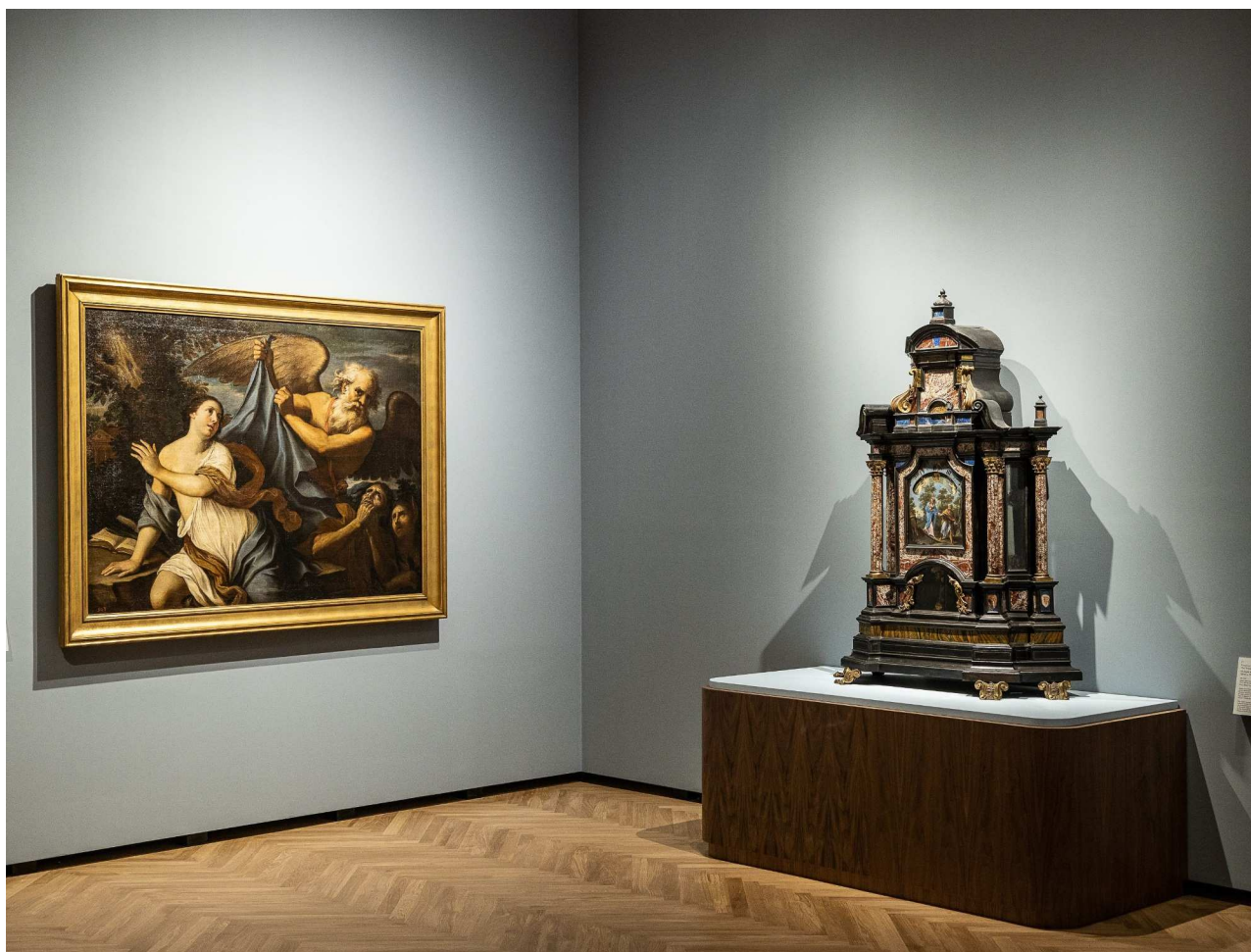
These are vast and challenging issues, that ISST often deals with, and whose different treatments dot the pages of “Kronoscope” and appear in “Time’s News.” The peculiarity of the Roman workshop lies in addressing some of them in close viewing, in direct contact with sculptures, paintings, clocks produced during the Baroque era, with their details, mechanisms, iconographies, tracing the threads that connect them to the present.



COVER: *The Diver*, 2021
Exhibition view: Damien Hirst's
Archaeology Now at Galleria
Borghese, Rome.
OPPOSITE: Bernini, *Apollo and
Daphne*, 1622-1625 and Damien
Hirst, *Children of a Dead King*, 2021
COURTESY LUCIANO
ROMANO, DAMIEN HIRST &
SCIENCE LTD.

ABOVE: *Clock with Cronos*
NEXT PAGE: *Time Unveils
the Truth and Night Watch*
17th century
Exhibition view of *Tempo
barocco* at Palazzo Barberini,
Rome, 2021.
COURTESY PALAZZO
BARBERINI-ALBERTO
NOVELLI





A significant example, treated by Joris van Gastel, is the iconography of the skull: “ubiquitous in Baroque,” and loved by Hirst, it is a symbol of *vanitas*, but also a corporeal presence that can be manipulated, and a sort of natural sculpture produced by Time itself, that can become the object of scientific discussion about petrification and geological time.

Another major topic is the presence of the measures of time in poetry, to which Lucia Simonato devoted her contribution: presenting 17th century’s European lyrical texts that have placed at the center of their compositions clocks of different types (hourglasses, sundials, wheeled gears), the importance of this poetic mediation in encoding the symbolic value of time emerged. “Far from offering only simple descriptions of real objects, these compositions seem rather to anticipate possible programs for clocks yet to be built, or at least to suggest credible contexts of use for shared iconographies.”

The relationship between the iconography of “*Veritas filia temporis*” and that of “*Envy*” allows Jana Graul to point out “a complex and ambiguous idea of Baroque time, both benevolent power and destructive force.”

Sculptures and their reception in relationship with time of perception and posthumous life of plastic works has been treated by Lorenzo

Pericolo about Algardi’s *Sleep*, and by Samir Boumediene about Bernini’s *Veritas* (*The Truth unveiled by Time*).

The layers of time that emerge while looking at Damien Hirst works at Borghese Gallery has been the focus of Laura Iamurri’s contribution: “The irreparably linear time of human existence, repeatedly evoked in the artist’s work in the form of *Vanitas* and “*memento mori*,” gives way here to a confrontation with historical time and with the invention of a new relationship with the past.”

Personally, I presented a work by the Italian artist Chiara Camoni: after having claimed from a notary the “property” of the ten days cancelled by Pope Gregory XIII’ s reform of calendar, she gives them to the participants of her performance “*Ten Days*,” so that they can virtually and creatively insert them in the flow of their daily time.

The *Future Library* by Katie Paterson has been recalled, too. A project started in 2014 and destined to be completed in 2114, it is an example of an artwork that imagines future times to come, unites generations, suggesting an impalpable, but vivid, sensation of the passage of time.

