

## ABSTRACTS FOR ISST TRIENNIAL CONFERENCE 2026, CAGLIARI

### **KEY NOTE (Monday): ‘The Anthropocene’ as conceptual aid to a time-ecological perspective for a world in turmoil (Barbara Adam)**

*Primarily, but not exclusively, for the themes of ‘Ecological entanglement’ and ‘Entanglement as inherent interrelatedness’. A scholarly presentation*

For almost four decades I have been part of the development of a time-ecological perspective. Through this perspective we recognized that time, space and matter are inseparably entangled. We appreciated that there is not one time but a *timescape* that encompasses not just space and matter, but time in its multiple forms and expressions. Moreover, we were able to demonstrate that approaches to time were at the root of the emerging environmental problems at the time.

In the presentation, I will identify some of the base principles of this time-ecological perspective as follows: change processes have an irreversible direction. Extremes of time are intricately entangled, as exemplified by the mutual implication of lived time and clock time and of present, past and future, while the socially created singularity of clock-time is enmeshed with the complexity of planetary, world, ecological and social times.

I will suggest that this time-ecological perspective is in urgent need of further development if it is to fully encompass, engage with and enable action in relation to the multiple crises characterising the global present, which are marked by simultaneity of its systemic problems that extend across all levels and scales of existence. It will require a massive expansion of the depth and breadth of time before we can recognize the interdependence of everything that ever existed, while being in the process of becoming and being already foreshadowed as process future.

I focus on ‘the Anthropocene’ not to contribute to the extensive discussions in geology about its existence, but to utilise the focus as an aid to understanding of and engagement with the temporal nature of socio-environmental crises from climate change to globally entangled conflicts, as well as unbounded pollution and species extinctions. Focus on the ideas entailed in ‘the Anthropocene’ helps with the recognition of our inescapable entanglement, from the beginning and to the end of time. Importantly, it foregrounds the systemic nature of the world as process. Thus, temporality rather than time becomes the key category and latency a central feature of past futures and future presents. As such, the use of ‘the Anthropocene’ as conceptual aid allows me to bring together ideas, insight and arguments, developed over my entire career, where I have connected past and present actions with effect domains that reach beyond a couple of decades into open-ended futures of impacts on humans, fellow beings and fossilised past life forms. By showing our implication in the processes, the focus allows me to open windows of opportunity that bring into reach the possibility of connecting emotionally with an unknown world in whose existence we are ineradicably entangled.

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**Founder’s Lecture (Tuesday): Standing the Test of Time? Examining Evidence for Temporal Entanglement (Elise Crull, The City College of New York & CUNY Graduate Center)**

A flurry of papers appearing recently in top-tier physics journals have triumphantly reported the successful entangling of *processes*, as in: “event A causes event B” entangled to “event B causes event A”. The reasoning behind these experiments goes like this. Standard quantum mechanics operates within – and therefore depends upon – classical spacetime, but such spacetimes already presume certain causal constraints, e.g. that information cannot propagate at superluminal speeds lest an effect precede its own cause. But what happens when we drop these (arguably classical) causal constraints?

The physics research program emerging from this line of inquiry – called ICS (Indefinite Causal Structure) – postulates that if interacting quantum systems embedded in a normal causal structure result in entangled states among those systems, then interacting quantum systems *not* embedded in a causal structure might result in entangled *processes*. Mystery! If the entanglement of states at a single time already defies intuition, what could it mean for a series of events to be entangled to another series of events?

In this talk, I shall explore this question. After briefly introducing how entanglement is commonly measured and understood, I will describe how ICS researchers approach time and entanglement differently. An examination of the ICS experiments purportedly demonstrating entangled processes will lead me to conclude that while the evidence fails to countenance claims about causality, it *does* seem to support something genuinely non-classical about time ordering, as in: “first A, then B” entangled with “first B then A”. Although entangled temporal order is a weaker result than entangled processes, it still provides ample fodder for new and distinctly quantum conceptualizations of time.

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## **Total Histories and Realms of Memory – On New Temporalities in the Hellenistic Period and the Entanglement of Ancient Jewish Apocalypticism (Moritz F. Adam)**

The Classical Hebrew language knows no words corresponding to the English terms “past”, “present”, or “future”. For the majority of the history of ancient Israel and its literature, time was thought of in a semantically bound, referential manner, as a time for something or a time of something, thus structuring its historical reflexions and aspirations towards meaning-making in a predominantly immanent manner. Through intercultural influences in the Hellenistic period, however, especially the hegemonial expansion of the Seleucid Empire in the 3<sup>rd</sup> century BCE, it encountered and reacted to new horizons of temporal thinking in which calendars were not reset at the advent of a new ruler or similar organising reference points, but where time became totalised, uninterrupted, paratactic, cumulative, endless, and directional. In this context, new temporalities also established themselves in Hebrew literature – partly in line with wider developments to which Israel was exposed, partly in attempts at subverting them.

This paper explores a key area of new literature production which originated with this shift to conceptions of time, namely the emergence of apocalyptic thinking, whose legacy in cultural history extends until modernity. Such apocalyptic literature entangled time in multiple ways.

In recourse to total historical horizons stretching and reflecting upon the history of the world from the beginning to the end, it actualised and recovered historical realms of memory, which were transposed onto the present. Pseudepigraphical apocalyptic writings invoked historical circumstances and exemplars, producing literature set in a distant past, yet bending time by making this past participatory for their contemporary readers and recovering historical moments of identity formation in a framework of political crisis and cultural negotiations between mutually informative influences of especially Greek and Hebrew, but also Persian and Ancient Near Eastern provenance.

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## **Entanglements of the Body and Mind: Disability and Temporality in the Writings of Louisa May Alcott (Thomas Allen)**

This paper will draw upon phenomenological theories of how bodies orient themselves in space and time (e.g., Sara Ahmed’s “queer phenomenology,” Lisa Guenther’s “critical phenomenology”) to analyze the representation of characters with disabilities in the fiction of Louisa May Alcott. My own background is in literary studies, but I will position this paper for a general audience by drawing out the implications of Alcott’s work for a broader consideration of the phenomenology of time. I focus on the way that Alcott employs disability to entangle narrative temporality by introducing untimely shifts into the standard progression of nineteenth-century storytelling. This aspect of Alcott’s fiction reflects the “narratives of entanglement” category from this conference’s call for papers, but it is also relevant to questions of social, political, and ecological entanglements of time. While Alcott today is best known as the author of *Little Women*, her own experience living with chronic pain (likely resulting from mercury poisoning) prompted an abiding interest in exploring the social, spatial, and temporal aspects

of disability throughout her fiction (including both mental and physical forms of disability). Alcott presents disability as a powerful aptitude to entangle standard narrative time and reconfigure social relations as bodies and minds reorient themselves in unexpected ways. Like Ahmed's "queer phenomenology," a phenomenology of disability has the potential to enable new ways of understanding human connections in time as well as our relationships with the nonhuman world. My goal will be to illuminate the relevance of Alcott's nineteenth-century texts to understanding the possibilities for representations of disability within the diverse temporalities of contemporary narratives, whether textual, visual, or aural.

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### **Dance Poems and Outtakes (Susan Banyas)**

I will offer 5 intertwined monologues -- Dance Poems and Outtakes -- that speak to our times and the inherent entanglements between nature and culture, self and society, power and control, body and mind. "Society marks you," writes George Orwell, "and this side of the grave, you will not escape from the marks it has given you." Political history dance. "Don't we want to be able to imagine the expansion of freedom and justice in the world?" Angela Davis asks. Revolutionary love dance. "It's simple," says David Ornette Cherry. "Creativity gets you outside the system's box." Dance of flow beyond entangled time.

I arrange movement, music, and language to shed light on particular moments, untangled from social habits, like a lantern moving from scene to scene, a detective looking for clues to the cover-up, a snake slithering through a briar patch into the earth, head-first.

These documentary performance art works bring in multiple voices (texts), visual images, soundtracks, live sound elements, like the stones of Sardinia touching with vibrations from time itself. The pieces are between 7-15 minutes each, total of 50 minutes and can be performed anywhere, at any time, as a whole or broken into sections.

My everyday dancing practices inform the nature of the work, rooted in physical and cultural investigations and improvisation. I will offer an everyday dancing practice sessions(s) open to anyone at the conference TBA. We will play with time and entanglements as actor, witness, and choreographer. Collaborations and monologues:

*The Shadow Dance is Holy*: additional text by American poet, Allen Ginsberg and Palestinian writer and journalist, Ghassan Kanafani, voices from *The Hillsboro Story*, Soundtrack collage by David Ornette Cherry. With projected images. 15 min.

*Hang on Heart*: additional voice/text by Jeremy Red Star Wolf, Umatilla tribal leader, former bronco rider. 7 min.

*Snake Dream*: soundtrack collaged from Chicago jazz composer, Ernest Dawkins, characters directed by theatre artist, Lanny Harrison. 8 min.

*Forest Dance*, additional text by biologist and writer, Merlin Sheldrake, forest ecologist, Suzanne Simard, poet Gary Snyder. 10 min.

*Marriage Dance*: Additional voice and text by American dance artist, Steve Paxton and long-time collaborator, writer Louise Steinman. 10 min.

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### **Virginia Woolf and the Madness of Temporal Entanglement (Adam Barrows)**

Throughout her literary career, Virginia Woolf endeavored to find narrative forms capable of reconciling seemingly unreconcilable modes of existence. One key to putting the human in relation to the nonhuman, the global to the local, or the private to the public, was to be attentive to the rhythms of those various modes. Literary style, as Woolf remarked in a letter to Vita Sackville-West, is “all rhythm.” Temporality was the key, to Woolf, for rhythmically interrelating the myriad facets of being. The clock itself, chiming out regular intervals of daily life, was to her a tantalizing if ultimately unsatisfying symbolic mechanism for temporal interrelation. Even if every clock on earth could be synchronized with the utmost precision, how might we synchronize, as she writes in *Orlando*, “the sixty or seventy different times which beat simultaneously in every normal human system”? If that difficulty exists for the normal system, what of the “abnormal” system? Woolf’s bouts of madness deeply informed her outlook on temporal entanglement, since she knew intimately that the mad experience, which breaks down narrative causality, symbolic fixity, and ontological certainty, is stubbornly unnarratable. Nevertheless, Woolf was determined to show, as she wrote in her diary about her work-in-progress *The Hours*, “the world seen by the sane and the insane side by side.” The book that would become *Mrs. Dalloway* gave us the eminently sane Clarissa and the irretrievably mad Septimus walking the streets of London on the same day in June, hearing the same public clocks chime but living rhythmically in two different worlds. In this paper, I explore Woolf’s poetics of mad temporality, revealing narrative’s power to force the “normal human system” to recognize other rhythms with which it is inescapably entangled.

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### **Disputing the past. Temporal entanglements regarding the use of the past by the alt-right and the making of a new-old world (Federico Julián Bonet-Castillo)**

In recent years we face a political defiance to what we might call liberal political establishment. This defiance comes mainly from the right-wing spectrum, in what someone has called 5<sup>th</sup> right-wing populist wave. Dropping aside the populist discussion, and searching for similarities in the wide spectrum of parties and groups that could be set inside the “movement”, we could argue that one thing they tend to have in common is that most of the movements share a wish to embrace the past as something we must go back to. But the question remains open: which past shall we return to? And more important why this one and no other?

The diversity and the widespread of the “movement”, as well as the different moments and themes of the past vindicated through all the globe show us the need to left the national specificities aside, very important in each context, and focus in answering the following questions: Which are the elements of our *zeitgeist* that incentivizes different right-wing groups across the globe to search in the past a golden

age to get inspiration from and try to go back to it? What are they seeking in the past and how they propose from those vindications to transform the present into and new-old world in the close future?

The following paper has the objective to present some elements that allow us to frame these questions and think some plausible answers taking into account the entanglements between History and Politics in modernity. To this end, the paper will proceed in the following order: first, it will address some uses of the past by far-right movements around the world and the pasts to which they refer. Second, it will address the relationship between the present and the past that *characterizes or characterized* modernity, a relationship in which the future guided political action and the past served to organize the narrative that shaped the political community. It will then discuss the crises that have challenged this framework. And finally, it will discuss what we might call the new-old world and its imaginaries in the political right-wing movements.

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### **Daily Marks and Lifelong Sediment: Two Acts of Slowness (Andrew Bracey)**

This presentation explores how slowness—both enforced and chosen—can serve as a mode of temporal entanglement. Developed during my adjustment to life with Long COVID, my daily five-minute drawing practice began as a therapeutic response to fatigue and evolved into a durational act of care, energy management, and presence. Each drawing marks time not through productivity but through repetition, persistence and attention. These works are not *about* time but imbue it to *create* a space in time.

Alongside these, *Palette* offers a contrasting approach to time. It is a 27-year accumulation of leftover oil paint from every painting I have made since art school—a sedimentation of practice, memory, and residue. Where the drawings mark time through daily repetition and embodied care, *Palette* materialises time through slow accretion and unconscious ritual. It forms a dense, layered object that challenges linear notions of time and authorship, embodying entanglement across temporal scales: daily, durational, lifelong.

These works respond directly to the ISST's call to explore entanglement as inherently temporal and interrelated. They ask: what new temporalities emerge when illness, creativity, and care become entangled? How can time be reclaimed from systems of productivity and reimagined as a space of interdependent being? Drawing on concepts of slow art (Arden Reed), slow philosophy (Michelle Boulous Walker), and slow looking (Shari Tishman), this presentation contributes to the interdisciplinary conversation on time as both method and medium for communicating complex relationships through art.

I propose to exhibit *Fuck Long COVID* as part of the conference's visual program. The drawings will be presented as a chronological series, offering a space for reflection and encounter, through a quiet choreography of time. In this space, illness, care, and creativity converge—revealing layered, lived entanglements.

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## **Temporal practices in everyday life: the case of time and health (Christian Bröer)**

Currently we are developing the notion of temporal practices in close engagement with material from families with young children. We are also starting research on time and stress concerning sleep and develop the notion of time-care. Below is the abstract of an article we are working on.

**Time, we claim and show, can be approached as a political socio-material practice** arising from the interplay between unequal institutional rhythms, material infrastructures and everyday embodied life. Temporal practices shape health directly – e.g. through stress, burn-out, or scheduled events like birth or death - and indirectly, when health-practices are timed and interrelated through timing.

We identify four **interwoven temporal practices** which pertain to health issues and beyond: *projecting* (ordering time via future risks and aspirations) and *carrying* (bringing past objects and experiences to the present) which are structured by norms, inequalities and materialities. *Timing* responds to these practices by scheduling life, while *pacing* aims to align this timing with everyday strains. Our political practice theory, attuned to power and contestation, identifies top-down *and* bottom-up mechanism through which temporal practices emerge from conflicts between dominant social rhythms and everyday health needs.

We develop these concepts through a **longitudinal ethnographic study of health-related parenting** in the Netherlands. By following families from the birth of the first child, we trace how temporal practices emerge in households. While time pressure is ubiquitous among young families, responses differ even among those with similar social backgrounds. We explain these differences through temporal dynamics themselves.

Our theory provides a **novel way of defining, embedding and connecting health practices** which goes beyond the focus on single domains (e.g. feeding or sleeping). Attending to the emergence of temporal practices mediating institutional rhythms and everyday life opens new pathways for supporting care. We call this **time-care: caring for and with time itself**, beyond the romantic and privileged reappraisal of “doing nothing” and in favour of resisting time-theft.

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## **Time Is a Flat Circle: Reality TV, new media, and economies of repetition (Angel Callander)**

Proceeding from a historical reading of American culture as fundamentally built on repetition (Kompere, 2005), this paper explores how media traffic in temporally repetitive economies. Wendy Hui Kyong Chun (2008) criticizes “new media” disingenuously using the “new” within dialogs on the future, as digital media since the 1990s tend to replicate themselves. Programming cycles of pre-determined newness into existing media, this “future simple” is largely driven by economics. Describing technologies expanding communication and interactivity within a massive globalization project in the '90s, new media did not encompass television. Now, rent-seeking platforms and streaming services have brought television into the fold, with reality TV adapting in kind.

In “Temporalities of the Real” (2004), Kavka and West note reality TV’s aversion to historical time, instead continuously decontextualizing the past into socially recognizable units. In the proceeding

decades, docusoaps contrived a temporality of interactive virtual domains exploiting the economic value of “authenticity.” Narratives are re-chronologized through viewer interaction with timestamped articles/social-media posts, intervening on layers of production to match reality with on-screen Reality. Events double back, and episodes narrativize the historical time of posts and tabloids from the future. This formula and its attendant conflicts constitute an endless repetition of the same.

The postmodern viewing experience relies on Chun’s “nonsimultaneousness of the new”: incessantly repeating and rediscovering reality TV’s dramas and emotional runoffs into reality, presented as novel content over and over. On the contemporary docusoap as with the concept of new media, the dubious yet reciprocal relationship between repetition and newness drives its economy. New media as socio-cultural memory, and the transient metaphysics of reality TV’s subject-image relations converge on a ceaseless mechanism of economics that continuously reinvents the new in order to sustain and expand. Ultimately, this entangles us in a cycle of enduring ephemerals that relitigate the past and direct the future as we repeat the present forever.

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### **Stories Woven in Time: Legal Narratives, Digital Identity, and the Forensic Imagination (Sílvia de Carvalho Homem)**

Technologies of identification — from digital identity systems to forensic DNA phenotyping — are more than technical instruments. They are narrative forces that weave together past, present, and future into dense fabrics of meaning, power, and responsibility. In their operation, they bind instantaneous acts of data capture to judicial processes unfolding over months or years, while their consequences ripple across generations.

This paper explores the temporal entanglement of law, technology, and human identity through two interconnected domains: the governance of digital identity infrastructures and the emergent use of forensic genomics in criminal investigation. Both contexts reveal how political and legal orders craft temporal narratives: stories about urgent threats requiring immediate action, about the permanence of genetic truth, and about the inevitability of technological progress. Such narratives are not neutral; they privilege certain futures while foreclosing others, shaping the temporal horizon in which rights and freedoms are imagined.

Drawing on European Union case studies, the paper analyses the interplay of competing “time regimes”: the accelerated pace of technological innovation, the measured rhythm of judicial deliberation, and the deep time of genetic inheritance. Approached as forms of entanglement, these interactions show law as both a weaver and a thread in the temporal fabric — enforcing sequences of events while being reshaped by shifting temporalities.

The paper concludes that recognising the narrative dimension of temporal entanglement is essential for designing governance capable of embracing complexity, uncertainty, and long-term responsibility. Such an approach may open alternative futures in which the temporal fabric of law and technology sustains — rather than erodes — the enduring values of human dignity and justice.

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## **The Angel of Simultaneity: Time and Entanglement in Dante's *Paradiso* (Dennis Costa)**

Contemporary physics tells us that it is only *when* properties of two or more subatomic particles are measured that they may be most clearly observed. The temporal event of measurement triggers specific or actual states of being for those particles, rather than any number of potential states. Observed particles that once interacted and have moved far apart continue to react immediately and uniquely to each other, their properties being somehow conjoined. That 'entanglement' between or among existants is found to be a fundamental characteristic of the universe would come as no surprise to the majority of late-antique and medieval philosophers. The conspicuous difference between 14<sup>th</sup>-century and 21<sup>st</sup>-century characterizations of reality is not so much about quantities—as one may suppose—as it is about qualities. Only one article of the 5<sup>th</sup>-century Nicene creed contains a *philosophical* statement, proposing that everything in the universe is either "sensually apprehensible" (*horaton*)—and therefore clearly measurable or quantifiable—or is "unavailable to sensual apprehension" (*aoraton*). Really existing things and energies are either physical or spiritual, either measurable or—at least in quantitative terms—immeasurable. The properties of spiritual things are different from but not discontinuous with the properties of physical things. If all existants are 'somehow' entangled, 14<sup>th</sup>-century philosophers, no less than their 21<sup>st</sup>-century counterparts, had to attempt to find out 'how'. (J.T. Fraser, an agnostic who appreciated the ediface of pre-modern natural theology, also, logically, wrote about the possibility and even the utility of articulating a natural theology for the post-modern world.)

My proposed paper reviews the terminology for pre-modern equivalents of entanglement: the Greek nouns *metoxe* (participation), *harmos / arthros / sunapsis* (joint), *koinonia* (shared state), *hupostasis* (subsistence), and the Latin verbal nouns *textus* (weaving) and *repletus* (filling up). I then elucidate moments in Dante's fiction that engage these ideas poetically. Dante's figures for entanglement are most often *temporal* in character; tropes about simultaneity predominate.

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## **Ready in Time: Multitemporal Entanglement and Earthquake Media (Nicole Cote)**

Earthquakes are temporally difficult planetary phenomena. In drawing together human and geologic timescales, quakes entangle concepts often perceived as disparate. Temporal disjuncture influences preparedness for situations like the imminent Cascadia Subduction Zone earthquake, which is expected to significantly impact the Pacific Northwest of North America. The *future* event has been labelled one of the worst disasters in the continent's history, making it meaningful to care about now, and yet the timing is unknown. It is potentially on our doorstep and possibly decades or even centuries away. Matters of time, including the earthquake's future orientation, the perceived slowness of geologic time, and the erasure of cultural memory by settler colonialism challenge the sense of urgency seismic warnings are intended to provoke. A Cascadia quake also represents one of many hazards residents face, which include other geologic events and the ongoing localized effects of a warming planet that produce human and non-human impacts. The ways individuals relate to geologic time and

multitemporal crises in their everyday lives can motivate action that addresses foreseeable vulnerabilities, but may also inspire ambivalence or end-of-time thinking. This raises questions for how public-focused resources facilitate temporal awareness for known hazards. This paper examines the features of media projects and their underlying technologies that inform audiences about a Cascadia earthquake and ready those at risk. In investigating their temporal complexities, this paper will discuss how institutional and community preparedness materials make use of temporal subjects and design frameworks to connect audiences to local risks and make them significant. The design of earthquake media projects can shape perceptions of risk in ways that impact what is deemed socially or politically possible. The challenges and possibilities raised by geologic time's commingling with an anticipation orientation and ongoing crises demonstrates how multitemporal frames can articulate ways of inhabiting the entangled world.

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### **Creating Time-Creating Objects (Andrew Cozzens)**

The writing of philosopher Graham Harman and archaeologist Christopher Witmore asks us to consider that objects are the creators of time. In this view, we do not exist inside a “wind tunnel” of time in which we move through life as time passes us by and changes our world around us. Rather, time is generated by objects that remain indivisible and whose meaning resists “overmining” and “undermining” by human interpretations. Every object, including artwork and stories, are real, non-subjective entities with their own reality. Within this framework, it follows that the experience of our world is the result of a highly entangled mesh of object-generated time concepts. Time measurement outside of each object's perspective is therefore considered arbitrary.

Although Harman's work has brought about valid criticism from philosophers, it offers an enriching perspective for the creative world. These ideas recontextualize the familiar structure and process of creating, exhibiting, and viewing artwork. Gathering materials, modifying them, and creating new objects are central to many artists' practices, including my own. Our work takes on new meanings as every component of the process may be contributing to the creation of its own time.

The proposed exhibition consists of a visual, durational work that asks the viewer to consider the past and future of the objects as well as their place alongside that timeline. Whose past are you referring to when you interpret the history of objects? What is “creating time” when we observe a work - the clock, our individual perspectives, objects, or perhaps all of the above?

By using clay (earth) to create objects, I expose the entanglement of these different phenomenologies of time. If selected to present at the ISST Conference in Sardinia, I hope to install a sculpture that includes a series of ephemeral objects (3-D scanned and hand sculpted tongues) that will dissolve over the length of the conference. The sculpture will also emit a quiet (nearly inaudible) soundtrack that correlates to each object as it slowly dissolves in the water. The viewer will be able to witness the evidence of each object's origins, its presence in space as a current object, the end of its existence as a single object, and the creation of a new object.

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## **Time entanglements in social research practices: dilemmas and opportunities (Valentina Cuzzocrea)**

Social research on time issues implies considerations of at least two different time dimensions: more frequently, the past viewed from the present, or alternatively the present in consideration of practices of future making. Sometimes, different points in time are considered, when longitudinal research is involved. Indeed, through different research techniques – some more creative, some more mainstream - research participants are brought to consider how their lives oscillate between different temporal dimensions within their life courses, in a constant production and revisitation of temporalities that may well be the object of research.

However, less attention is paid to how social researchers deal with managing a plurality of time dimensions and time entanglements in which research participants are involved. When they are asked to produce their narratives on something that happened in the past, even if this has repercussions on the present, the role of the social researcher is mostly to find an interpretative key, and in addition to fostering processes of sense-making among these participants. There are precise responsibilities in conducting these tasks, however, things have happened already; the past cannot be changed.

The social researcher- informant relation inevitably complicates when the focus is on aspirations, dreams, hopes, and any other categories that are directed towards the future, namely towards something that has not happened yet. How can we as researchers take a more responsive and supportive role on these occasions? Is this even appropriate and desirable? What part of these futures is in the hands of those who investigate them? Should something in the present be done to improve conditions for future flourishing of participants?

Reflecting on the role that researchers assume, and even embody, towards research participants, especially when doing research with young people on the theme of the future, and drawing from few research projects conducted on youth futures in Sardinia, this presentation seeks to challenge established roles in conducting research on time while reflecting on new avenues for engaging with time entanglements, to the benefit of research participants.

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## **Immortal Crabs and Blue Almonds: a Grammar of Dreams (Ella Dawn McGeough)**

Methods of speech that account for hypothetical or uncertain situations such as dreams, wishes, suggestions, demands, desires, possibilities, opinions, doubts, and emotions depend grammatically on the subjunctive mood. Also referred to as the irrealis mood, the subjunctive is a subsection of grammar used to specify various states of unreality, particularly when an event is deemed unlikely.

We often bifurcate language of the imagination into remembering and dreaming. Seemingly separate spheres defined by a distinct relationship to time, past and future. We remember in the past tense, saying: “Our beach vacation *was* wonderful!” Or we dream in the future tense, exclaiming: “Our beach vacation *will be* wonderful!” What happens though when we try to voice our present-tense desires? When, with lament, we cry in an irrealis mood: “We *wish we were* at the beach, *now!*” a loopy mix of

past and future tense collapses into an inevitably thick and messy present tense—a reminder that time can only be understood as bracketed, dependent on the complex and uneven conditions of our existence. A nowishness within this hereishness.

Presented alongside a video work\*\* in which the artist finds the face of a dear friend emerging from a plaster mold—recalling how in, Jean-Paul Sartre’s 1940 text, “The Imaginary,” the temporal dimension of irrealis are conjured in the face of his friend Pierre—“Immortal Crabs and Blue Almonds: a Grammar of Dreams” considers how a muddling of tenses in both grammatical structures and material methodologies does not suggest non-time, but time’s entanglement. Perhaps this complexity even creates an excess of time. Time with which we might dream, wish, imagine, create otherwise.

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### **Particulate Archives: Dust, Duration, and the Politics of Place (Emiy Di Carlo, Justine Kohleal)**

*Abradant Methodologies* is a research-creation project that investigates dust as medium and metaphor. Synthesizing artistic practice and theoretical writing in order to develop a new, experimental methodology, our approach blurs the boundaries between curator and artist. Utilizing Marcus Verhagen’s nested registers of time, this presentation explores the time(s) represented within our new collaborative artwork, the duration of its making, and the prescribed time of its viewing (Verhagen, 2023). Anchored by these interlocking and overlapping temporalities, this project examines dust’s temporal and spatial entanglements, including how it materializes economic histories, environmental conditions, and human relations. We also consider how the curatorial strategy of what Verhagen calls the “exhibition-as-medium”—in which a show is conceived from the beginning as a “single entity”—imposes a temporal structure that shifts the exhibition space from a series of discrete objects toward a unified spatio-temporal experience.

In tandem with our presentation, we will debut *A Thousand Motes of Dust (In Every Cubic Inch of Air)* as part of the ISST conference exhibition. In 2023, we began collecting dust samples from financial districts in Berlin, Tokyo, New York, and Toronto—a practice that revealed the near-absence of dust in these sanitized environments and pointed to the ways neoliberal policies have reshaped spatial and temporal experience. The economic impact of dust was notably articulated in 1966, when engineer Peter Jost estimated that friction, wear, and corrosion cost the UK one percent of its GDP annually. Beyond its capacity to disrupt financial systems, dust is a unit of relation as much as a marker of time, and it tells stories of place, permeability, and environmental change: in Victorian London, dust from old buildings was used in constructing the modern skyline (Wheelwright Ness, 2011), while today, industries generate increasingly toxic forms of dust on a global scale (Amato, 2000).

Working across two geographically distinct sites—Edmonton and Toronto— *A Thousand Motes of Dust* creates a portrait of place and relation through the collection and production of dust at decommissioned industrial sites. Presented as a two-channel video, the project transforms dust into a particulate archive of the worlds we move through, and which move (or bear down on) us. Dust thus becomes an index of our neglect or attention, and a reminder of our finitude: everything eventually becomes dust.

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## **Predicting, Promising, Anticipating. The Entanglement of Future in Digital Temporality (Sabino Di Chio)**

Like all cultural determinations, technologies shape temporalities. In a cultural context often described as predominantly presentist (Hartog 2015; Lübke 2009), digital innovation operates as a laboratory for producing the future. On the everyday level, digital devices reduce the costs of future-oriented actions as planning, prevention, emergency management. In the public sphere, digital culture acts as a reservoir of practices and discourses promising collective emancipation, uniting algorithmic decision-making with narratives of liberation from bureaucratic and cognitive constraints.

This paper investigates the paradox between the digital emphasis on the future and a contemporary life dominated by structural uncertainty and the primacy of the present. It presents the first results of a critical mapping of the future in digital temporality in current theoretical and social debates.

From a technical perspective, the future matters as an object of prediction. Data, elevated to a key productive factor, fuels predictive analytics (Mayer-Schönberger, Cukier 2013), enabling unprecedented probability calculations to reduce uncertainty in an Age of Entanglement where “it is increasingly difficult to understand the very systems we have built or how to repair them” (Hillis 2010). Yet this capacity also drives behavioral engineering, deploying an “economy of action” to elicit predictable and marketable emotions, purchases, and movements (Zuboff 2019).

From a rhetorical perspective, the future appears as a perpetual promise. Tech companies stress an imminent future (Balbi 2024), positioning themselves as accelerators bridging the gap between an imperfect present and its solution. Beyond marketing, Silicon Valley aligned think tanks advance a “longtermist” ideology (Bostrom 2014; MacAskill 2022), applying algorithmic quantification to steer political and philanthropic interventions against human extinction risk. While restoring long-term thinking, such visions seem to reveal a latent presentism that encourages influencing political decisions by identifying a favourable “plasticity” in current events that is suitable for radical transformations.

Bringing these perspectives together reveals a shared logic: a future harnessed to the immediate needs of the present. In digital culture, the future takes the form of *anticipation* (Kitchin 2023), where speculation (Adams et al. 2009) re-enchants the present, making it rapidly convertible into solutions, insights, or commodities.

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## **Nocturnal entanglements: Feminist movements and night policies in Italy (Eleonora Diamanti)**

This paper focuses on the role Italian feminist movements play in informing time-oriented politics and night governance in contemporary Italy. It explores narratives of entangled identities and ecosystems by arguing that the night-time has served feminist movements to push forth a political agenda and rethink the interrelation between gender and space from a temporal scape. While in the last fifteen years many European cities, such as Amsterdam, Paris and London have successfully implemented night policies to foster nightlife and make the urban night more accessible and safer, it is only recently that Italian cities have started to design night policies. Through the study of policies, public discourse, and the interrelations between feminist movements and institutions, this paper examines how struggles

led by feminists have been received at the local political level, sometimes being stripped of their radical potential or subsumed. While at the political level there is still resistance to promote night governance initiatives, I argue that Italian feminist movements are re-designing the urban night and night-time impacting the language of policy-making and bringing attention to practices of inclusion and exclusion along multiple axes of oppression, bringing issues of care to the forefront in building safer spaces. Hence, the paper shows how the entanglement of identities and ecosystems, namely feminist groups and night, generate new perspectives on coexistence, justice, space and time.

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### **Entangled Temporalities - Timekeeping with the Technological Other (Steven Doughty)**

Despite continuous innovation in the technology of timekeeping, understanding of human perceptions of time has historically been at odds with mechanical time, as found in the Greek concepts of Chronos and Kairos, the writings of Shakespeare, and in the influential and well-documented arguments between Henri Bergson and Albert Einstein. This paper examines how the growing presence of technological other-than-human entities, particularly in the form of social media algorithms, LLM chatbots, and other autonomous and semi-autonomous “machines,” function as mediators, not intermediaries, of temporal perception and timekeeping. The paper argues that mechanical time and experiential time have become entangled in contemporary Western society through the incorporation of the technological other as an actor. To develop this concept, the paper begins by discussing historical discourse and techniques of timekeeping and comparing them with contemporary use of digital and algorithmic timekeeping, with an emphasis on mobile internet devices. By doing so, it seeks to identify when and how the technological other gains voice and agency. Once the agency of the technological other is understood, further exploration of this entanglement’s impact is conducted through examining how humans, with the technological other, actively participate in everyday practices and interaction rituals of timekeeping and temporal perception, with a focus on those activities that include social media use, content creation, and artistic interventions.

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### **Patterns of Time. Artwork proposal (Castien Dowling)**

Photo collages (6-10) of shadows and light to create a maze measuring the change over time. Printed on paper, 24”x32”.

The labyrinth is a timeless symbol that has long overtaken my artwork; a pattern of twisting and tangling paths always finds its way to the forefront of my paintings. It has become more than my artistic staple, more than my signature, but a part of how I now see the world I am trying to picture.

I work predominantly with layers of maze-like patterns, working them from abstract shapes into something realistic, as shown in my latest architectural series. In that body of work, I apply my pattern to marble surfaces and stone ornamentation to paint fantastic but still very real buildings. The series I

would like to complete for the 2026 ISST conference is the opposite. Rather than simply recreating the beautiful architecture around me with my pattern work, I would like to create photographic collages of stonework over time with the change in light to make my maze-like patterns represent time, not space. Rather than creating the subject out of patterns, I will be using the subject as the medium to create my patterns. Using the reality, the shifting lights, shadows, and colors of a physical space over a day to differentiate the layers. By inverting my process, the pieces will be about the reality of a space, the way it lives and breathes, the time spent within it rather than simple aesthetics. I want to illustrate the lived experience of architecture changing in time, all in one image, entangled.

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### **The Philosophical Fisherman: The Entanglement of Time and Philosophy in Greek and Roman Culture (Melissa Barden Dowling)**

In Greek and Latin literature and art, we frequently encounter the image of the patient and wise fisherman. On Greek pots, Roman frescoes, and Roman sarcophagi, he appears seated on a shoreline, holding his fishing pole, and quietly observing the world around him, looking on from a corner. He witnesses gods, rituals, divine marriages, and the apotheosis of heroes. But he himself is unchanging, timeless.

In Graeco-Roman literature, the fisherman is an interlocutor who assists the protagonists in moments of crisis and who introduces questions of death and immortality. The ancient novels by Chariton, Xenophon of Ephesus, and Heliodorus, include fishermen at key moments in time to assist the protagonists and to offer wisdom about the gods and the afterlife. The Roman satirist Lucian crafted the allegory of the fisherman searching in a teeming sea for a single good fish, just as he trolled for a true philosopher in a sea of false men. The Greek philosopher Pythagoras actually claimed to have been the fisherman in a prior life, after which he remembered all his lives across time. It was his role as a fisherman that granted him access to his earlier selves. He taught that reincarnation offered the opportunity for the sage to understand the essential truths of the cosmos, which exist outside of time. The New Testament presentation of Jesus as a fisher of men, calling his disciples before the coming end of time, is drawn from this ancient allegory.

The ancient fisherman is a secondary character in a larger drama, reminding the audience to consider the scene thoughtfully and to look for its larger significance. The fisherman serves as a pointer, timeless himself, to focus our attention on the crisis, whether involving the gods or the immortal afterlife. The fisherman is the figure most entangled between past, present, and future, making us think carefully about the events before us and what we may apply to our own brief lives.

(This talk will be illustrated.)

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## **Resonating Beyond Sound: The Temporality of Yú (余) in Chinese Instrumental and Music Aesthetics (Jingyi Du)**

In Chinese musical thought, *Yú* (余) denotes more than a residual sound; it embodies a state of resonance in which the audible and the inaudible, the physical and the imagined, interpenetrate. Unlike a discrete pause or an empty interval, *Yú* extends the temporal life of a tone beyond its acoustic cessation, binding together the moment of performance, the gradual decay of vibration, and the listener's perceptual afterimage. This temporal prolongation produces what may be described as a resonant field of time, in which past and present co-exist within a single auditory horizon, enabling a listening mode grounded in continuity and transformation rather than segmentation.

This paper examines *Yú* as a distinct temporal form within Chinese instrumental aesthetics, drawing on Daoist notions of *xū-shí* (虚实, emptiness and fullness) and the Confucian ideal of harmonic balance. Beyond performance practice, *Yú* is embedded in the cultural logic of instrument-making and the acoustic thought that shapes the production and perception of sound. These ideas are not only integral to the design and material configuration of instruments, but also to the ways in which sound is imagined to linger—physically, culturally, and cosmologically—after its audible presence has faded. The study extends this analysis to “silent instruments” in museum contexts, with particular attention to objects whose meanings have shifted from their original performative and social settings to curated states of display and preservation. In such contexts, instruments become sites of latent resonance: they no longer sound in real time, yet they invite temporal imagination, recalling past performances, embodied gestures, and historical narratives inscribed in their material form. Silence thus becomes an alternative mode of temporality, reframing presence through memory and interpretation rather than immediate acoustic experience.

Methodologically, the research integrates philosophical inquiry, organological analysis, and museum studies. It combines close examination of selected instruments in collection contexts with the study of their material, symbolic, and historical attributes, alongside critical readings of curatorial narratives. This interdisciplinary approach aims to articulate *Yú* as a temporal entanglement—where physical vibration, embodied memory, and historical time converge—and to contribute to broader cross-cultural debates on how music challenges linear conceptions of time. By positioning *Yú* within both its original philosophical framework and its recontextualisation in contemporary museum practice, the study offers a model of musical temporality rooted in continuity, interrelation, and the subtle co-presence of sound and silence.

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## **Entangled Futures: Astrology and the Temporal Order of Crisis in the Weimar Republic (Joana-Isabel Duyster-Borreda)**

This paper explores how esoteric and astrological ideas of time gained traction in the Weimar Republic as responses to political instability, crisis, and cultural fragmentation. In the aftermath of a lost war, imperial collapse, and the uncertainties of democratic rule, many Germans sought new frameworks of

meaning. Astrology, occultism, and spiritualist notions of time offered an alternative logic of prediction and coherence.

Drawing on a range of primary sources such as horoscopes of nations and political figures, astrological yearbooks, and esoteric journals, this paper will try to examine how these temporal imaginaries challenged dominant political time regimes, such as constitutional calendars, electoral cycles, and narratives of linear historical progress. Astrological forecasts for leaders such as Friedrich Ebert and Paul von Hindenburg reframed politics as the unfolding of cosmic forces and thus recasting crisis as destiny or cyclical necessity. At the same time, Weimar debates about occultism, “end times,” and millenarian renewal articulated visions of future transformation that sometimes stood in tension or entangled with both rationalist modernity and liberal-democratic norms.

Rather than treating esotericism as marginal or escapist, the paper argues that astrology and occultism offered *entangled temporalities* that tried to connect political and cosmic time, helping people to navigate a rapidly shifting world. The Weimar Republic emerges as a laboratory of competing and sometimes complementing time orders such as legal, religious, esoteric, and revolutionary time. By situating esoteric temporalities within broader debates of the 1920s, the paper contributes to wider discussions about how ideas of time shape historical consciousness and political agency in moments of profound social transformation.

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### **Everything is Temporal (Daniel Fajardo Gomez)**

The names of most bones come from Latin or Greek, reflecting either their physical shape or their placement within the body. For example, the temporal bone, one of the most complex in the skull, comes from the Old French temporal (“earthly”) and Latin temporalis (“of time”). If some etymologists speculate that the name refers to the early appearance of grey hair in that area of the head, another possible association emerges if we consider the shape of the bone seen from above. It resembles a sundial—a device used to measure time, with a board divided into twelve sections and a gnomon that casts a shadow to estimate the sun’s position and assign a fraction of the day. Sundials, like other timekeeping devices—from calendars and hourglasses to mechanical and atomic clocks—transform physical phenomena into measurable units.

Proceeding from these semantic and material entanglements, my paper investigates the temporal bone’s complex form and its connections with the ideas of observation, measurement, and tracking of time, framing this osteological part as a primordial timepiece. Historical sources—such as the Ishango bone, a tool engraved with counting marks and linked to early measuring systems—and studies on the intersection of human behavior and technological development provide the background for a central question: how have the logical correspondences between anatomical structures and natural cycles shaped the experience and recording of temporality? To address this, I interrelate object-based research, sculpture, and drawing with practices such as the duodecimal counting system derived from the hand’s phalanges and the sky observation aligned with environmental changes—such as the shifting of shadows— as an early practice of timekeeping. This practice-based study rethinks time morphology as

literally “embodied,” leading to the conclusion that the temporal bone is both an elemental shape and a symbolic nexus of early solar time measurement.

Since my research paper also draws inspiration from artistic resources and experimentation, in addition to my conference proposal I plan to display five graphite drawings, each measuring 21 × 29 cm, along with a sculptural work composed of twelve pieces arranged on a 120 × 120 x 45 cm pedestal or table. To showcase these elements, I require at least four square meters of space with one side bordering a gray or dark color wall, as well as direct lighting for both the drawings and the sculptures.

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### **The Signal Function of Time in Social Interaction: How Temporal Experience Provides Framing Cues for Falling in Love (Michael Flaherty)**

During social interaction, do various dimensions of temporality signal that one is falling in love? If so, how do aspects of time and temporal experience function as framing cues for that interpretation? These questions can only be examined empirically by means of close ethnographic description of experience and interpretation during courtship, a process dispersed across time and space. Conveniently, however, couples provide precisely the data we need in interviews for their wedding announcements in each Sunday edition of the *New York Times*. From this archive, we have recorded field notes from 191 wedding announcements published between 10 December 2023 and 28 July 2024. To date, the resulting file consists of 43,113 words. Every couple cited aspects of temporality as evidence that they were falling in love. In rare cases, “love at first sight” is signaled by dramatic distortion in the perceived passage of time, with events transpiring in what seems like slow motion. More commonly, duration serves as a framing cue when first dates last an inordinate amount of time, and neither person wants the encounter to end. Frequency signals that they are falling in love when they strive to see or contact each other often, even every day, or monitor each other constantly on social media. There is, as well, a standard or ideal sequence to courtship, and various firsts are commemorated. In regard to timing, couples note that things happen earlier or faster than usual, but the synchronicity of the timing is surprisingly mutual. They allocate considerable time to be together, and they devote time to thinking about each other when apart. Moreover, they steal time from all other relationships and responsibilities in order to make time for each other.

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### **Rethinking interpersonal memory: how the past is negotiated and co-constructed in enduring romantic relationships (Avery Franken)**

This paper will use insights from ten months of ethnography in Malmö, Sweden to investigate how romantic partners experience, negotiate and co-construct interpersonal memory throughout long-term relationships.

Henri Bergson writes in 1896, “There is no perception which is not full of memories. With the immediate and present data of our senses, we mingle a thousand details of our past experience”.

Building from Bergson, Lisa Baraitser posits that the past supplements the present, not simply as recollection, but as an immanent and dynamic force that produces change in relations between present actors (2017). The alive-ness of the past is central to the inner workings of intimate relationships. Partners must foster a common-enough understanding of their history — a negotiated archive of recollections, associations and interpretations — in order to meet each other in a shared present, and coordinate their futures. They may share amicable stewardship over their history: tracing their entangled pathways, demonstrating care through intimate knowledge, deriving a meaningful narrative arc for themselves and others. Equally, partners' recollections may rub uncomfortably against each other, demanding reconciliation; painful memories may linger, or *haunt* (Gordon, 1997), the present; forgetting may come to imply negligence or apathy.

My present project, *Knowing Love Differently: A Multimodal Engagement with Enduring Midlife Love in Malmö, Sweden (KLD)* is centred around the temporality of endurance. To *endure* is not (necessarily) to develop, optimise, or transform, nor to crumble, degrade, or implode; this sets it apart from the most salient temporal frameworks in a moment coming to be defined by its compounding crises. Working with Baraitser's *Enduring Time*, among others, I understand enduring relationships as a storied entanglement of progressions, cycles, interruptions, and recollections. To tease apart these temporal threads and re-introduce somatics to discussions on temporality, *KLD* employs a multimodal anthropological framework, including audio emotion diaries, go-alongs, joint love-life histories, and photography. This paper will thus address two less-researched sites of temporality: the interpersonal and the embodied, making it a fitting contribution for the interdisciplinary aims of the ISST.

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### **Digital Eternity in the Series *Upload* and *Pantheon* (Sonia Front)**

The paper explores the concept of eternity as depicted in the series *Upload* (2020–2025) and *Pantheon* (2022–2023), which portray an afterlife whereby human consciousness is transferred to a computer. In contrast to the Christian conception of time, according to which time is a feature of the material world, which ceases to exist in the afterlife, and eternity precedes, parallels, and comes after time and history, the two series show a digital after-world, in which eternal time is entangled with capitalist time. As opposed to the traditional religious concept of endless timelessness, digital immortality does not offer temporal sovereignty, as uploaded minds become the intellectual property of the companies providing the technology and might be exploited as free labor or deleted. In this temporality, new subjectivities come into being: a permanent fusion of the human and machine, whose agency is positioned within the assemblage. While the characters of both series dwell in network/machinic time, temporality is produced in such a way that the subjective experience of time follows linear time in *Upload* and network time in *Pantheon*, which, in both cases, constructs new forms of exploitation that serve to maximize capitalist profit. In so doing, both series provoke questions about the reification of the human in digital eternity and its implications.

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## **Bridging Time: The Viaduct Museum Langwies (Carla Gabri)**

The Viaduct Museum Langwies, located in Switzerland, in the Grisons Alps, is dedicated to a remarkable achievement of Swiss engineering: the Langwies Viaduct, which at the time of its construction in 1912/1914, was the largest and most wide-spanning reinforced concrete railway bridge in the world. As artistic director, I have developed the museum's exhibition format not as a static site, but as a dynamic space where past and present remain in continuous entanglement.

In my talk, I will outline some key aspects of the curatorial strategies. Drawing on format theory (e.g., Dorothea von Hantelmann, *How to Do Things with Art*, David Summers, *Real Spaces*) and Georg Kubler's *The Shape of Time*, I will reflect on how exhibition formats – understood as historically specific, yet open to reconfiguration – shape the ways we understand and experience history. For the viadukt museum Langwies, I experimented with formats that resist linear chronology and instead allow for resonance, juxtaposition, and reactivation.

One of the key examples I will highlight is the video installation *Langwies- Panama*, which reactivates a comparison already made by Tom F. Peters in “The Result in Small and Large: The Langwies Viaduct and the Panama Canal (*Building the Nineteenth Century*)” The installation stages a live-stream exchange between the two sites in situ in the museum and juxtaposes infrastructures of radically different scales in different timezones.

The talk will argue that such experiments position museums as laboratories of temporal entanglement, offering not only interpretations of the past but experimental propositions for how history and present co-exist and shape each other.

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## **Palimpsesto: Experiments in Time Translation (Chloe Garcia Roberts)**

This presentation draws from *Palimpsesto* my current book project exploring the particularities of remembered and experienced time in Mexico City. As both a US and Mexican citizen, I've always felt the primary difference between the two places is their relationship to time. I spent significant periods of my childhood in Mexico City, though I mainly lived in the States, and the sensation that time has a specific viscosity there is something I rediscover on each return. This temporal divide has become just another border I've learned to navigate.

Mexico City is a geographical, cultural and temporal palimpsest. When the Spanish expedition finally bored its way from the coast into the central valley and the Mexica capital, the men recount a floating metropolis so far from all they had experienced before it was described as “undreamed”. After the city was conquered and destroyed, the lake was drained, and a new city was built out of the ruins of its predecessor. Today if you fly into Mexico City at night, you can see the ghost of this ancient lake. Though instead of being a lake of water, it is a lake of light. In Mexico City, the boundaries between past, present, and future perpetually collapse, blend, and shift which in turn has a profound influence on the perception, experience, and even the passage of time in this place.

Combining literary analysis, personal narrative, and translation theory, the book is a series of experiments in what I am calling time translation. Each piece revolves around a particular touchstone

or portal—examples of which include blossom time and the clock of the Jacaranda in the spring, the parentheses of the 1985 and 2017 earthquakes, the veil of Catholicism the old gods wear and discard, and the history and temporal symbolism of a statue of Coatlicue, the snake goddess, now housed in the Museo de Antropología. Through my work as a translator of ancient and historical texts, I’ve come to recognize writing as a form of time travel, albeit one that requires a disembodiment of the animus of the work, a severing from the creator in order to travel—only the words make the journey. With this project I attempt to find a way for the imaginer or the rememberer to travel along with their words and be the moment they write of, whenever that is.

For my proposed talk I will discuss the project briefly and read an excerpt from the book.

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### **Anachronistic Abstraction: Tradition and Innovation at the Margins of Modernity (Scott Gleeson)**

The dominant history of art conditions us to be suspicious of artistic styles that do not clearly reflect the times from which they emerge. Artists and art historians trained in the formalist method are instructed to see an orderly succession of styles, from prehistory to modernity, as reflexive of humankind’s gradual evolution toward a superior consciousness. The ideas of formalism are salient in the 700-year history of easel painting in which the innovations of Giotto in late thirteenth century Italy pave the way for mankind’s ultimate creative achievement, the gestural abstract canvases of Jackson Pollock. This history pits innovation against tradition in a productive entanglement that ensures cultural renewal and forward progress; it also assumes that any return to the past is done within the sanctioned space of “revival” or “renaissance”. Tradition is thus represented as the domain of stagnant, non-Western or ancient cultures, whereas innovation is celebrated as the primary achievement of a dynamic, modern Western culture. Idiosyncratic and anachronistic objects that do not conform to the dominant style are rejected by their contemporaries and ignored by art historians. New Art History challenges this narrative, yet its founding assumptions persist unchanged.

In response to what George Kubler calls art history’s “morphological problem of duration,” my talk returns to that most contested site of aesthetic discourse of the Late Middle Ages and Early Renaissance: the gold ground of sacred panel painting. This paper theorizes my own experiments using Cennino Cennini’s dead technique of gilded *gesso pastiglia*, an outmoded symbol of timeless divinity and stylistic casualty of shifting perceptions of time at the margins of modernity. I advocate an *anachronistic abstraction* capable of disrupting art historical narrative and reconciling a contemporary yearning for the eternal with the accelerated temporality of the digital age.

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## **Time infected by the pandemic. Exploring the impact of the Covid-19 pandemic on young adults (Clarissa Grande)**

In 2020 the coronavirus pandemic and the lockdown that followed increased uncertainty and insecurity in societies. The Covid-19 period has not only reshaped daily life but has also influenced how individuals experience and relate to time. Given the importance of future trajectories for young people, this paper focuses on research discussing young adults' perceptions of time in Italy during the Covid-19 period where was imposed a radical national lockdown, restricting the movement of the population. Drawing on a qualitative approach based on semi-structured interviews with 30 respondents aged 18 to 28, the study addresses two questions: How has the pandemic altered the perception of time? What are the long-term effects of these changes on their future trajectories?

Borrowing from Luhmann's contribution to the future, the study identifies three key modes: *past futures* (imagined during the pandemic); *present futures* (scenarios thought in the present) and *future presents* (plans actively shaped now). The results reveal a dynamic entanglement of temporalities: while the short-term future was more affected and constrained by the pandemic, the long-term future is sustained by resilience, optimism, adaptability and reflexivity.

The study introduces the concept named "*f-resent time*", an hybrid temporality in which the present and future intertwine, exemplifying a temporal entanglement that links individual biographical time with broader social rhythms. This concept captures how young adults reintegrate and re-imagine future possibilities in the present, producing new forms of temporal agency and challenging the dominant logic of presentism in contemporary society. The study argues that the pandemic not only disrupted traditional perceptions of time but also generated a 'positive side effect': a renewed engagement with the future, offering young people an opportunity to reconsider their life paths in a post-pandemic world. This contribution enriches the debate on time, demonstrating how global disruptions reshape both individual and collective temporal imaginaries.

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## **Becoming entangled in time: Psychological tools to enable the development of temporal knowledge in a child with ASD (autism spectrum disorder) (Mayrose Hall)**

For a developing child, mastering the intersubjectively shared temporal system by which time is measured and social life coordinated in his/her culture, is a process leading to entanglement *in* time. Learning to understand and operate with 'objective' or 'clock-time' is essential to becoming entangled in time. However, mastering clock-reading is a fundamental aspect of temporal knowledge which can pose difficulties for children with autism. I begin by presenting utterances which demonstrate a child's difficulties in comprehending the ways in which time is conceptualised in English. I argue that grasping the ways in which the underlying metaphor of length is used to conceptualise duration is essential to mastering clock-reading and is thus fundamental to becoming entangled in time.

I present a set of novel tools designed to support the acquisition of temporal knowledge, in particular mastery of clock-reading. Each tool requires the child to engage in manual action as a means for

coming to understand abstract concepts. The devices exemplify Vygotsky's notion of psychological tools, that is, artificial devices designed to act on mind and behaviour. Included in the set is a 'Linear Clock' used to support the development of understanding of temporal sequence, by making concrete the meaning of words used to indicate temporal order, an 'How-long-O-meter' used to represent the child's subjective experience of duration, which when used in conjunction with a pair of 'Linear Scales', supporting the transition from subjective, experientially based understanding of time to an understanding of objective/ clock-time as an abstract, numerically ordered cyclical system represented and measured on clocks. Also included are three modified clock-faces, the 'Split Clocks', which make tangible the dual time scales represented on analogue clock-faces and a 'Visual scheduler' designed to make concrete the notion of elapsing time. Using these tools enabled the child to become became entangled *in* time.

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### **Time 2.0: The Disentanglement and Redemption of Time (Poster by Peter and G. M. Hancock)**

Time is an invention of life that subsequently imprints duration onto all inanimate matter. Since the epithet 'living' represents a self-determined form of hubris, codified by a purely arbitrary division of arrangements of matter, the separation between living and non-living systems is purely artificial. Consequently, the iatrogenic creation of the traditional approach to time (Time 1.0) is negated. Zero-time theory derives from these foundational predicates. Here, we explicate how the beginnings of time emerged and how disentangling fallacious assumptions serve to redeem time in the form Time 2.0. We have always known of time's complexities but to many St. Augustine's admonition to simply not think about it still holds sway. We argue that this received, traditional entanglement emanates from multiple conundrums that derive from the self-satisfied but unjustifiable reification of human cognition. Formalized systems of time measurement are arguably the most effective tool ever created. But these material expressions spring from this mostly unquestioned assumption of the primacy of life and especially its human form. As with Schrodinger, we explore and challenge the unearned exceptionalism of 'life.' When living systems are viewed as one, albeit interesting, but simply another arrangement of matter, there is no privileged to that arrangement. The subsequent imposition and assumed ubiquity of duration in a physical universe is revealed then as a categorical error. It is an illusion, but one that is in a constant state of re-affirmation. Indeed, this cascading renewal is true to such an extent that even questioning its reality is to court general social derision. Time 2.0 explores the 'future' of time in a world now 'alive' to these foundational fallacies. Dissociation of the concept of time from the tool of time is the first essential step in this awakening. Sufficient comprehension of the implications of Time 2.0 can, for example, elucidate the mystery of Drake's equation in understanding that alternate forms of extant life, in not being burden with Time 1.0, would not view the issue of communication in the same limited manner that humans have. Many other ramifications of Time 2.0 will be considered and discussed.

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## **Impish Time: Poe and the Perversity of Entanglement (Anita Harris)**

Many of 19<sup>th</sup>-century American writer Edgar Allan Poe's stories have narrators who recount murdering someone in a way that deflects accountability, weaving tangled narrative webs of circuitous logic in vain attempts to suspend time. Those suspended-time bubbles ultimately collapse, though not before the narrative entangles readers through what Poe terms the "single effect" of storytelling.

One of these tales, "The Black Cat," features a narrator who murders his wife but blames a cat. The narrator writes from prison, believing some "intellect" will find his actions logical, promising to write objectively, but frequently digressing into emotional divulgences. His narrative includes a passage on perversity, which he calls a "primitive impulse," asking, "Who has not, a hundred times, found himself committing a vile or a silly action, for no other reason than because he knows he should *not*?"— a manipulative attempt to justify his actions while subtly implicating the reader in the same propensity.

In another story, "The Imp of the Perverse," the narrator also expounds on perversity, explaining it through science (including phrenology) and densely constructed logic, using common examples like procrastination. The narrative sounds like an overwrought essay—until the end, when the narrator explains how he himself is a "victim" of perversity, having murdered a relative years before, then randomly and *perversely* confessing, now awaiting execution.

On the brink of death, these narrators desperately attempt to inflate their final moments through rhetorically elaborate explanations that meander like a maze, perversely extending time through stalling. The resulting tangled narratives are models of "impish time": the narrator's attempt to preserve himself through delay (like storyteller Scheherazade, mentioned in "Imp"), sustaining the time bubble long enough to entangle readers in his thinking before his past inevitably catches up to him.

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## **Four Metamorphic Metaphors for The Self-Entanglement of Terrestrial Time (Paul Harris)**

(Exhibition and Paper Proposal): The geophysical dynamics of Earth constitute terrestrial time or "geotemporality." Powered by plate tectonics and the resultant rock cycle, geotemporality unfolds as a self-entangled involvement with itself—the planet does not produce or demolish matter but remixes and redistributes it, evolving-devolving as it melts and cools, slip-sliding away and solidifying at the same time all the time. As Manual Delanda observes, "given that it is just a matter of time for any one rock or mountain to be reabsorbed into the self-organized flows of lava driving the dynamics of the lithosphere, these geological structures represent a local slowing-down in this flowing reality. It is almost as if every part of the mineral world could be defined by specifying its chemical composition and its speed of flow: very slow for rocks, faster for lava."

Metamorphic rocks, formed as mineral crystals are reconfigured under new temperature and pressure conditions, exemplify the rheology (stress, deformation and flows of matter) of geology. The self-entanglement of Earth's recycling is played out in the journey of metamorphic rocks from the crust into the mantle and back. Geologist Marcia Bjornerud calls metamorphism "a kind of natural alchemy," and compares the itinerary of metamorphic rocks to "the narrative arc of *katabasis* and *anabasis* in Greek

myth: the protagonist's descent into the Underworld, the tribulations experienced there, and the eventual return, with hard-won wisdom, to the land of the living."

The proposed exhibition presents four displays of metamorphic rocks accompanied by texts clarifying how their composition and formation concretize the self-entanglement of terrestrial time. The conference paper will conceptualize geotemporality and situate it within J.T. Fraser's hierarchical theory of time between the eotemporal and biotemporal levels. Geotemporality will be theorized as an entanglement of the reversible, deterministic eotemporality of physics and the irreversible, open biotemporality of life. Terrestrial Time crystallizes as a singular form of cyclic, chaotic temporality, within which the geologic becomes, in J.T. Fraser's words, a "region between life and non-life filled with mysterious beings," including metamorphic rocks.

Exhibition Description List: "Four Metamorphic Metaphors for The Self-Entanglement of Terrestrial Time"

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### **Consent to Marinade: AI Images and New Forms of Temporal Relation (Shannon Hayes)**

When early viewers encountered daguerreotypes in the 1840s, they found themselves unable to look directly at these new images, "abashed by the distinctness of those human images" and fearing "that the little tiny faces in the picture could look back at us" (Benjamin 2008, 279). Today, we find ourselves in a similar position of uncertainty before AI-generated images. While daguerreotypes confronted viewers with an uncanny intensification of human presence, AI images seemingly intensify the absence of the human from the realm of visual meaning. Still unsure if the "little tiny faces" will look at us in turn, we find ourselves suspended between an event that has already taken place and is not yet here.

This suspension points to the spectral temporalities manifested by AI images: an entanglement of human and algorithmic time that blurs traditional temporal boundaries. Unlike photographs, which carry traces of what once existed, these images operate as traces of traces, emerging from networks of statistical relationships that never referred to actual bodies or moments. As they circulate and become training data for future models, they create feedback loops where each image influences both present viewing and future creation.

In this paper, I explore the temporal entanglement AI images disclose. Presenting us with visual meaning that no longer requires human intention to proliferate, such images show us forms of existence that exceed human life. This confronts us with our species-finitude: the recognition that we inhabit visual systems that generate meaning autonomously, challenging us to discover modes of being that work creatively with our finite condition. Rather than oscillating between rejection and embrace of AI imagery, I propose "marinade," drawing on Barthes (2011) and Haraway's (2016) "response-ability," as a productive suspension between human and algorithmic visual logics. Marinade entails a "consent to change and die," allowing new forms of relatedness and responsibility to emerge through our entanglement with algorithmic temporalities.

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## **The Cagliari Labyrinth: Performative Entanglements of Place and Time (Karen Heald, Susan Matthews)**

As collaborative artists we juxtapose past filmic events with contemporary responses that utilise sound and visual disseminations to explore spacetime, verticality and the inevitable tension between the past, present, and future.

Drawing upon philosophical theories of Kristeva's semiotic chora and Steryl's notion of verticality and free fall, these concepts are explored through a tripartite framework of in-between-ness; being in-between and transitory strata. In acknowledging the unmeasureability of time, we have transferred these via our creative practice exhibiting them as a single channel film *The Timekeeper and the Hourglass* along with its further advanced installation and live performance.

When two particles become entangled, their properties become correlated in ways that defy classical intuition, a phenomenon described by Einstein as spooky action at a distance. By investigating the directional flow of information through the creation of audio and visual responses to video footage shot spontaneously in a variety of worldwide locations, we are exploring the entanglement of time and our collaboration. This interplay between sound and video offers a multitude of possible outcomes, effectively entangling the past with the present and future. The notion that in our universe we can only remember the past and not the future and that we cannot be entangled with future states because those entanglement patterns have not yet been formed is curious and intriguing.

We propose to develop this practice-based research further through attendance at the conference, during which we will respond creatively to the immediate environment, the island of Sardinia, the conference participants, and our own collaborative relationship. We will develop creative processes to explore the theme of time and entanglement, revealing the "spooky action at a distance" connections between, locations, timezones, physical environments, individuals, thoughts, and actions, resulting in a bespoke site-specific audio-visual exhibition with performative elements, together with a contextualising talk/presentation.

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## **Coral Time (Anna Henchman)**

This paper argues that coral reefs embody a nonlinear timefulness that defies teleological concepts of living and dying. Corals are the longest-lived animals, with some individual colonies surviving for 5000 years. Like their fellow Cnidarians, jellyfish, corals have no inner clock that leads inevitably to death. Corals resemble plants in continuing to grow as long as they live. This existence in time, this timefulness, requires ongoing evolution of the organism – imagining life not as a one-time birth but as something continually reconstituted, more iterative than singular. Corals' continuous self-constitution has affinities with indigenous conceptions of time, in which time is both fluid and rooted to stories and specific ancestral genealogies. By contrast, European and American narratives often imagine the coral island as out of time—either prehistorical, trapped in the past, or as timeless, in an otherworldly, suspended state.

Coral lies in the realm of animals but possesses key characteristics of both plants and rocks. Devoid of a face or a backbone, a coral is a single animal made up of thousands--or even millions--of identical polyps. Corals are sedentary like plants, composed of colonies, and they engage in a remarkable symbiosis with the microscopic algae that grow inside them. Coral is a foundation species, depositing its skeleton beneath it as it grows. This conception of coral sees it as an interconnected entity that includes coral, fish, sea, rock, and people.

The term morphology, the study of form, emphasizes form as process. Geologist Marcia Bjornerud asserts that “rocks are not nouns but verbs—visible evidence of processes: a volcanic eruption, the accretion of a coral reef, the growth of a mountain belt.” Rachel Carson describes the almost alchemical formation of coasts—not “lifeless rock or sand, but created by the activities of living things [...] able to turn the substance of the sea into rock.” When one conceives of a coral reef as akin to Charles Darwin’s “entangled bank,” an entangled reef, the limitations of the concept of individual life spans comes into focus.

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### **'windblown leaves': acousmatic architectures & synesthetic timescapes in Susan Howe's artist books" (W. Scott Howard)**

This presentation investigates Susan Howe's artist books as manifestations of acousmatic architectures and synesthetic timescapes at the intersections of manuscripts, textiles, visual arts, collage poems, ecstatic prose, and sonic materialisms. Through their experiential forces of factual telepathy and synesthesia, Howe's artist books transfigure their materials and our collaborative engagements with the past, present, and future. Although much scholarly attention (since the 1980s) has been given to the importance of historiographic and psychogeographic methods in Howe's poetry and poetics, the dynamics of Howe's timescapes have yet to be studied as distinctive forms of sonic, visual, haptic, textual, and spatiotemporal entanglement.

Author of more than thirty-seven books and recipient of the 1980 American Book Award, the 2011 Bollingen Prize in American Poetry, and the 2017 Frost Medal from the Poetry Society of America, Susan Howe (1937- ) is a prolific poet and essayist, scholar, educator, visual and sonic performance artist. Howe's transdisciplinary and multimedia works embody dialogues among different fields of research, creativity, and public engagement (especially theatre, history, and painting). Howe often begins a composition with fragments of discourse (e.g. biographical or historical anecdotes, literary puzzles, cultural mythologies) and then stitches those narrative threads into a canvas of questioning and answering, always critically attentive to the role of language as a material, sonic, textual, haptic, visual, and spatiotemporal mediator of human experience. My presentation will feature selected manuscripts, fabrics, visual images, word collages, poems, and prose passages from Howe's artist books (1992, 2010, 2019) and especially from *TOM TIT TOT* (Grenfell / MoMA, 2014) alongside audio samples from her studio recordings / adaptations of those artist books with the composer and musician, David Grubbs. My engagement with time studies will intersect with foundational works from J. T. Fraser, Achsah Guibbory, Sean Enda Power, Carlo Rovelli, and selected articles from *KronoScope*.

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## **The Race With Time (Emma Hsu)**

Needham's Grand Question implies China missed the opportunity to modernize science. My dissertation challenges the premise and aligns with Benjamin Elman's call to understand non-Western innovations on their own terms. Employing the Rashomon Effect, I explore "Time and Entanglement" in 18th and 19th-century Qing Dynasty China by examining how diverse temporal understandings clashed and converged. In juxtaposing conflicting perspectives, the Rashomon effect reveals the simultaneous existence and interaction of various temporal layers—from cosmic rhythms (eotemporality) to subjective human experience (nootemporality) and socially constructed time (sociotemporality)—highlighting inherent "temporal conflicts."

In Europe, Reinhart Koselleck theorized the French Revolution instigated a significant acceleration of time, fostering a future-oriented modernity. In contrast, Qing China's established time management systems, rooted in its unique socio-political and cosmological order, instilled stability. This indigenous innovative system's effectiveness led the Chinese to initially disregard integration of European mechanical clocks. My research examines this East-West entanglement through three distinct historical lenses:

1. James Dinwiddie's journals (Macartney Embassy, 1792-1794): British astronomer's direct, often bewildered, view of Qing rhythms and clock reception highlights the clash between linear, industrial nootemporality and cyclical Qing sociotemporality.
2. William Proudfoot's biographical narrative: Dinwiddie's grandson provides a later interpretation, demonstrating how historical accounts are shaped by biographical nootemporal biases, emphasizing perceived temporal progress differences.
3. Louis de Poirot Jesuit archives: The last Jesuit of the Qing court reveals a longer, more integrated, yet cautious, engagement with Western horology, illustrating a sustained entanglement where Jesuits adapted to Manchu sociotemporality and its unique priorities.

By contrasting these narratives, my study reframes the Qing's interaction with Western time technology not as a failure to adopt, but as a deliberate choice rooted in a highly evolved indigenous temporal system. This illustrates a case for Fraser's arguments against exporting "Faustian" time through exploring cultural specificity rather than Western obsession with the "tyranny of numbers."

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## **Migrant Temporalities: Beyond the Linear Narrative of Integration (Boram Jeong)**

The temporal dimension of migration is often considered in the framework of progression toward integration. The narrative of a "successful" integration hinges upon linear temporality, under which a migrant's cultural assimilation to the hosting country is seen as a movement toward the future, whereas their continued affective attachment to home is cast as regressive and backward-looking.

This paper proposes a temporal framework of *endurance* as an alternative to the linear narrative of migration, emphasizing a migrant's ongoing relationship with home after departure. Drawing on Henri Bergson's theory of duration as well as Asian Diaspora literature and film, the paper argues that

migrants inhabit a *dual temporality*. They carry the time of their past or hypothetical life that could have unfolded at home —aborted by migration—, alongside the present reality of migrant life.

The analysis begins with Isabelle J. Kim’s speculative fiction “Homecoming is Just Another Word for the Sublimation of the Self,” portrays migration as a process of “instantiation”: the duplication of the self caused by a permanent border crossing. The two ‘instances’ in the story—Rose, who emigrates to America, and Soyoung, who remains in Korea—explore the possibility of undoing this severing, or “de-instantiating” after twenty years of separation. Similarly, Céline Song’s film *Past Lives* (2023) depicts Na Young’s journey to become Nora after migrating to Canada, tracing the tension between her past and present selves through sporadic yet intense encounters with her deeply connected childhood friend, left behind at home.

Bergson’s concept of duration that emphasizes the endurance of the past into the present helps articulate how migrants live with the unrealized possibilities of an “unmigrated” life (*‘What if I had stayed?’*), not as distant, expired past, but as aspects of the ongoing present. This dual temporal structure offers a more comprehensive account of migrants’ lived time, suggesting that a departure from one’s home cannot be adequately understood as a linear movement away from the past, but as a form of grief that splits the present into two temporal series: one actualized and the other virtually coexisting.

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### **Entangled Islands, Archipelagic Time (Erica Johnson)**

This presentation comes out of work that I am doing as a team member of a Mellon Foundation grant focusing on islands and archipelagos. Specifically, the project covers the politically and historically interconnected archipelagos of the US Virgin Islands, the Marshall Islands, and the forty-two islands that make up New York City. Archipelagic studies, as a field, dismantles hierarchies between continents and islands, large land masses and small. Whether with regard to the geological archipelago that forms the Caribbean or Foucault’s more abstract concept of a carceral archipelago, there are lines of entanglement connecting disparate or distant bodies. **Archipelagic time**, in contrast to a notion of time that is based within national boundaries and linear histories thereof, is an example of quantum entanglement whereby “intimate interactions of particles across vast spatial distances” create temporalities distinct to each system of relations. Archipelagic time follows a logic of entanglement that calculates the consequences of the relation among its elements.

**Case study:** The US bought the Virgin Islands in 1917 from Denmark, which had ruled over them for centuries. The islands went from being in archipelagic relation to the small (largely island) nation of Denmark, to being in relation to the massive land mass of the US. However, the political discontinuity of 1917 is a thin overlay onto ecological and cultural continuities. Edouard Glissant theorizes archipelagic time by drawing from the ontological index of lived landscapes, in eschewal of European cartographies and historical periodization. He writes extensively about physics, drawing on time as a function of space, and space as a site-specific index that preserves its integrity even under the forces of change, realignment, and violence. I show how contemporary Virgin Islands writers and artists represent archipelagic time, and I focus on the Virgin Islands-based work of soil scientist Suzanne

Pierre's Critical Ecology Lab whereby she puts Glissant's theory into practice by mapping intensities of anthropogenic change on the landscape. All soils are specific to their geologic locations, but they are also archives of colonial collision that indicate St. Croix's position in archipelagic relation within and beyond the Caribbean. Based on a small island, Pierre's work is scalable to colonial ecologies around the globe. As the editors of the recent *Contemporary Archipelagic Thinking* explain, archipelagic thought provides a framework applicable to all spacetimes whereby "irreducible differences become the norm."

(\*The island location of the ISST conference promises to make our conversations about islands and archipelagic time all the more engaging.)

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### **Entangled times, resonant lives. Resisting temporal alienation in the everyday (Carmen Leccardi)**

As is well known, Rosa identifies the capacity to enter into resonance with the world—in its multiple dimensions, both private and public, ecological and religious, all understood as different articulations of human existence—as a powerful antidote to contemporary alienation (Rosa 2019). While in his most well-known analysis (Rosa 2010) alienation and temporal acceleration are presented in conjunction, this influential exponent of the fourth generation of the Frankfurt School later works theoretically on possible antidotes to this dramatic social reality. Within this framework, his 'theory of resonance' takes shape: an analytical approach aimed at identifying possible ways and forms for constructing non-alienated dynamics of relations between subjective times and the times of the world.

On this basis, in the paper I intend to highlight to what extent awareness of the indissoluble entanglement between existential, socio-historical, and natural times (an intertwining that Norbert Elias had already emphasized in his 'Essay on Time' of 1992) fosters processes of de-alienation in everyday life, that is, creates conditions for resonance. In this analytical context, I will focus in particular on the processes and forms of 'unconventional politics' enacted in everyday life by groups of young activists who identify in the meaningful temporality of non-alienated human relationships, first and foremost, the antidote to the currently dominant capitalist commodification of time.

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### **TIME and QUANTUM ENTANGLEMENT: Alain Aspect's crucial experiment (1982) forces us to differentiate between *causal time* and *process* (Rémy Lestienne)**

I propose to begin with a quick review of the principle of superposition in quantum mechanics and its distant consequence: the non-separability of pairs of entangled quantum particles. The subject was discussed after the publication, in 1935, of a provocative and now famous article by Einstein, Podolsky, and Rosen. The discovery of Bell's inequalities in 1964 opened up the possibility of testing this prediction of quantum mechanics, in some specific cases. To do this, a measuring device must be

placed on the path of each of the two particles, each measuring a variable from a pair of so-called quantum-incompatible quantities. One of the difficulties of the experiment is to prevent any possible propagation of information between the state of the first detector at the moment of measurement and the second, to ensure that the first measurement cannot influence the result of the second.

The experiment conducted by Alain Aspect and his team in 1982 was the first to obtain this goal. It earned its author the 2025 Nobel Prize in Physics (along with John Clauser and Anton Zeilinger). Following on from Aspect (1), I will focus my presentation on the long and difficult path between the simplicity of an theoretical design and its actual implementation: the source of entangled photons (a jet of calcium atoms excited by two lasers, one of which has an adjustable frequency), ultra-fast switches to deflect or not deflect the beams (by acousto-optic effect), linear polarization analyzers (specially constructed polarization-separating cubes of optimal quality), and finally high-efficiency photomultipliers. I will also present the example of  $K^0$ -anti- $K^0$  particles entanglement (2), where the solidarity effect specifically concerns a temporal quantity: the lifetime of each member of the pair before their decay. I will conclude with the need to distinguish between relativistic causal time and the motor of the World, driven by a completely different mechanism, which must necessarily escape classical and relativistic spatio-temporal analyses. North Alfred Whitehead was one of the first to understand this necessity. He considered this motor to be the inexhaustible source of a sequence of “time” dust and proposed calling it the *process*.

(1) Alain Aspect, *Si Einstein avait su*, Paris: Odile Jacob, 2025

(2) these massive particles (their masses are slightly more than half that of a proton) consist of a down quark and an anti-strange quark and an anti-down quark and a strange quark respectively.

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### **Curating Entanglement: A reflection upon Time through visual arts (Laura Leuzzi, Antonella Sbrilli)**

This paper presents the theoretical and curatorial framework underpinning the exhibition developed for the ISST Conference, which emerged from a hybrid model of open call and curatorial selection. The exhibition foregrounds contemporary visual arts practices—encompassing video, installation, and mixed media—that critically engage with the concept of entanglement across social, technological, political, and historical domains. Central to the curatorial approach is an understanding of entanglement not merely as thematic content, but as a method of inquiry, reflecting the complex and often non-linear interplay between visual arts’ research and practice

The artworks selected respond to different strands of entanglement, including: social and technological Entanglements investigate the co-evolution of scientific knowledge, technological systems, and societal structures, tracing the feedback loops that shape public imaginaries and infrastructures; Political and Historical Entanglements confront the embeddedness of power and memory in technological and cultural formations, exploring how intertwined trajectories of colonization, resistance, migration, and surveillance persist in present-day narratives; Narratives of Entanglement, offering critical, speculative,

and poetic articulations that challenge linear or binary understandings of progress, agency, and causality.

By situating the exhibition within the interdisciplinary space of the ISST conference, this paper argues for the curatorial process as a critical form of knowledge production, where curating becomes both method and medium for investigating the topic. The exhibition operates not as an illustration of entanglement but as a generative site where diverse material practices provoke new modes of seeing, thinking, and relating across disciplines.

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### **Time and Entanglement in 17th-Century Japanese Moral Theory (André Linnepe)**

In seventeenth-century Japanese scholarly discourse, time emerged as a central theme. It was discussed in connection with diverse topics, including moral codes for social status groups, the genealogies of warrior houses, astronomy and calendrical systems, as well as medicine. This paper examines the concept of time in the work of one influential scholar of the period within the context of moral theory.

From the late sixteenth to the mid-seventeenth century, Japanese society underwent a fundamental transformation. A key issue in intellectual debates was the critical situation of the warrior class, relocated from the countryside to castle towns and forced to adjust to a new urban environment. This paper focuses on the writings of the Confucian scholar Nakae Tōju (1608–1648), who responded to the challenges of contemporary society by emphasizing the need for a new understanding of time.

Tōju introduced the concept of “[appropriate] timing [in accordance with] the middle” (*jichū*) as the central normative criterion for moral action. He argued that this can be analyzed in relation to its appropriateness to ‘time’ (*ji*), ‘place’ (*sho*), and ‘[social] rank’ (*i*). However, in order to realize such ideal practice, the necessary moral dispositions must be cultivated. He considered “filial piety” (*kō*) the most important, interpreting this virtue as the principle of cosmic life force. Based on his theoretical considerations, Tōju criticized the urban lifestyle of contemporary warriors, viewing it as an unsuitable environment for their moral education. This paper explores how time emerges as a pivotal element in Tōju’s theory, facilitating his conceptualization of the entanglement of temporal, spatial, social, and cosmic dimensions. In doing so, it aims to incorporate premodern Japanese sources into our thinking about time and entanglement.

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### **Cave, Bunker, and Cell, 1938-2021: A Social History of Attempts to Disentangle Time (Alexis McCrossen)**

Conceptualized as “timeless spaces” because they are removed from natural and social time, caves and bunkers have attracted sleep researchers, warfare specialists, psychologists, chronobiologists, and others who wished to disentangle the various strands of time, particularly natural time and social time, from somatic and psychological time. Psychologists, criminologists, and sociologists have performed similar studies when examining prisoners in solitary confinement. This paper reconstructs the history of the experiments, looking not so much at the findings as at the motivations, that is, at the scientists’ and explorers’ ideas and presuppositions about the entanglement of time. It starts in 1938 with a

University of Chicago physiologist and his graduate student who stayed thirty-two days in a “Mammoth Cave” in the US. The paper then discusses the French geologist and speleologist Michel Siffre, who coined the phrase “beyond time” after spending 1962 spent sixty days alone in a cave in the French Alps in 1962 and six months in a Texas cave in 1972. Turning to 1960s and 1970s “bunker studies” and research since the 1980s about the dehumanizing consequences of solitary confinement, the paper addresses the development of research into what happens to bodies and minds in regimented spaces. The paper ends with the 2021 “Deep Time Experiment” in which fifteen men and women spent forty days in a French cave. It concludes that the quixotic efforts to fashion “timeless spaces,” whether caves, bunkers, or prison cells reflects an on-going and on-the-ground widespread understanding of the necessity of time’s entanglements.

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### **Negotiating Temporal Regimes in Digitised Societies: Older Adults’ Digital Practices Between Engagement and Disengagement (Giulia Melis)**

Two major issues of contemporary societies, population ageing and neoliberal socio-economic transformations, are redefining the experience of time in old age.

Once characterised by progressive social disengagement, the transition to older adulthood has undergone a temporal shift towards the active ageing paradigm: these discourses encourage maintaining an active and productive lifestyle to slow down ageing in the idea that it could consequently reduce its «burden» on society.

The widespread diffusion of technologies, especially by public institutions, reinforces this paradigm with a digital-by-default perspective, which attributes the responsibility for keeping pace with the acceleration required by digital innovations to older adults. While neglecting the role of socio-economic background and the risks of exclusion originating from the digital divide, such narratives also underestimate that digital experiences originate not only from individual skills but also from social practices, which shape the temporal organisation of everyday life and are characterised, among others, by opportunities and constraints deriving from social roles, gender cultures, and the distribution of paid work and care activities.

This reflection originates from a longitudinal case study on 65+ older individuals living in Northern Italy that adopts a gendered life course approach to the ageing experience, digitalisation, and everyday practices in post-pandemic societies. It is based on wave 5 data, namely 30 narrative interviews exploring everyday negotiations of older adults navigating digital public services (DPS) in the context of family practices.

The preliminary findings highlight the temporal regimes of everyday digital experiences, shaped by biographical trajectories and social roles. Data documents the tension between compliance with digital demands and resistance to active ageing pressure, ranging from biographical continuities to strategic disengagement. Moreover, participants’ experiences reveal that discourses on digital practices are intertwined with temporal regimes, which mirror the broader sociocultural context rather than depending exclusively on individualised skills and dispositions.

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## **Complexity and situated temporalities: the influence of entangled inequalities on the future aspirations of young Indigenous women in Costa Rica (Tilman Menzel)**

While classical approaches to the study of temporalities in colonial and postcolonial societies have presented dichotomous juxtapositions of differing temporal regimes between Indigenous and occidental societies, several authors have critiqued this binary framing of two separate temporal conceptions and have rather focussed on the interplays and interactions between an expansionist, hegemonic occidental time and Indigenous time regimes, resulting in temporal hybridity.

Drawing on my research with young Indigenous women in Costa Rica, I argue that the study of temporalities in general, but particularly in Indigenous communities, should resist the ethnicization of temporal regimes, which often results in essentialization and the oversimplification of social complexity. Instead, it should account for the multitude of factors influencing the social perception of time, such as transnational class dynamics, gender and generation, and examine how these dimensions interact in the construction of temporalities. In order to accurately represent this interplay and the complexities of temporalities in modern/colonial contexts, I apply the concept of “entangled inequalities” developed by the [desiguALdades.net](http://desiguALdades.net) research project based at the Institute for Latin American Studies of Freie Universität, which puts forward a multi-scalar, relational and diachronic perspective on the study of inequalities.

Drawing on the experiences and testimonies of participants from both rural and urban contexts, I illustrate how gendered family histories, agro-extractivism, the insertion into the public education system and intergenerational dynamics in the efforts for cultural revitalization shape and determine the temporal realities experienced by the participants of the research project, giving rise to situated, intersectionally entangled temporalities.

Keywords: Entangled Inequalities - Intersectionality – Indigenous temporalities - Social Complexity

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## **„ Green Abysses:” Vegetal Hetero-Temporality and Lafcadio Hearn’s Tropical Apocalypse (Sabine Metzger)**

When the late 19<sup>th</sup> century American writer and journalist Lafcadio Hearn describes the forests of the West Indies as “green abysses,” he diverges significantly from the widespread *topos* of the “green hell” which denotes the tropical rainforests as zones inimical to man. Hearn’s metaphor, resonant of both Anaximander’s *apeiron* and of the “wild abyss” of John Milton’s *Paradise Lost*, addresses the ontology of vegetation or what Michael Marder calls “ontophytology.” The “green abysses” refer to a *phusis* that is self-destructive by its excess and thus perverting itself by its very hyper-productivity, producing an “inextricable chaos” of “blazing green vines ... form[ing] ... motionless cascades – pouring down over all projections like a thick silent flood.” The tropical forest emerges from Hearn’s writings as an apocalypse in the sense outlined by Henri Maldiney, i. e. as “an inversion of the very act of creation.” This paper will deal with the “green abysses” temporal dimension. Hearn’s vision of tropical apocalypse hinges on what Michael Marder refers to as vegetal life’s “hetero-temporality,” which is

complicated in the tropics by the absence of clearly defined seasons and a growth that is already decay. As this paper will argue, Hearn's tropical is time neither a "present eternal" nor is the cyclical time of organic nature that is proposed, for instance, by Ezra Pound in his "Seven Lakes Canto" or by Michel Onfray's notion of "floral time." Tropical time emerges from Hearn's writings as present that – being devoid of the inchoative aspect of the "present of presence" – never inaugurates or temporalizes itself and that defines the tropical forest as the very antithesis of a world.

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### **Entangled Temporalities: Recovering Laozi's Phenomenology of Time and Its Relevance to Contemporary Entanglement Discourses (Thomas Michael)**

This paper proposes a radical reinterpretation of temporality in Laozi's *Daodejing* by recovering his neglected understanding of the phenomenology of time, contrasting Daoism's dominant metaphysical understanding of time. Drawing on textual evidence from the recently excavated Guodian *Laozi* (c. 350 BCE), I argue that Laozi's original thought centers on temporality as experienced time rather than abstract, measurable time. The key to this is the phrase *hengdao* (恆道, "the Temporalizing Dao"), which signifies rhythmic flux with its ceaseless, non-linear entanglement of existence/non-existence, life/death, and human/nature that later Daoism replaced by *changdao* (常道, "the Eternal Dao") with all the metaphysical implications that follow. Restoring Laozi's fluxing *heng* paradigm reveals an ancient model of human-nature entanglement as rhythmic co-flux that resists anthropocentric timelines, and it offers novel insights for contemporary discussions of "entanglement" by challenging linear chronologies and foregrounding embodied, cyclical experience.

Because *heng* as rhythmic flux embodies temporal entanglement, it denotes the Dao not as a transcendent entity but as immanent, rhythmic unconcealment emerging from the constant co-presence of "somethingness" 有 and "nothingness" 無. Phenomena like storms from *Daodejing* Chapter 23 or festivals from Chapter 20 are presented in "bubbles" of time—non-sequential, textured durations where human experience, natural cycles, and existential reflection interweave. The text's timeless portraits, for example the enthronement in Chapter 62, also collapse past/present/future into affective moments. In parallel with literary explorations of hybrid identities and nonlinear historicity, these "bubbles" of narrative entanglement evoke universal human conditions.

Restoring this co-primordially demonstrates Laozi's primordial understanding of temporality and his rejection of the metaphysics of sequential creation. This positing of a constant entanglement is akin to quantum superposition, where opposites coexist without causal priority, and it shows a deep resonance with quantum entanglement's challenge to classical causality and linear time. Laozi's non-hierarchical co-primordially complicates "spooky action" debates by grounding relationality in phenomenology and prioritizes lived rhythm over abstract sequence, serving as a resource for rethinking time across physics, ecology, and narrative.

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into complex relationships. More specifically, the presentation will examine the dynamics of narrative nodes, situations that allow for more than one continuation by delineating their scope and types of modal engagement in Thomas Pynchon's novel *Mason&Dixon* (1997) and Krzysztof Kieślowski's film *Blind chance* (1987). Pynchon's novel and Kieślowski's film are prime examples of entangled narratives masterfully employing the subjunctive to redraw the horizon of historical and personal possibility. If *Mason&Dixon* is concerned with projecting America as a subjunctive realm filled with plural realities and unrealities, *Blind chance* presents a life-story in terms of contingency, tipping points and forces beyond the protagonist's control. Both works present human history as composed of nodes of intertwined trajectories and reflect on the ways these trajectories relate to one another. Both put to use the subjunctive in order to reveal a wide spectrum of narrative possibilities and to articulate tensions between diverging temporalities and timelines.

Iser, Wolfgang. *The fictive and the imaginary: charting literary anthropology*. Baltimore: Johns Hopkins University Press, 1993; Popper, Karl R. *A World of Propensities*. Bristol: Thoemmes, 1990.

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### **AI and the Severance of Process under Late Stage Capitalism (Bailey Moorhead)**

As the current mode of capitalism grows "later" and social life becomes more entangled with technology, big data corporations fuel inflation of the AI industry with promises of greater automated efficiency. In practice, AI and LLM software such as ChatGPT eliminate experiences of process for the user, leaping from command to output without human trial and error. Yet process is vital for human development, defined by gradual progress over linear passage of time. AI's attempted circumvention of process effectively erases ontogeny and its durational temporality, alienating the user from the labor necessary for critical thinking and skill advancement. AI reflects the limited vision of capitalist technofascism, prioritizing production and profit over process or progress.

The recent television series *Severance* (2022-present) resonates with these impacts of mental labor automation. The series features workers implanted with a microchip which "severs" their consciousness into two entities: the worker (or "innie"), who knows nothing of the self outside of work; and the non-worker (or "outie"), who knows nothing of the self at work. The innie is essentially enslaved, confined to their office and conscious only for labor. The outie forgoes work altogether, relying on the innie to make life easier. While the innie and outie are connected through their shared body, each consciousness perceives time through a collapsed, disjointed lens. The convenience-driven "severance" procedure echoes AI's promises to ease labor and increase efficiency, and both structures inherently dehumanize through distortions of time and process.

This interdisciplinary study investigates how socioeconomic trends motivating the growing presence of AI entangle human experiences and understandings of labor and time. *Severance* speculates on the possible endgames of such experiments, narrativizing the horror and absurdity of technofascism under late stage capitalism. Severing process comes with a cost, complicating durational temporalities through increasing enmeshment of man and machine.

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**PANEL: Cosmological Superpositions of the Obscure and Manifest: Representations of Space-Time Entanglements in Premodern Japanese Written Sources (Simone Müller, Léo Messerschmid, Carina Roth, Berfu Sengün, Daniel Schley)**

Written sources attest that time is indelibly tied to space in premodern Japanese thought, whether through experiences on pilgrimage, ritual order, cosmological layering, transmission of beliefs, transition to the afterlife, or the recording of accidental events. What unites these disparate themes, each addressed by a paper in this panel, is that they revolve around an underlying entanglement and dynamic interplay between the manifest, quotidian realm and what was considered obscure or beyond direct perception, implicitly invoking the totality of the envisioned cosmos. This fundamental entanglement is inherently temporal, in that it is representative of several epochs, encompasses multiple temporal scales, and reflects processes of temporalization: It positions humans, bound by linear time, within a cosmos of entangled space-times characterized overall by cyclicity through natural rhythms, transmigration, and periods of renewal and destruction, yet containing linear temporal trajectories. In mediating between the obscure and manifest, and through repetition, ritual served to enact this understanding of the cosmos, converting cosmic beliefs into facts about this realm, and to uphold and renew its order, thereby generating entanglement. Ritual not only reinforced personal beliefs, but by creating a privileged space-time, it also enabled practitioners to engage in cosmic schemes and higher spatiotemporal orders and progress along the path towards Buddhist salvation.

Focusing on diaries, court manuals, fictional and didactic tales, and religious and historical texts, while positing a spatiotemporal framework, this panel explores various forms of entanglement predominantly shaped by time through the lens of cosmology and ritual. Spanning the eleventh to seventeenth centuries, a time of political unrest, these diverse sources reflect permutations of a shared overarching cosmology, itself suffused with a blend of intricately intertwined belief systems. Presenter 1 examines an eleventh-century court lady's memoir, which is replete with spatiotemporal entanglements, namely visits to pilgrimage sites that inspire memories and dreams, interweaving fantasy and reality. Presenter 2 focuses on court rituals that drew on continental cosmology and served to underscore the mediating role of the emperor, who, in following a minute protocol, realigned the cosmos, thereby regulating time and space. While elaborating on the coordination of multiple temporalities and spatial dimensions within and across medieval tales, Presenter 3 elucidates how these tales temporalized human existence by analysing entanglements of time and cosmological order. Presenter 4 explores how medieval Buddhist tales describe entanglements of the spatiotemporal traits of India, China, and Japan, with the overall cosmological order imagined by Buddhist doctrine. Presenter 5 investigates the intricate temporal entanglements in the representations of death both as a moment in life and as a specific period of afterlife described in the cosmology of medieval Shūgendō texts. Presenter 6 examines spatiotemporal traces of contingency, visible only indirectly in descriptions of past events, in a historical text whose perspective focuses predominantly on the Buddhist cosmic order that sees accidental events as part of a necessary course.

In this way, the papers shed light on the multifaceted and superimposed layers of entanglement in premodern Japan from different angles, and particularly entanglements between time and cosmology, ritual, belief systems, personal and collective history, narrative, and written documentation.

### **Obscure Encounters and Heartbreaking Departures: A Chronotopic Analysis of the *Sarashina Diary's* Pilgrimages (Berfu Sengūn)**

In travel diaries, spatial representation is inherently bound to time and movement, yet its function within the narrative shifts according to the focus of each work. Pilgrimages in these diaries create entanglements in time and space, intertwining the physical act of traveling and temple visits with memories, dream visions, and spiritual experiences. The journey, therefore, becomes both a temporal progression and a spatial expression that connects the manifest and the obscure. Taking pilgrimage as a ritual site, this study explores spatiotemporal dynamics of narrative worldbuilding in diary literature (*nikki bungaku*) through Mikhail Bakhtin's theory of the literary chronotope. Building on this perspective, this paper particularly focuses on the chronotope of encounter by examining the functions of temples and dreams in the *Sarashina Diary* (*Sarashina nikki*), a memoir written in the early eleventh century by the daughter of Sugawara no Takasue (also known as Lady Sarashina).

The *Sarashina Diary* is notable for its introspective tone and its depiction of the author's journey through the lens of literary passions—including infatuation with Ukifune, the ill-fated heroine of the classic Japanese court novel *The Tale of Genji*—along with religious reflection and the passage of time. The narrative explores the impermanence of worldly life and Buddhist salvation through Japanese cosmological worldviews, with the author's dreams woven into the story. The *Sarashina Diary* represents a Heian woman's emotional and spiritual journey in negotiating the boundaries between fantasy and reality, illuminating the conceptualization and experience of time and space. Written in Lady Sarashina's later years through retrospective memory construction, which is dyed with regrets and pain, this memoir exhibits intricate entangled temporalities that cover the events of her life from the age of thirteen to her mid-fifties and records her travels and pilgrimages.

### **Spatiotemporal Entanglements at the Medieval Japanese Court: Cosmological and Ordering Principles in the New Year Ritual “Obeisances to the Four Directions” (Simone Müller)**

The court of medieval Japan was characterized by a system of highly refined rituals and etiquette displaying various forms of spatiotemporal entanglements. Annual ceremonies, so-called *nenjū gyōji*, intricately incorporated cosmological ideas informed by both continental and native principles, including the Five Phases (*wuxing*), natural rhythms, pollution, taboos, as well as ancestor worship. Court procedures also exhibit temporal and spatial entanglements in terms of order, duration, frequency, tempo, as well as visual and acoustic synchronization. Furthermore, court rituals demonstrate intricate spatiotemporal hierarchies based on the age, rank, and gender of the participants involved. This complex system of cosmological and spatiotemporal interlocking is prototypically evident in the New Year's ceremony “Obeisances to the Four Directions” (*shihōhai*), a rite dedicated to the welfare of the imperial house that is still performed today. Introduced from Tang China, it involved a minute sequence of movements, gestures, and sermons aimed at readjusting the cosmos to allow for a prosperous new beginning by praying for a good harvest, relief from natural disasters, the longevity of the imperial throne, and peace for the coming year. This goal was believed to be achieved by paying reverence to the emperor's ancestors and his cosmic representative, the Supernal Lord residing in the North Pole, and by appeasing the spirits of the four quarters, thus maintaining harmony between the

world of the gods and the world of men, which were believed to be intricately connected. The rite thus exhibits a fascinating system of actions in time and space by combining principles of Daoist, Buddhist, and native thought, symbolically merging the realm of the obscure with that of the manifest.

In this paper, I will outline the parameters of cosmological and spatiotemporal entanglements in Japanese court ceremonial. Using the Obeisances to the Four Directions as an example, I will demonstrate how cosmology and space-time principles are closely intertwined, fulfilling ordering functions and cementing the emperor's authority against the backdrop of a time that was viewed as uncertain and unpredictable.

### **The Spatiotemporal Traits of the “Three Lands” (*sangoku*) and their Cosmological Entanglements: Tales from the *Konjaku monogatari*shū (Léo Messerschmid)**

Japanese Buddhists saw themselves as the end point of a line of tradition that had begun far away with the birth of the Buddha Śākyamuni at the westernmost point of the then imagined world, in Tenjiku (an imagined topos that is only roughly identical with India). The imagined spatiotemporal traits of Tenjiku were perceived to be deeply entangled with the cosmological framework of Buddhism, because the advent of a Buddha was not seen as something accidental, but as highly auspicious and determined by cosmic cyclical order. The historical beginning of Buddhism was accordingly perceived to be a particularly privileged point in time and space, during which unawakened beings had the best opportunity to break the cycle of death and rebirth by encountering the Buddha and thus to transcend time itself. The presumption of a deep entanglement between spatiotemporal conditions and the cosmological order also played an important part in the way Buddhists in medieval Japan understood their own position within the Buddhist world, which they imagined as being inferior to that of India during the age of the Buddha and as characterised by the decline of the Buddhist teaching (*mappō*). In my presentation, I will look at two examples of how the *Konjaku monogatari*shū, a medieval collection of “explanatory tales” (*setsuwa*), describes the process of the transmission of the Buddhist doctrine from India into new places with different spatiotemporal properties. While these properties were subject to historical change, their entanglement with the Buddhist teaching and its presupposed cosmological order was imagined to be unchanging, thus allowing the practitioners to see themselves as part of one salvific movement unfolding itself through time and space. One aim of the presentation is to analyse descriptions of the critical moments of the acceptance of Buddhism in China and Japan and the narrative strategies used to stress the continuity between the different spatiotemporal conditions rather than their disparity.

### **Layers of Afterlife: Death as an Instant in Time, Death as a Period in Time (Carina Roth)**

Time is commonly perceived as an inexorable movement, either linear or cyclical. It also marks instants that single out significant events. Death straddles both categories. Medieval Japan is replete with representations that exemplify death as an instant and death as a period in time. Datsueba is an old woman who undresses the deceased before sending them into the afterlife. Buddha Amida descends to the deathbed of his followers and takes them to his Western paradise. Conversely, in the Buddhist perspective of reincarnation, death is a suspended moment before entering another destiny, unless a practitioner manages to break the cycle and “become a buddha in this body” (*sokushin jōbutsu*). These

temporal nodes have spatial correlates. Datsueba is seated under a tree on the shore of a river that the deceased cross before reaching her. Amida resides in the Western Pure land, and all other Buddhas have their own dwelling from which they interact with sentient beings.

The spatiotemporal entanglements thus generated are reinforced by an underlying logic of intertwinement between local and universal religious figures that permeates Buddhist cosmology. In Japan, the expression “original grounds and manifested traces” (*honji suijaku*) describes a mechanism in which Buddhist deities (original grounds) are deemed to take local forms (manifested traces) to better address local needs. To illustrate how images of the afterlife reflect such entanglements, this presentation will center on excerpts of documents pertaining to the Shugendō tradition, a religious movement centering on ascetic practices that took form at the end of the thirteenth century. Because Shugendō draws upon elements of different religious movements and because its ultimate objective is to find Buddhist liberation within this life, its texts provide an ideal background to reflect upon combinatory images of the afterlife.

### **Traces of Historical Contingency in the *Fusō ryakki* (Daniel Schley)**

This paper examines historical contingency as an example of spatio-temporal entanglements: the accidental encounters between events and people at one specific time and place. Contingency was usually invisible in premodern historical accounts. It is a name for the incommensurable, which was interpreted, for instance, as luck and sorrow or religiously described as fate or divine providence. In Buddhist-inspired historiography, chance or hazard was difficult to reconcile with the belief in history as a series of events causally linked in accordance with the Buddhist law of karma. Contingency was thus dissolved within a cosmological metastructure. But contingency lies at the very root of historical writing insofar as historians have to place otherwise unrelated events in time and space into the spatio-temporal framework of a meaningful story. These *histories* were more or less narratively elaborated, but common to them was the underlying praxis of turning the past into history by building necessary connections between past events and people in relation to the present.

In my paper, I seek to investigate traces of contingency in twelfth-century Japanese historical perceptions with the *Fusō ryakki* 扶桑略記 (Short History of the Eastern Country) as my case study. Written at the turn of the twelfth century during socio-politically changing times, the work depicts the events from the first mythical ruler Jinmu up to 1094 and temporally connects events in Japan with occurrences in India, China, and the Korean peninsula. Noteworthy is its use of different chronologies according to place. Apart from references to Japanese and Chinese dynastical time reckoning, the *Fusō ryakki* refers to the *parinirvana* as an additional historical zero point. I will explore how these different chronologies and references to distant realms informed the historical perspective and how the entanglement of time and space is visible through events between contingency and necessity within a Buddhist cosmological order.

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## **Attracted by and Through Entanglement (Rosemary Mountain)**

Various manifestations of “entanglement” form key features in my own art, research, and life - leading me to speculate that an attraction for entangled states might form part of my own - and perhaps others’ - aesthetic preferences. I explain the different manifestations and comment on the aptness of the term ‘entanglement’ to describe each.

The first example is a more poetic representation of entanglement in musical works which portray apparently diverse and often unconnected temporalities in what may be created by processes leading to asynchronous lines, or can be considered ‘constructed illusions’ created by the composer to present layers with only brief or non-existent alignment. My fascination with this type of musical structure led me into extensive analyses and also creative works of my own.

A somewhat similar phenomenon can be seen in a subsequent research project designed to test out differing perception strategies and employed terminologies in visual and sonic fields, whereby participants are encouraged to make pairings of semi-random visual and audio fragments. In this case, the frequent collision of temporalities contributes to the impact of the results and the diverse reactions they provoke - not only in the specific paces of the media clips but also in their implied temporal feel, from 18th-century courts to urban chaos or gentle landscapes.

A quite different, and I think more accurately entitled, ‘entanglement’ is also present in this research project through the emergence of distinct research nodes in different countries, where colleagues developed the central platform independently to explore their preferred facets of the project. Now that the project is being revived and expanded, we are more consciously working to ensure an optimal level of inter-nodal communication without impeding independent growth.

A more subtle layer of entanglement has permeated the past few decades of my life by constant contact with my partner’s work in the imagining of ancient worlds - and how to portray them - through exploration of mythology, archaeology, and cultural studies; this has provoked an almost daily mental ‘migration’ between Bronze and Iron Age and current times.

The most pervasive, if subtle, form of entanglement, is that which existed between my partner’s and my own individual art & research explorations, which began as simply coexisting, but became increasingly co-referential, though not always in a linear manner; the same themes would crop up in very different manifestations, often years apart.

The talk will contain some media examples as illustrations where relevant.

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## **Percolating Time and Hydroelectric Entanglement (Kieran Murphy)**

Time, for Michel Serres, does not simply flow. It percolates. Serres conceptualizes time through fluid dynamics grounded in scientific and everyday observations. Water flows, stagnates, seeps, evaporates, crystallizes, and returns. By watching water meander across landscapes and circulate through the hydrological cycle, we can grasp time as a turbulent entanglement of states and trajectories.

In this paper, I examine how hydroelectric landscapes shape the percolation model of time. These landscapes range from thunderstorms to hydroelectric dams and provide a material ground for exploring how time circulates among cyclical, entropic, and negentropic rhythms and crosses thresholds of reorganization. For example, lightning signals the shift from cloud to rain and supplies a classic figure for sudden transition in other systems.

To show how this model works in a historical narrative, I turn to Namwali Serpell's acclaimed novel *The Old Drift* (2019). The percolation model reframes history as a turbulent field where human and nonhuman temporalities converge. Serpell's novel retells the history of Zambia by centering on a hydroelectric landscape transformed by the construction of the Kariba Dam. The dam functions as a temporal interface where seasonal water, electrical demand, politics, and ancestral memory meet. The novel features a chorus of mosquitoes whose commentaries on real and imagined historical events make temporal entanglement and reorganization legible. The result is a narrative of timefulness that challenges linear progress and keeps human and more-than-human rhythms in view.

I conclude with a discussion of how Serres's and J. T. Fraser's models of time converge on thresholds. Fraser models time as an open, hierarchically nested system whose interfaces permit passage from one level of organization to the next. Serres describes a porous field where thresholds arise within percolating flows. Hydroelectric landscapes let us test both views and grasp how thresholds couple and reorganize temporal orders.

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### **Ovid, Joyce, and the Entanglement of Time (Stephanie Nelson)**

Along with the *Odyssey*, James Joyce's *Ulysses* has reference to many other works, not least Ovid's *Metamorphoses*, a poem that shares Joyce's interest in reshaping its predecessors. And while *Ulysses* famously treats just one Dublin day, while the *Metamorphoses* moves from the beginning of time to the contemporary (*Met* 1.3-4), the two nonetheless portray a similar temporal entanglement, with *Ulysses'* single day continually subsuming other times and the *Metamorphoses'* world-history remaining deeply, even parodically, embedded in Ovid's present.

Two episodes in particular make this point in *Ulysses*. In "Cyclops" Leopold Bloom's meeting with his personal Polyphemus (the Homeric name, incidentally, meaning "of many voices") is punctuated by paragraphs that suddenly view the scene through a medieval, or biblical, or romance lens, to pick only a few. Not to be outdone, "Oxen of the Sun" relates the coming together of Bloom and Stephen in a maternity hospital through a series of parodies that trace the development of English from Anglo-Saxon to modern slang. In both cases the novel's ostensible "now" is shown to be inextricably entangled with the past of both language and event.

Ovid takes an opposite approach. His account of the Flood, for example, is, ostensibly, clarified through references to contemporary Rome. Similarly, his presumably timeless myths include a continual meta-reference to other authors. The apparently distant "then" of both myth and history thus prove to be completely entangled with the present.

This paper will argue that both of these opposite approaches view the entanglement of past and present not as a development, but rather as revealing the impossibility of holding both within a single frame of

vision. Like the famed bunny-duck illustration, or the silhouettes / vase, or many works by M C Escher, we see one side or the other – but not both. In fact, to view one is precisely also to obliterate the other – a form of entanglement that is inherently irrational, and so requires the medium of literature.

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### **Entangled Ecosystems, Species Extinction, and the Intertwining Narrative of *The Great Silence* (Jo Parker)**

I focus on *The Great Silence* (2014), a collaboration among performance artists Jennifer Allora and Guillermo Calzadilla and speculative-fiction writer Ted Chiang. Their 16-minute video installation braids together footage of the Arecibo Telescope at work, footage of the highly endangered Puerto Rican parrots, and subtitles (supposed “translations” of the parrot narrator’s parrot language) that tell a tale of impending extinction. My presentation will include a brief history of the Arecibo Telescope and its 57-year effort to find signs of extraterrestrial life in the cosmos before its stunning collapse onto the rainforest floor in December 2022; a brief discussion of the environmental factors that led to the parrots’ near extinction; and a detailed analysis of the braided narrative structure of *The Great Silence*. Throughout, I will be exploring what David Wood in *Re-Occupy Earth* calls “the strange temporalities of environmentalism,” whereby “the present is overlaid by past and future”—for example, the message to the stars that the now-defunct Arecibo sent in 1974 and that, if returned, may transmit to a planet bereft both of humanity and of the parrots whose probable demise humanity has hastened. Ultimately, I argue that the film enacts the ongoing destructive entanglement of rainforest fauna and human enterprise, wherein our futuristic aspirations clash with the realities of the catastrophic climate change that has already been set in motion on our planet. It thus illuminates the hubristic human anthropocentrism that has enabled such destruction. I will conclude by discussing what Wood calls an “enlightened anthropocentrism” that might help us “shape a sustainable future in a more than human world.”

The presentation will include film clips from *The Great Silence*, footage showing the collapse of the Arecibo Telescope, and clips of the gray parrot Alex, famed for its cognitive abilities.

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### **The Interactive Performance of O —: Reimagining Time through Light, Sound, and Chinese Cosmology (Hanyu Qu)**

"O —" is an interactive performance that explores cyclical and linear conceptions of time through light and sound, drawing on ancient Chinese philosophies of time and music. Once central to daily life and cultural rhythms, these cosmological traditions have been overshadowed by globalized, industrial time frameworks. The performance seeks to stage an entangled experience where traditional and modern temporalities intersect.

The performance relies on custom interactive musical devices: two boards and nine boxes. The boards represent time, with different configurations of LEDs (circular vs. linear). The nine tangible boxes represent the numbers from 1 to 9, derived from *Luo Shu* (洛书), and are each equipped with light sensors and ESP32 Mini boards, which sense the light from the boards and trigger different sound samples. The work is grounded in Neo-Confucian philosophy and cosmology, integrating elements of Daoism and Buddhism. In particular, O — draws on the *Luo Shu* (洛书), the *Yin-Yang* (阴阳), and the *I Ching* (易经). The *Luo Shu* is directly applied to the design of the devices used in the performance, while the latter two concepts provide an overall framework for the performative exploration of time. The nine boxes themselves do not showcase circular time; rather, it is through the interaction between the boxes and the boards during the performance that the concepts of time are manifested.

By merging ancient cosmology with contemporary art, O — reframes time as culturally entangled—shaped by globalization, cultural imperialism, and the adoption of modern temporal aesthetics in Chinese music and sound. Is it linear, cyclical, or a complex web of intersecting paths shaped by history and power? The work challenges the audience to reflect on the values that underpin our shared existence.

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### **On Chrono War Wristwatches and the Entanglements of Military Time Regimes in World War I (Frank Reichherzer)**

During the First World War, the wristwatch became enmeshed in complex entanglements of technology, power, and temporality. What had once been a decorative or civilian ‘womanly’ accessory was transformed into an indispensable tool for coordination amid the unprecedented scale of industrialized warfare. Soldiers relied on wristwatches to orient themselves in the temporal chaos of battle and dull of military service alike, while the device itself came to embody modernity, masculinity, discipline, and control. The wristwatch was more than a time telling instrument: It was a producer of complex temporal entanglements and cultural symbol.

The omnipresence of wristwatches from rank and files to generals was closely tied to the construction of a “military time regime.” This regime was not simply a technical effort to synchronize watches but a deeply political and cultural project. Military feasibility seemed to hinge on precision timing: barrages, advances, and supply lines all required synchronicities. The battlefield was thus temporalized, structured by an abstract, clock-based rationality that extended military power into the smallest units of daily life. Through the wristwatch, individual bodies were drawn into alignment with the machinery of war, embodying the entanglement of personal and institutional time.

Yet the promise of absolute temporal mastery was undermined. Soldiers also contested the regime, experiencing tensions between imposed schedules and their own bodily rhythms and subjective perceptions of duration. Long stretches of waiting, boredom punctuated by sudden forms of extreme violence, and the constant anticipation of ambiguous orders and plans all produced experiences of time that escaped rational control. My paper explores these entanglements of wristwatches, temporal regimes, and military power. The story of the wristwatch highlights how war was structured through

new regimes of time—and how individuals navigated, appropriated, or resisted them in the struggle over temporal control.

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### **What time do we have? An attempt to re-entangle inner and outer time (Lanei Rodemeyer)**

In theory, time splinters into two main perspectives, internal (inner) and external (outer) time. Inner time (or sometimes “temporality”) is associated with consciousness and personal experience. Outer time, on the other hand, is understood as an objective aspect of the universe. These two perspectives have been distinguished by philosophers and scientists alike: The former is often referred to as “subjective time,” “inner time-consciousness,” “psychological time,” or “embodied temporality,” whereas the latter is “objective -,” “empirical -,” or “clock time”—to name a few terms. These two aspects of time appear incommensurable, with philosophers usually bracketing one in favor of the other, or the sciences often dismissing temporal experience as “merely subjective” or “psychological.” Very few scholars have attempted successfully to reintegrate these approaches to time, one notable exception being J.T. Fraser. But even Fraser’s “nested hierarchies” of time are generally treated as distinct, even if they evolve out of one another.

Is it at all possible to bring these two aspects of time together? And if so, how? Using phenomenology, and specifically Husserl’s *Ideas II*, as a clue, this presentation attempts to “re-entangle” subjective with objective time. In this text, the body is the “turning point” between sensory internal experience and material reality. As such, it functions as a medium for connecting subjective and objective time. Beginning with a brief overview of how the sensory body is interconnected with the objective body, I then consider how a similar move is possible with regard to inner time-consciousness and empirical time. In doing so, I propose possible insights that phenomenological analyses might contribute to the sciences and hierarchical temporalities such as Fraser’s—and vice versa.

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### **The time of love: an ethnographic exploration of rhythms of intimate relationships at midlife (Rahil Roodasz)**

Based on ethnographic fieldwork in Amsterdam in 2025-2026, this paper provides a twofold analysis: 1) of time as a tool for exploring romantic entanglements in long-term intimate relationships, and 2) of how romantic entanglements shape (experiences of) time through daily and life course rhythms. It focuses on midlife (age 35-60) as a social category of time that for some induces awareness of the passing of time, experiences of decay, multiple work and care responsibilities and reflection on life choices. At the same time, the universality of ‘midlife’ is troubled by using a multimodal methodological approach, including interviews, photography, go-alongs and audio diaries, articulating wide-ranging intimate experiences of middle-aged people with different cultural, socioeconomic, gender, sexual and religious orientations. The paper considers rhythm as a lens to think time and entanglement together by including co-existing, conflicting, and resonating flows of intimate, care,

work and leisure time. This enables a better understanding of how the social imprints its rhythms on everyday life and how different temporal imperatives (“getting the most out of life”, “biological clock”, “quality time”, “empty time”) shape and are resisted in everyday practices of enduring midlife love. Additionally, rhythm allows for an embodied, sensorial understanding of time and entanglement, while taking account of power relations within and outside intimate relationships at midlife.

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### **Time as Entanglement: Temporal Practices and Standardization in the German Empire (Caroline Rothauge)**

Sociologist Norbert Elias highlighted that ‘time’ is essentially a relational category, as our perception of temporal order arises from the way different sequences of events are compared and connected to each other. Building on this insight, my paper – rooted primarily in historical analysis – asks how entanglement can function as an analytical tool for examining concepts and forms of dealing with ‘time’.

First, I demonstrate why debates among technical experts and scientists about the need to standardize the many local times in use were fueled by the late 19<sup>th</sup> century. One main reason for this was the increasingly transregional and transnational interconnections in Western industrial societies, driven by media-technological innovations such as the steam engine and telegraphy.

Second, I focus on the case of the German Empire, where “Central European Time” was designated as the official time – partially in 1892 and Empire-wide in 1893 – and, beginning in the spring of 1916, daylight saving time was implemented three years in a row. However, this did not necessarily mean that contemporaries were able or willing to adapt to these new official time regulations. Their non-compliance was often rooted in traditional habits, structural constraints, and prevailing notions of social life or individual conduct. Whether working hours, school schedules, transportation services, store opening hours, church services, meal times, family routines, leisure time, or personal temporal experiences: changing the “timing” (Elias 1984: p. 8) in one case or introducing a new ‘time’ inevitably affected other temporal concepts or arrangements, because they were mutually interconnected – which, in turn, required adaptations and readjustments.

Thus, this paper traces specific cases of entanglement to show that ‘time’ is not a fixed entity but a product of dynamic, context-dependent negotiations and conventions, which are subject to historical change.

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### **About my Time Machines (Florian Schlumpf)**

Time fascinates me in its sensual dimension.

My objects move, pendulums swing, gears turn. We can best grasp time with the help of “movement,” whether it be through a change of location or the movement of a hand on a clock. My objects attempt to distinguish themselves from “time measuring devices.” I leave the measurement of supposedly

uniformly flowing time to the many talented watchmakers who have been doing this with great perfection for hundreds of years.

What fascinates me about time is precisely its unevenness. Waiting a minute at a red light seems like an eternity. If I have a minute to catch a train while running to the platform, a minute seems to be a duration of a few seconds. This allows me to put ideas of time in relation to each other. In my machine called “Eternity”, I have a fast-running wheel that drives a final wheel in the series via a few reduction gears, which turns exactly once in 10,000 years -> an interval of time that is almost unimaginable for us thus becomes more tangible.

If I also recall that scientists of our time are seriously planning the safe storage of radioactive waste for 1 million years, which is 100 times my 10,000-year clock, I suddenly gain insights into the relationships between concepts of time that would otherwise remain largely abstract. When I watch a film, the speed at which the film runs dictates my perception of time.

When I build an object that only becomes accessible through my movement, it is I who defines time. The present suddenly takes on a dimension that can be arbitrarily determined. I am currently building a machine that continuously slows down movement. We immediately associate this with “time passing more slowly.” But if I build a matching dial, the interval of fast movement is a small distance of the hand, and that of slow movement is a short one. We intuitively pause for a moment to classify this apparent contradiction.

Actually, my objects want to speak without words.

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### **Re-enactments of the Past: Temporal Entanglements in a Pregnancy Ritual at Umi Hachiman-gū Shrine (Sarah Rebecca Schmid)**

Umi Hachiman-gū, a Shintō shrine located in Fukuoka (Japan), is a popular destination for those who are or want to become pregnant. The shrine offers services that are intended to ensure a safe pregnancy and delivery. The most popular ritual is the so-called *koyasu no ishi*, or “Stones of safe delivery” ritual. These stones, each bearing the name and date of a previously born baby, can be found in an enclosure on the shrine premises. Pregnant women are encouraged to select one of the stones and take it home with them. Upon safe delivery, the stone is to be returned together with a new stone, inscribed with the name and date of birth of the newborn. In other words, once added, stone can be temporarily removed from the pile to be used as an amulet by someone else, but it must eventually be returned. Each pregnancy is therefore protected by the stone from an earlier successful pregnancy and in turn has the potential to protect a future pregnancy. This creates a complex, interwoven bond between the many pregnant women that have visited the shrine over the years.

However, the ritual also re-enacts a story from Japanese mythology in which Empress Jingū used a stone to prevent the premature birth of her son while she was leading a military campaign. Consequently, the ritual involves a complex interplay of time, invoking the past twice and superimposing these two layers onto the present in order to generate a positive outcome for each birth.

This presentation examines the history of the ritual in more detail, as well as the belief that re-enacting the past can have a favourable influence on future events.

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### **Microbial Ways of Telling Time: Microbial Mats as Entanglements of Bio- and Geo-Times (Astrid Schrader)**

The Anthropocene is often framed as a clash between human historical time and planetary geological time. Efforts to reconcile these scales rework historical time as stratigraphy, rethink geological temporalities, or explore human affect in relation to deep time. This paper instead asks what can be learned from how marine microbes “tell” time.

Drawing on Margulis and Sagan’s notion of life as a “sentient symphony,” I examine how microbial communities are constituted through entangled temporal rhythms. Earth’s cycles provide a metronome for circadian, tidal, and seasonal processes that organise microbial life. Focusing on intertidal microbial mats, I argue that these systems—among the oldest ecosystems on Earth—literalize the metaphor of a “sentient symphony.” By tracing how microbial mats are made legible as records of environmental change, I show how they embody alternative modes of “telling time” beyond anthropocentric frameworks.

Coastal microbial mats are sunlight-driven consortia that stabilise sediments and protect coastlines. Diverse microbial groups intra-act through the cycling of carbon, nitrogen, and sulphur, forming tightly coupled ecosystems. Cyanobacteria, as primary producers, impose daily rhythms on surrounding microbes through cyclical metabolic outputs, coordinating collective activity.

Microbial mats also link present ecologies to deep evolutionary pasts. Analogous to stromatolites and microbial induced sedimentary structures (MISS), they generate and preserve traces of microbe–environment interactions across billions of years. Extending Helmreich’s notion of “time slips,” I argue that they function as spectral beings: living archives of environmental change that embody a superposition of multiple times.

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### **First Ladies and Their "Entangled Histories" over Land: A Timeline (Katherine Sibley, Nancy Beck Young)**

As historians, our presentation will highlight a “mesh of intertwined trajectories” around the relationship of Americans with land over three timespans: the era of slavery in the United States (18th-19th century); the era of outdoor conservation (1910s-1930s); and the era of the environmental movement (1960s and after). We explore a particular group of women, U.S. first ladies, whose power derived from their husbands’ roles as presidents, to underline this entanglement. Presidential spouses signify and embody national values and their relationship with the land consistently shaped American history, for good or ill. In the early national period, most American first ladies were slaveholders.

Their relationship with the land helped preserve a system of human bondage that has imprinted American history ever since; women like Martha Washington, Dolley Madison, Julia Tyler, and Julia Grant all enslaved others, benefited from this oppressive system, and regularly outright promoted it.

During the Progressive Era and New Deal, 1900s-1930s, we see first ladies' entanglement with the land shift to celebrate nature or promote national causes, rather than as a tool for exploitation. Helen Taft planted cherry blossoms throughout Washington; Edith Wilson used the White House as a sheep pasture during World War I; Florence Harding cultivated masses of flowers and opened the White House grounds; Lou Hoover promoted others' activities in nature, including the Girl Scouts. But perhaps no first lady better exemplifies the love of the land than Lady Bird Johnson, with her environmentalism in the 1960s. She advocated highway beautification and promoted urban parks in poor areas in Washington, as well as national parks, although not without facing fierce resistance. Later first ladies, like Laura Bush and Michelle Obama, were also advocates of conservation as well as promoting land use that lent itself to small-scale kitchen gardens and the healthier foods that could result, efforts which also generated entanglement in controversy.

This shifting entanglement of first ladies with land is key for understanding significant historic change; early first ladies saw the land as a means for their enrichment and comfort, enslaving others to uphold this privilege, while more recent occupants of the post saw the land as itself a tool of liberation for others, even as they could not avoid the entangled histories and intertwined trajectories which pushed back against their emancipatory goals.

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### **Schoenberg and Stravinsky: A timely Entanglement (Helen Sills)**

Arnold Schoenberg and Igor Stravinsky first met in 1912, at the time of composing their two most radical and influential musical works: *Pierrot Lunaire* and *The Rite of Spring*. For several years, both composers had been concerned with the issue of time in music, but from quite different perspectives. Stravinsky, nurtured in the contemporary renaissance of Russian Orthodox chant and folk song, was speculating in sound and time as an expression of his Christian spirituality, while Schoenberg, a Jew influenced by Expressionism, was exploring the fluid temporalities of deep emotions. For a while, relations between the two men were cordial.

In the 1920s this friendship rapidly deteriorated. Stravinsky explored ideas from Cubism and Neo-Thomism in *Symphonies of Wind Instruments* (1920) to construct autonomous temporal forms to touch the spirit. Schoenberg turned from Expressionism to announce his own 12-tone pitch system and to compose his first totally-serial piece, the *Suite for Piano* (1921-23). Inevitably, the polarisation in style and method between Stravinsky and Schoenberg and their respective followers became the subject of much public criticism and debate.

Shortly after the death of Schoenberg in July 1951, Stravinsky attended Robert Craft's rehearsal of Schoenberg's *Septet Suite* op. 29 and realised that Schoenberg's 12 tone system, if amalgamated with his own compositional style, could develop into the solution to his loss of artistic direction. This paper, with musical examples, points to his use of serialism to heighten contrasts of temporality and to strengthen the time-creating relationships between differentiated layers of movement. This timely

entanglement with Schoenberg's innovative organisation of pitch resulted in the glorious, late flowering of his work. Thus the life-long quests of both Stravinsky and Schoenberg to compose music in praise of the divine was finally achieved by the combining of their respective visions for the evolution of music.

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### **Synchronizing Toxic Temporalities: Environmental Remediation in Post-Mining Germany (Cassiopea Staudacher)**

The so-called Wismut-Region in the former GDR in Germany used to be the world's fourthlargest uranium provider and has now been transformed into Europe's largest environmental remediation project. It serves as an ideal analytical entry point for examining multi-scale and conflicting material temporalities of the Anthropocene, which must be coordinated for meaningful collective action. Such collective action addresses the material questions of enduring burdens from radioactive waste and environmental destruction, as well as questions about how we can collectively and democratically deal with nuclear cultural heritage and create sustainable futures together.

This paper introduces an empirically grounded theorization of the synchronization of multiple entangled temporalities. Synchronization is often understood as a temporal process of alignment. Since plurality exists before alignment occurs, synchronization becomes a way to manage multiple temporalities—their rhythms, speeds, and durations. While simultaneity implies autonomous parallelism of temporal processes within a common timeline, synchronization allows for more active management. From this perspective, synchronizations are matters of perspective that produce temporal frames of reference, managing and creating coordinates. They render certain changes visible while obscuring others, thus becoming powerful social tools with "political and ethical dimensions" in that they form "the choices communities make about the way they will tell time and thus who or what they will choose to keep time with" (Bastian 2012:25).

Understanding Wismut as a landscape where long-term environmental hazards meet the political timescales of post-Soviet transformation and struggles over appropriate ways to deal with these toxic legacies will be conceptualized through temporal desynchronization, by examining the actual practices of memory work, environmental repair, and struggles over discourses of risk visibility.

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### **What does it mean when a photograph is made, but never seen? (John Steck Jr.)**

In the summer of 2013, I photographed bodies of water in Iceland, aiming to create a poetic contrast between vast seascapes and smaller lakes. While welcoming the possibility of adventure, project diversion, and chance, I did not expect to learn about the loss of my mother on my third morning there. Rather than going home for her funeral, I mourned her death within the Icelandic landscape. At this time, I made 287 photographs on 4x5-inch sheet film, which to this day, I have yet to have developed. Throughout the past twelve years, these latent images have posed both personal and temporal

entanglement, as I am terrified at what I might see if I were to develop these photographs. Would the concept of place memory come to life, absorbing me back into the landscape, or would it revive the headspace of a distant traumatic event?

The latent images are intertwined within three timelines: past, present, and future. Regarding the past, they are a timestamp, specific to a traumatic event within a specific landscape. In the present, they are invisible images that withhold evidence. They are sheets of silver-hailed crystals which remain sensitive to light, protected in old Kodak film boxes. Conversely, the future holds the promise of the reveal. The potential to have their chemical properties altered and become fully formed images. To be proof. Seen. My presentation will compare these entangled timelines while discussing the original project on bodies of water, the mourning process, and the personal and economic reasons for not developing the film. I will survey other works created while in Iceland, while highlighting works, texts, and concepts from other artists and scholars who consider the temporal nature of images through a medium that claims to freeze time.

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### **Entangling Chronologies: Cosmos, Myth, and Time in Early Modern Japan (Raji Steineck)**

Early modern Japan (roughly 1600-1850) was a crossroads of scientific information. Scholars showed a keen interest in exploring the Japanese environment and in integrating their findings with new knowledge transmitted from the East Asian continent and Europe. This required a re-thinking of established paradigms in areas as varied as cosmology, botany, medicine, and historiography. Part of the challenge was to understand and translate European modes of time reckoning. Heliocentric cosmography equally posed a challenge to established patterns of thought, especially on the side of Neo-Confucian scholars, who operated from the fundamental conviction that human society was governed by the same patterns of order as the cosmos. Still, few scholars saw the need to completely relinquish all traditional concepts, although they were willing to select, adapt and modify them to accommodate new information in different and often conflicting ways. Motoori Norinaga, for example, the foremost exponent of «National Learning», accepted the heliocentric model while fusing it with ancient imperial mythology. Yamagata Bantō of the merchant academy *Kaitokudō* criticized Norinaga—and ancient mythology—as unfounded, presenting a model of plural planetary systems in support of a feudalistic political vision. Satō Nobuhiro in his comparative survey of cosmographies saw imperial mythology as a necessary complement to physical cosmography: without it, he argued, the description of the universe would be like the description of all parts of a clock (well executed by European science) without an identification of its purpose (the prerogative of Japanese scholarship). Each of these positions thus wove different threads of early modern Japanese and European science and historiography into its fabric, foreshadowing different trajectories for modern Japan and its increasingly globalized environment.

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## **Chronostrategy of Operative Imperialism. Time-related bias in history of thought related to cultural imperialism and coloniality (Tomoe I.M. Steineck)**

This paper explores the ideological entanglements between modernity, civility, and cultural imperialism through the lens of *chronostrategy*—a term I use to describe the strategic deployment of temporal frameworks to assert cultural dominance. Rather than a neutral or universal measure, time operates as a tool of differentiation and hierarchy, positioning societies on a constructed continuum of progress. Within this chronostrategic logic, Western modernity emerges as both the telos and judge of historical development, framing non-Western cultures as static, backward, or outside history altogether.

A focal point of analysis is the early modern encounter between Europe and the Sino-cultural sphere. Using Gottfried Leibniz’s engagement with Chinese philosophy as a case study, the paper examines how superficially positive European admiration of Confucian ethics was situated within a chronostrategy that ultimately rendered Chinese civilisation “a-historical.” Despite its highly codified moral and social order, Ming China—and broader East Asian cultures—were deemed temporally inflexible, and thus in need of Western advancement.

This patronising chronostrategy underpinned the broader logic of cultural imperialism. It legitimised the civilizing mission of European-Protestant expansion by universalizing Western temporal understanding within emerging Protestant vision of culture, devaluing indigenous epistemologies. Through this framework, the rhetoric of civility becomes a mechanism of epistemic violence, masking asymmetrical power relations as benevolent progress.

The paper argues that *chronostrategy* is not merely a relic of early modern thought but a persistent structure within global imperialist ideologies. By foregrounding time as a central vector of cultural hegemony, this analysis reveals how modernity continues to operate as a strategy of coherence—one that erases plurality in the name of development, and naturalizes domination through the manipulation of historical temporality.

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## **The Intergalactic Fishbowl: Seaweed, Tea and the Entangled Ecologies of the Body (Daniela Tan)**

This paper explores the entangled ecologies of the body in examining materia that serve as both culinary ingredients and medicinal substances: tea and algae. While green tea has achieved global recognition in today’s *matcha* boom, algae remain marginal in Western cuisine and medicine, despite their ecological and therapeutic potential. In engaging a dialogue between traditional medical knowledge (TJM or *kanpō* 漢方) and contemporary literary texts envisioning the survival of species in a larger ecosystem, the discussion of both materia showcases existence and survival as relational interactions.

The preparation, consumption and therapeutic effects of tea documented in the *Kissa Yōjōki* 喫茶養生記 (Treatise on Tea Drinking for Health, 1211) by monk Eisai showcase the interrelated entanglement of ecology, care and time. The same pattern shows in Science Fiction narratives, where the body is displaced from earth to space, and humans along with other species search for ways to sustainably fuel body, mind and spaceships. Eco-speculation and bioengineering as a speculative approach to future

technologies are integral in the Solarpunk genre, such as the cultivation of algae. The simultaneity of medical, bioengineering and social effects of time spent in the cultivation of these materia in both medieval and contemporary source texts showcases how new ideas can be developed in an environment that integrates and cultivates temporal practices and the transmission of knowledge (*Izumo fudoki* 出雲風土記, Reports from Izumo, 733; *Wayferer Series*, 2014-2021). Time here does not divide, but connects us. Through poetic reflection, cross-cultural sources, and methodological inquiry, the human body is framed as interwoven and interrelated within a larger ecosystem, thereby blurring boundaries between food, medicine, and the environment.

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### **Law's Futures and their History: The European Legal tradition since the 14th Century as an Example (Andreas Thier)**

Legal norms are basically intended to protect expectations regarding the future actions of third parties. However, law relates to the future in other ways as well: Law processes different types of societal interpretations and ideas about the future.

This paper, which looks at European legal tradition since the 14<sup>th</sup> century, argues that two types of such future perceptions can be observed: Law places a strong emphasis on experience-based ideas of individual future dangers, such as individual accidents. Expectations of the future, such as millenarian expectations, are also tangible, though less pronounced. As technology and science evolve and legal systems become more differentiated, however, ideas about these futures are changing. At the same time, the legal interpretations of both types of future are becoming increasingly intertwined. The paper takes a three-step approach. (1) The rise of marine and fire insurance since the 14<sup>th</sup> century demonstrates how the growing body of empirical knowledge leads to the progressive differentiation of legal risk control. However, influences from ideas about salvation history also become sometimes visible. (2) Since the 18<sup>th</sup> century, ideas that open the future to human access have gained ground. These ideas have a legal counterpart in the sovereign provision for shaping societal progress. At the same time, the range of risks that can and should be managed legally is growing, as seen in social security, for example. (3) Since the 1970s, growing awareness of ecological and climatic threats to humanity has led to the mobilization of fundamental norms to secure the future. These developments are also increasingly influencing risk assessment in insurance law, even though traditional protection against individual risks continues to be the basis for legal developments in this area.

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### **Temporal Ecologies: A Process Philosophic Approach to the Temporal Dimensions of Ecological Entanglements (Mithalie Tripathi)**

This performance lecture stages a speculative encounter with a bubbling algae pool in Garli, Himachal Pradesh (Himalayas), to interrogate ecological entanglement as a temporal and transindividual

phenomenon. Entanglement, as developed within environmental humanities and Anthropocene studies, destabilizes anthropocentric accounts of agency by foregrounding the inseparability of human, nonhuman, and geologic processes. Thinking-with Gilbert Simondon's philosophy of individuation and transduction, Alfred North Whitehead's speculative empiricism, and Michel Serres's topology of mingled bodies, the lecture explores how ecological entanglement is not an external event but an ontogenetic process that implicates bodies, affects, and environments in metastable becomings.

Through the speculative emergence of "Binky"—a transductive figure born from manic obsession and ecological turbulence—the work dramatizes how ecological grief and violence are temporal operations that disindividuate subjects, opening onto transindividual modes of relation. In this sense, grief is not a private residue but a collective potential, a force that exceeds the individual and resonates across generations and species.

Attending to the temporal dimensions of entanglement reveals that Anthropocene crises are not only spatial disruptions but temporal disjunctions: fossil-fuel capitalism condenses geologic durations into decades; extinction abbreviates evolutionary timescales; climate upheavals accelerate planetary rhythms. From a process-philosophic perspective, these conflicts are not anomalies but expressions of metastability—ongoing tensions between the preindividual reserves of being and the individuated forms they temporarily sustain. Simondon shows that individuation is never a completed act but an open-ended transduction, wherein time itself is the medium through which beings emerge, persist, and dissolve. Ecological entanglement, then, is a temporal weaving of rhythms across scales—human, nonhuman, geologic—each moment charged with potentials for reconfiguration.

In this light, Serres's notion of mingled bodies offers a topology for thinking ecological time as neither linear nor hierarchical, but as a fabric of overlapping durations, sensory interferences, and recursive feedbacks. Entanglement is not merely coexistence but the very condition by which bodies and milieus constitute each other in time. The performance lecture thus refigures ecological entanglement as a temporal phenomenon: an event that unsettles individuations, discloses the subject as perpetually disindividuating, and demands new forms of collective becoming. By enacting a fugitive poetics of ecological resilience against violence, the work emphasizes that to inhabit ecological time is to recognize the instability of identity, the openness of process, and the necessity of living as good ancestors within the tangled temporality of more-than-human worlds.

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### **Historians Entangled. Aztec Calendars and the Twisting of the History of Time (Ricardo Uribe)**

On December 17, 1790, the so-called "Aztec calendar" was discovered underground in the main square of Mexico City, and since then it has aroused great interest among scholars in the Americas and Europe, including Alexander von Humboldt, who had the privilege of examining the monolith personally. However, the first person who dared to decipher the hieroglyphics carved on this stone was Antonio León y Gama (1735-1802), an enlightened scholar from New Spain. Through the publication of two books, he asserted that this large circle was used by pre-Hispanic indigenous priests to determine the dates and hours of ceremonies and sacrifices. According to him, it was two devices in

one [Fig. 1]. First, it was a sundial with multiple gnomons that cast the sun's shadow. On the other hand, it was the Aztec calendar itself, the name by which it is still known today, although we now know that it was not a calendar but a platform where human sacrifices were made.

This lecture aims to reconstruct the entangled histories that led this scholar to see clocks and calendars that did not exist, beyond explain these facts and indigenous calendars. Antonio León y Gama was a polymath with a passion for mechanical clocks, gnomonic, and he made astronomical observations from his observatory. He had inherited several concentric drawings that were supposedly pre-Hispanic calendar wheels. However, he was unaware that they were actually medieval diagrams introduced to the New World by the first missionaries in the 16th century to represent indigenous time [Fig. 2]. These historiographical entanglements misrepresented the Sun Stone as an “Aztec calendar” and twisted the history of time. From the 16th to the 21st century, historians discriminated between “circular time” for indigenous peoples and “linear time” for Europeans. In this sense, Antonio León y Gama was a reproducer of this entanglement.

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### **Art, entanglements and archeologies of the future (Katarzyna Więckowska)**

In a recent interview, Katie Paterson argued that “art has the power to collapse vast, abstract concepts – like geological time, cosmic distances, or ecological cycles – into embodied, sensory experiences” (2025). This article offers a reading of the entanglements of art, human and nonhuman bodies and deep time in selected works by the Scottish artist and puts them in conversation with projects by other contemporary ecologically-oriented creators. While I refer to a number of works by Paterson, including *Fossil Necklace* (2013), —*there lay the Days between—*” (2022) and *Spectre* (2025), my main focus is on two projects: *Requiem* (2022), and the text by Jan Zalasiewicz accompanying it, and *Afterlife* (2025). Paterson’s artworks insert human time in the vast timescales of the planet and the cosmos, thereby pointing to the connections between humans and other lives – more-than-human and nonhuman – and opening the possibility to picture ourselves as future fossils or, as David Farrier puts it in *Footprints*, “as ghosts who will haunt the very deep future” (2020, 11). This reading of Paterson’s work through the ideas of fossils, deep time, and the future finishes with references to other contemporary art projects, in particular Marta A. Flisykowska’s *fossibilities* (2023) and works from the exhibition *Future Fossils* (MassArt Art Museum, 2025).

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### **Entangled with the World: Subjective Time and Self during Altered States of Consciousness (Marc Wittmann)**

The question of how the brain processes time has remained unresolved until recently. New empirical findings support the idea that subjective time perception—particularly over intervals of several seconds—is closely linked to interoceptive signals such as heart rate, processed in the insular cortex. These

results suggest that our sense of time is fundamentally embodied, shaped by bodily signals and emotional states.

Altered states of consciousness (ASC), whether induced through meditation, psychedelics, or sensory-reduction techniques like Floatation-REST, are typically characterized by a reduced sense of time and self. In such states, individuals often report profound experiences of “selflessness” and “timelessness,” particularly during peak states.

In this presentation, I will share results from systematic studies investigating how experienced meditators and participants in Floatation-REST perceive time and the bodily self. Both groups reported diminished awareness of body boundaries and altered time perception, often described as a feeling of merging or entanglement with the environment. These findings highlight a shared phenomenology across different ASC techniques.

Such self-transcendent experiences—central to many spiritual traditions—are associated with a heightened sense of connectedness to others, the world, or a higher power. Over time, these temporary states can evolve into stable personality traits, a process often described as spiritual awakening.

Together, this research illustrates how the human experience of self and time ranges from everyday perception to altered and transcendent states, offering insights into the embodied nature of consciousness.

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### **Protecting the ancestors: dealing with emotional entanglement in historical research (Diana Wylie)**

Most professional historians know their impact will be severely compromised if they allow their emotions to dictate their findings. Nevertheless, avoiding or muting emotional bias can be devilishly hard. When the historical actors are our own ancestors, creating emotional distance between ourselves and the past can be particularly challenging. Empathy, love, and even reverence for our forebears can bedevil our interpretations of the past as profoundly as any party political or ideological agenda. Conflicts may also arise when the ancestors’ values differ profoundly from our own. If, for example, Grandpa swore the sun should never set on the British Empire, how will his granddaughter react, if she spent half a century exploring its impact on Africa?

The author of this paper is a professional historian confronting the contents of two trunks of ancestral letters, notebooks, and photographs. She discusses the challenges she encountered while trying to disentangle her professional commitment to dispassionate enquiry into past time from her emotional fidelity to her ancestors – Britons and Americans who left paper traces of their lives and thoughts between the late 18<sup>th</sup> century and the end of World War Two. How can she use her emotional entanglement with these figures to deepen her historical enquiry? How can she safeguard her dispassionate analysis, even when the attitudes she is discovering are contrary to her own?

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## **Imprisoned Polytemporality: Political, Biblical, and Botanical Entanglements in Yan Lianke's *The Four Books* (Ziqi Ye)**

This paper examines the entanglement of political, biblical, and botanical temporalities in Yan Lianke's *The Four Books*, set in a re-education labor camp during China's Great Leap Forward famine. The novel's political temporality enforces a regime-driven rhythm of production quotas, punishments, and ideological campaigns that regulate human rhythms; its biblical temporality emerges through the novel's imitation of biblical narrative, drawing on salvation history and moral reckoning, importing sacred cycles that transcend the immediate disaster, and creating an unending allegorical effect that reframes the catastrophe within a deep-time horizon; its botanical temporality, embodied by wheat, corn, and trees, follows the autonomous cycles of nonhuman life, such as seasonal growth, renewal, and decay, which evoke ecological rhythms resistant to human acceleration, yet are violently incorporated into the state's unified process through mass mobilization.

By analyzing this “political–biblical–botanical” entanglement, the paper reveals that these three temporal layers do not merely coexist; rather, they form an “imprisoned polytemporality,” where human and nonhuman rhythms are forcibly synchronized yet never fully aligned. By reading these temporal entanglements through environmental humanities and narratology, the paper explores how literary form mediates between biological, geological, and cultural timescales, and how such hybrid temporalities reframe historical trauma. The study argues that this polytemporal entanglement disrupts linear historical narratives, foregrounding the persistence of nonhuman time within systems of political control, and thus offers a model for cross-scalar temporal thinking that resonates with contemporary debates on ecological crisis and cultural memory.

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## **Interviewing autistics about their temporal entanglements (Sean Yeager)**

This paper uses an interview-based method to expand upon Yeager's theory of “*kakokairos*” ([2025](#)), which describes autistic temporalities. According to Yeager, autistics occupy hybrid temporalities which must reconcile their individually idiosyncratic experiences of time with the capitalistic demands of “chrononormativity,” which forces deviant bodies into societal timings (Freeman, 2010). Navigating these entanglements between the personal and the social leads autistics to have a Du Boisean double consciousness (1903) with regard to the flow of time.

Yeager articulates their theory of *kakokairos* by analyzing Kurt Vonnegut's *Slaughterhouse 5* and Ted Chiang's *Story of Your Life*. Both of these narratives establish a tension between serial temporalities, which proceed from one moment to the next, and simultaneous temporalities, which experience all of time at once. Yet each narrative's protagonist occupies a temporality which is a hybrid of the two, with Chiang's character saying that her “worldview is an amalgam,” an entangled admixture of the serial and simultaneous. Yeager uses this as the basis for articulating the hybridity of neurodivergent experiences.

My project builds on Yeager’s theory of *kakokairos* by analyzing a series of 15 interviews that were conducted in Summer 2023. These interviews occurred over Zoom, with participants tuning in from four continents. Interviewees were self-identified autistics who were familiar with at least one of four science fiction narratives: the prior two, along with Ursula Le Guin’s *The Dispossessed* and Denis Villeneuve’s *Arrival*. Because these narratives theorize and embody a wide array of temporal phenomena, participants and I had an accessible means of discussing topics within the realm of temporal phenomenology (e.g. trauma, PTSD, and the processing of memories). Preliminary analysis has confirmed much alignment with Yeager’s theory, and participants stated that these narratives were helpful for articulating the entangled nature of their experiences. Future work will consist of further interviews.

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### **Entangled Temporalities and Normative Layers in Sexual Criminal Law: On the Problem of Periodization Between the Premodern and the Modern (Vid Žepič)**

This paper examines the historical and normative entanglements within the development of sexual criminal law in Central Europe, focusing on the challenges of periodization. Although legal historians often draw a conceptual line between “premodern” and “modern” criminal law, especially regarding sexual offences, this division proves deeply problematic upon closer inspection. Legal regimes across time are marked not by clear transitions, but by overlapping, competing, and sometimes contradictory temporal layers – moral, religious, legal, and constitutional. Terms such as *delicta carnis* (“sins of the flesh”), *Sittlichkeitsdelikte* (“offences against morality”), and eventually *Sexualverbrechen* (“sexual crimes”) reflect ideological shifts, but they also demonstrate how outdated legal rationales persist well into the modern era. Norms that originated in theological or moral orders—such as those governing incest, adultery, or marital rape – continue to inform or distort present-day legal frameworks, often under the guise of protecting public interest or vulnerable groups. The paper argues that this entangled temporality complicates any effort to define a precise historical moment of transition to “modern” sexual criminal law. Enlightenment critiques laid the intellectual foundations in the 18th century, but effective legal reforms did not unfold until the late 20<sup>th</sup> century – and remain incomplete even today. Moreover, new legal categories such as “femicide” may unintentionally revive premodern legal logics, by reintroducing gender-specific norms into a field theoretically grounded in gender neutrality and individual rights. Understanding these entanglements is not only a task for legal historians but a necessary tool for legal critique. Periodization is never neutral – it shapes how we interpret, apply, and reform the law. A historically conscious approach enables us to identify and challenge the lingering influence of moralistic or anachronistic norms within modern sexual criminal law.

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