



Slow sounding vision: approaching Technodiversity through artistic practice

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Introduction

The U.S. Geological Survey's (2022) updated water cycle diagram, presenting water movement as a multi-scalar, dynamic process, disrupting the traditional notion of a closed cycle. This shift in perspective reveals that each stage of the water cycle has the potential to catalyse change. When I came across this new diagram, I found it impactful. It significantly enhanced my understanding of how technical systems and research shape everyday life. Moreover, it indicates the limitations of statistical representations that claim to provide complete knowledge. In addition, it raises broader questions about the nature of knowledge itself in a world increasingly influenced by Artificial Intelligence (AI) and emerging technologies. Ultimately, this sheds light on the dynamic factors that have a broader impact, and extend beyond Anthropology and Geography to any area involved in cultural production. The previous water cycle diagram reinforced a cyclical view, shaping how children and adults alike interpret and represent their reality. This shift in perspective on the water cycle aligns with my broader interest in the physical infrastructure of digital media. In this context, various forms of matter and materiality are intricately interconnected. Together, they enable global sensing and data collection. In this way, the functionality of these cycles and networks is not an open-ended process; there is more to it than meets the eye. The sustainability of this vast infrastructure requires ongoing innovation, which is a process that operates beyond geopolitical boundaries. To return to my main point, my argument critiques the tendency of emerging technologies, such as AI, to present knowledge as a closed system, thereby limiting our understanding and imagination. Consequently, technologies like Google Search create a 'Cartesian map,' presenting information in a way that suggests what is displayed is all there is. As a matter of fact, the updated water cycle diagram demonstrates that both techno-scientific advancements and creativity show knowledge is still evolving and there are unexplored paths. Similarly, when technology intersects artistic research, artistic production frequently focuses on the human-machine relationship—a dualistic approach that overlooks designing and articulating methodologies that introduce a non-anthropocentric vision. As a consequence, this encourages me to design interdisciplinary methodologies. These methodologies aim to produce alternative imaginaries for a post-anthropocentric world. As a result, this essay examines digital technologies from the perspective of artistic production. It explores how artistic practice can methodologically utilise digital technologies in alternative ways. Furthermore, it analyses the following questions. What role does sensibility play in the intersection of art and technology within artistic practice? How can thinking about technodiversity—especially through the production of alternative imaginaries—expand the field of artistic practice? Lastly, how can an artistic practice, incorporating the concept of technodiversity, supplement other fields of knowledge production? To answer these questions, this essay is structured into three sections within the discussion. The theoretical framework focuses on the work of the philosopher of technology, Yuk Hui. It also draws on scholars from various disciplines, including architecture, anthropology, philosophy, posthumanities, sociology, feminist studies, and sound





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studies. To conclude, the analysis in the discussion section centres on my art experiment *Landscapes of Local Culture*, along with the artworks of the Interspecifics Collective and Jacob Kierkegaard.





Education of sensibility

To address the relationship between art, technology, and artistic practice, it is essential to focus on the role of sensibility. Sensibility should not be seen as merely an embodied experience or a product of diverse cultural origins, but rather as a foundation for distinct forms of aesthetic thinking. In this context, art is central to aesthetic education because it is fundamentally an education in sensibility. To quote Joshua Billings (2015), “before and after the eighteenth century, Greek culture has sought to hold ancient and modern apart, conditioning art, literature, and philosophy in Europe.” This accentuates how ancient Greek culture reflects a deep engagement with existential questions and the human condition in European society. Tragedy and catharsis were elements that continue to influence all aspects of knowledge production. As articulated by Cochrane (2022), “in art, tragic aesthetics appropriately acknowledge suffering makes sense of their ethical value.” Seen in this way, tragic aesthetics appeal to sensibility by intertwining emotional resonance, intellectual stimulation, and aesthetic appreciation. This demonstrates how sensibility has been adopted and perceived in Europe. From another standpoint, Yuk Hui (2021) notes that “it must recognise the diverse experiences of art—not only due to the varied cultural origins, but also because of the many distinct forms of aesthetic thinking.” In Chinese art, rather than being guided by a Dionysian impulse or a tragic journey toward catharsis, it is rooted in a quest for *ping dan*—a quality that translates to blandness, or more literally, flatness and insipidity. This aesthetic seeks simplicity and serenity, emerging from contemplation of the “not yet stirred” and the “already stirred.” Blandness avoids exaggeration of emotions while retaining the ability to express feelings and inclinations. Hui explains that Li Zehou identified the non-tragic perspective in Eastern art. Additionally, Li pointed to the distinction between *dao* and *qi* as a key factor in the decline of China's aesthetic tradition. However, Li did not fully develop this aesthetic approach into a structure and systematic framework, instead leaving it as a somewhat ambiguous discussion of emotion. This leads Hui to argue that any stereotype regarding *shanshui* (mountains-water) must be rejected. Such stereotypes overlook the essential nature of *shanshui*, reducing it to a simplistic and superficial understanding. The core issue of *shanshui* is not a nihilistic void. Instead, it emphasises the education of sensibility. This viewpoint emphasises the profound and nuanced way in which *shanshui* cultivates awareness and deepens one's connection to the world.





In recent decades, numerous artistic approaches to technology have emerged. These approaches attempt to narrate the human-machine relationship. According to Hui (2021), “It suggests a connection where art incorporates technology. But what exactly does “incorporate” mean? Is it merely an adaptation borrowed from industrial applications?” This refers to the standardised approach through which emerging technologies are interpreted. These technologies include augmented reality, virtual reality, and even social media. All of these are interpreted within the limitations of structural parameters. This raises the question of whether artistic methodology genuinely integrates art and technology, or merely operates within the semantic framework of a given technology's functionality. Returning to the central issue, sensibility relates to time and space. It is the faculty through which we perceive the world in Kantian terms. Hence, time and space are the a priori conditions of sensibility. They are the fundamental frameworks through which our senses experience reality. Time influences sensitivity by contributing to both desensitization and heightened emotional reactivity. In a similar vein, Byung-Chul Han (2020) refers to the time shaped by the incursion of digital technologies. He states, “dyschronicity does not arise from a drive for greater acceleration. Rather, it is primarily caused by the fragmentation of time.” Han explains that, due to the fragmentation of time, the experience of duration becomes impossible. As a matter of fact, he distinguishes between mythical time, historical time, and discontinuous time. First, mythical time refers to the time of ancient societies, before the development of rational, linear thinking. This time is cyclical and repetitive, with no clear separation between past, present, and future. Instead, time is experienced as an ongoing cycle, linked to the natural order of the world. Historical time, on the other hand, emerged with modernity, where time became linear and progressive. Han explains that due to the fragmentation of time, the experience of duration becomes impossible. As matter of fact, he distinguishes between mythical time, historical time and discontinuous time. First, mythical time refers to the time of ancient societies, before the development of rational, linear thinking. This time is cyclical and repetitive, without a clear separation between past, present, and future. Instead, time is experienced as an ongoing cycle, linked to the natural order of the world. Then, historical time emerged with modernity, where time became linear and progressive. In this view, time moves forward, marked by events, actions, and milestones. This shift represents the modern worldview, focused on progress, rationality, and the unfolding of history. It is a time of cause and effect, where people and societies focus on shaping the future through goals and productivity. Lastly, there is discontinuous time, which is associated with the contemporary moment, where the experience of time has fragmented. This is the time of the present, where there is no continuity or stability in how time is experienced. Instead, we face an accelerated world of constant information, communication, and technological development. In this context, there is no longer a coherent experience of time. Rather than a continuous flow, time consists of moments that are disconnected, interrupted, and isolated from one another. These different types of time can be analysed in the context of sensibility in technology and artistic practice. Mythical time has the capacity to emphasise the elongation of artistic processes. It also strengthens sensorial





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connections with the world and ancestral traditions. In this sense, reinterpreting technology can expand these connections and create more immersive experiences. Similarly, historical time involves an awareness of historical contexts, evolving artistic traditions, and technological advancements. It reflects how artists navigate the progression of art forms. Artists also incorporate modern technology to shape new visions, styles, and modes of expression. In discontinuous time, sensibility showcases an awareness of the fragmented and disjointed experiences of time in the digital age. Technology can be used to reflect on or critique this fragmentation. It also enables artistic research to engage with these moments in new and meaningful ways. Moreover, this analysis explores how these disjointed moments can be framed within artistic methodologies. These methodologies critique both universal ways of perceiving technology and the ways in which technology is constituted within centres of artistic knowledge production. Additionally, Han explains that mythical and historical time possess a narrative tension. This tension emerges through a specific sequence of interconnected events. Within this narrative, time acquires a sense of “scent.” In contrast, point-time lacks this essence. Time gains a scent when it acquires duration, when it is shaped by a narrative or integrated with tension, and when it takes on depth and spatiality. As Han (2020) states, “the temporal dissipation in postmodernity is a consequence of a paradigm change, which cannot exclusively be explained in terms of the intensified acceleration of the life and production processes.” The impression that time moves considerably faster than before also arises from our diminished ability to linger. As a result, the experience of duration has become increasingly rare.





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*Figure 1: Concept art for Landscapes of Local Culture field recordings (2023).
Illustration by the author.*



*Figure 2: First test of a 3D spectrogram in 2022. Concept, design, and
rendering by Ashlee Adams.*





Landscapes of Local Culture (LOLC) is an experiment,¹ that spanned three years, from 2022 to 2024, and was developed in and around Gothenburg, Sweden. *LOLC* is not about “materialising” sound, but rather about an ‘accumulation process,’ in which human and non-human sounds are captured using various types of microphones. Each microphone has differing latencies and vibrations, interacting uniquely with the surrounding environment.



Figure 3: 3D-Printed Spectrogram of Södra Mölndal (2023). 3D-printed in PLA filament, 45 cm × 45 cm. Photograph by the author.

¹ This essay distinguishes between the connotations of “a project” and “an experiment.” While both can serve artistic and scientific purposes, referring to it as “an experiment” shifts the focus of my critique to academia and public artistic funding. In Sweden, these are common methods of funding for artistic work. *Landscapes of local culture* does not fit within academic scheduling due to time and resource constraints. Its case-study nature also makes it unlikely to receive public funding, as there are few calls for interdisciplinary artwork production. Therefore, I categorise *Landscapes of local culture* as “an experiment,” as it reflects the lack of both resources and disembodies it from formal education.





Figure 4: Photograph of Rävekärr, Södra Mölndal (2023). Taken by the author.

The collected sounds are represented as 3D spectrograms,² which are subsequently transformed into 3D-printed pieces, drawings, and installations. *LOLC* draws inspiration from *Speculative Communications* by the Interspecifics Collective (2017), which, at a microbiological level, explores behavioural patterns as a source for composing an audio-visual score. *Speculative Communications* functions as a research platform for non-anthropocentric communication. In other words, it serves as a self-generative system of non-human intelligence.

LOLC also takes inspiration from *MELT* by Jacob Kirkegaard (2016), which features recordings of various stages of ice melting in Greenland. By utilising sound, *MELT* illustrates the continuous evolution of matter, serving as a poignant example of the impact of climate change on natural cycles. In this work, the sounds transition from the harsh grinding of ice caps to dripping and, finally, to the flow of water. *MELT* examines the transformation of water through different states, from solid to liquid, illustrating the irreversible alteration of its molecular structure. It symbolises both the perpetual flow of change and the profound impact of human activity on the environment. All the sounds were recorded in Greenland by Kirkegaard between 2013 and 2015.

² A spectrogram is a visual representation of how the frequency content of a signal changes over time. It displays time on the x-axis, frequency on the y-axis, and amplitude as colour intensity, with brighter areas indicating stronger signals. Commonly used in audio analysis, speech recognition, medical imaging, and seismology, spectrograms are generated using the Short-Time Fourier Transform (STFT) to break a signal into smaller time segments for frequency analysis. This tool helps identify patterns in sounds, detect anomalies, and analyse complex signals across various fields.





The significance of sensitivity in artistic practice, particularly at the intersection of art and technology, can be understood through two principal aspects: the perception of time and the narrativisation of time. Firstly, the perception of time can be divided into two subsections: technological mediation and the acceleration of time. Hui explores sensibility through technological mediation, examining how technology shapes human perception and aesthetics. Han, on the other hand, critiques modern technology for creating a discontinuous sense of time. Han suggests that it fragments life, drives it towards immediacy, and alters our ability to engage deeply with the world. This perspective aligns with Hui's critique of technology's tendency to fragment human experience and distance individuals from more holistic forms of perception.

For both Hui and Han, conceptualising sensibility within artistic practice serves as a means of addressing and acknowledging this fragmentation. This underscores the role of sound as a transversal element—one that expands human perception. Similarly, Salomé Voegelin (2021) emphasises the potential of sound art to move beyond the landscape and into the world of artistic practice. This shift denotes the plurality of sonic possibilities for understanding and appreciating sound work. Furthermore, this connection extends to both artistic discourse and everyday life. As a result, *LOLC* investigates the interconnectedness of life, where electrical and electromagnetic phenomena serve as a unifying force. These phenomena emerge from the continuous transfer of energy among cells, organisms, matter, and the surrounding environment. They uncover the intricate web that binds all living things and matter. This is a process that accumulates other processes. In this case, sound acts as a transversal element. That is, sound itself accumulates processes. This approach expands the time sensitivity of both human and non-human processes involved in a landscape over time. *LOLC* introduces not only an alternative perspective, but also a deeper understanding of the landscape itself. Secondly, Han's critique of acceleration aligns with Hui's concern about technology's capacity to fragment human experience. This acceleration diminishes our ability to engage deeply with the world. It forces artistic production to respond with heightened sensitivity to the fleeting and ephemeral nature of time, as of now. An artistic conceptualisation of sensibility can counteract acceleration by creating works that invite slowness, reflection, and, above all, immersion. In the context of artistic practice, sensitivity entails an awareness of how technology shapes perception and meaning. The education of sensibility, in this sense, becomes an epistemological tool to navigate and critique the mediated world.

This shares similarities with Voegelin's (2021) phenomenological positivism, which alludes to hearing a landscape as an environment, a time-space. This refers to a landscape that goes beyond providing a singular and unchanging process. Rather, it allows for the observation and engagement with multiple dynamic processes that undergo continuous feedback loops. The aim is to examine sound by delving into its material processes and exploring the correlation with the complexities of perception. *LOLC* does not attempt to romanticise slowness in contrast to the acceleration of time, particularly with respect to digital technologies. However, there is an implicit intention to draw attention to the metabolic processes within a given landscape. This invitation calls for adopting an





awareness of time that mirrors other cyclical processes. Such processes can only be recognised by paying attention to metabolic activities and their temporality, whether on a microscopic or macroscopic scale. In *LOLC*, slowness becomes an element in learning to recognise these processes within a landscape. As Mark Peter Wright (2022) puts it, “under this interpretation, recording becomes a network of relations, heard and unheard, transformed back onto aesthetics and practice through a set of provocative questions.” By using various microphones that capture different vibrations and latencies, *LOLC* aims to delve into the performative essence of all living matter and technological infrastructure. This approach emphasises the dynamic qualities of existence—how everything is in a state of vibration, oscillation, and fluctuation.

Lastly, Hui (2021) claims that “without political and philosophical significance, aesthetic thinking only provides “added value” for consumerism and easily submits to the logic of replacement by machines. This diminishes both sensitivity and reason by reducing everything to “experience,” a framework that falls short of adequately examining the role of art.” In the contemporary time, Hui asserts that it is necessary to differentiate between two types of sensibility. The first is machinic sensitivity, which involves sensing and data collection, mediated by technology on a planetary scale. The second is organic sensitivity, which refers to perception and response to the world. It is rooted in biological, natural, and human-centred experiences. As a result, multiple organic sensibilities exist at a local level.

For this reason, the narrativisation of time denotes the breakdown or erasure of traditional, cohesive narratives in contemporary life. This is particularly evident in the context of media, technology, information overload, and totalised information. As Han (2020) explains, “the drama of acceleration is a product of past centuries. We can describe it as a drama because it is tied to a narrative. However, de-narrativisation removes this narrative, turning the accelerated, goal-oriented process into a directionless, rapid motion.”

In contrast to traditional linear narratives, which provide meaning through interconnected stories and histories, modern technologies—such as social media, digital platforms, and rapid information exchange—generate fragmented, disjointed, and surface-level experiences. These experiences lack deeper context and continuity. Consequently, I believe that an artistic practice, situated at the intersection of technology and sensibility, might not be directed towards building a coherent narrative. Rather, it could focus on understanding and responding to the speed and transience of experiences facilitated by technology.

From Haraway’s (1988) perspective, *LOLC* serves as a form of embodiment and a source of knowledge. Knowledge, in this view, is embodied; it is tied to physical, cultural, and historical bodies, rather than existing as something abstract or disembodied. In turn, artistic practices may no longer focus on telling a clear, connected story. Instead, they explore the sensory impact of disconnected moments or the emotional resonance of fragmented experiences. *LOLC* itself can be understood as a type of “fragmented story.” It moves from the sensory act of hearing, spanning across different





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mediums, to create fragments and details that contribute to a larger narrative. In *LOLC*, sensibility is attuned to the disconnectedness and immediacy of the world. Technology enables the exploration of new forms of expression. These expressions range from short, fragmented images or sounds to interactive experiences that do not rely on narrative cohesion.

To conclude, this section has explored the concept of sensitivity from both historical and formal perspectives. The aim was to expand its understanding as a cultural element with various connotations. Sensitivity, therefore, is developed as an entirely cultural construct, meaning that multiple sensitivities exist. These sensitivities influence how artistic work is perceived and articulated, particularly at the intersection of artistic practice and digital technologies.

Expanding on the concept of sensitivity leads to a discussion of technodiversity and its relationship to artistic practice. This will be the focus of the following section.





Imaging Technodiversity

During the COVID-19 pandemic, Zoom Communications, according to Iman Ghosh (2020), surpassed the combined market value of the top seven airlines. This points to how global events can dramatically shift material value. Digital technologies, through algorithms and statistical models, reshape the economy by prioritizing real-time image exchange over traditional material value. This also illustrates how entire industries can be displaced quickly by the flow of digital images, in stark contrast to sectors that rely on physical goods and passengers. However, this raises questions about the concept of technology. For this reason, this section will explore whether the concept of technodiversity, particularly through the production of alternative imaginaries, can expand the field of artistic practice.

To determine whether the concept of technodiversity has the potential to expand the field of artistic practice, it is important to elaborate on the concepts of biodiversity and automation. Accordingly, Hui (2018) observes that “technology is transmitted to us as culture, which constitutes a means of living; yet it continually mutates at an accelerating pace.” Hui focuses on technodiversity to offer an ecological approach to machines, requiring a rethinking of ecology itself. In other words, if the foundation of ecological systems is diversity, Hui, drawing on the concept of biodiversity, introduces the idea of technodiversity. He puts forward that, without technodiversity, there is a risk of biodiversity disappearing due to the homogenising force of a totalitarian, modern rationality. While ecological thought goes beyond the mere protection of nature, it is fundamentally a political philosophy grounded in environmental concerns. As a counterposition, technological singularity—a concept linked to the Age of Enlightenment, surveillance, and other developments—refers to the idea that machines have the ability to think and produce far beyond human capabilities.

Endorsing the notion of a single, universal conception of technology, technological progress is similarly viewed as an end product. In sociocultural terms, this view is also connected to the Anthropocene, a new geological period in which human activities influence the Earth's natural processes. Some believe the Anthropocene began during the industrial era, marked by events such as European colonisation, the development of the nuclear bomb, and others. Therefore, from an epistemological and ontological perspective, what defines the concept of nature—a notion that is inherently rooted in European thought? On one hand, Philippe Descola (2014) argues that “the idea of a universal “nature” as distinct from culture is not a universal concept, but rather a product of Western thinking.” Descola uses the term ontological pluralism and naturalism to explain that multiple worldviews exist, each with its own logic for categorizing beings, including those in nature. These worldviews include animism, analogism, and totemism. According to Descola, naturalism is one of four fundamental ontologies—alongside animism, totemism, and analogism—that shape how cultures perceive the relationship between humans and non-humans. Since the Enlightenment, naturalism has been the dominant ontology in Western thought.





On the other hand, Eduardo Viveiros de Castro (2015) explains that “instead of focusing on multiculturalism, which implies one culture alongside many others, we should focus on a single nature that encompasses multiple natures.” This suggests that there are different ways of behaving, and these processes appear to have avoided the effects of modernisation. As a consequence, in Hui's work, focusing solely on nature may not be sufficient, as it fails to address the complexities of modernisation without resorting to dualistic thinking—such as traditional vs. modern, digital vs. physical, good vs. bad, and so on. Moreover, this approach risks falling into proto-fascist tendencies. Instead, Hui (2018) suggests “reframing the discussion around technology or technics, encouraging us to consider a multiplicity of perspectives on what we understand as technodiversity.” For that reason, a single history of technology must encompass various technological histories and reflect on the different possibilities they present. Only by doing so can it reopen the question of technology and the imagination of technology.

Another key aspect of this inquiry is the concept of automation. John May (2023) defines an automation process as “the distribution of one's mental and physical efforts across a range of formats, platforms, and material environments.” Essentially, this encapsulates a dynamic and evolving theory of media that is both experienced and actively practised. It requires meticulous planning and coordination across connections, relationships, affinities, and tensions within a complete body of work. May's concept of multihyphenation consists of two main components. Firstly, vertical disintegration refers to the composition of a system's structure within a particular production process. In this context, labour and risks are redistributed downward and outward, leading to an intensified combination of instability and inequality. Secondly, telemasis represents the psychological aspect of computational capitalism, extending beyond the mere adaptation of workplace IT. It involves the prevalence of socialised and “socialisable” electronic images as the primary means of communication. In this context, the act of imaging becomes the central foundation of social existence and production.

Conversely, Hui (2019) asserts that “the contingency of materiality is evident in the fact that a product may be used in ways the designer had not anticipated.” This means that any design logic, when externalised, inevitably surpasses its original framework, as the gaps between theory and practice are not only contingent but also serve as sources of inspiration. This openness to contingency arises from a materiality that cannot be fully reduced to form—an openness that is constrained within a totalising technical system. In other words, we live in a digitalised world shaped by *Gestell*, where the power of AI relies on reducing the world to computational models. This does not mean that reductionism is inherently negative, but it becomes problematic when treated as the totality of reality, much like the error made by mechanism.





Figure 5: Photograph of Palmhuset (2022). 100 cm × 70 cm. Rendering by the author.

As mentioned in the first section, *LOLC* is an interdisciplinary experiment that integrates sound, drawing, and 3D printing. This experiment focused on several locations in and around Gothenburg, including Öckerö, Palmhuset, Skeppsbron, Södra Mölndal, and Jolengatan. The equipment used included electromagnetic field microphones, geophysical microphones, hydrophones, ultrasonic microphones, bio sonic data interpreters, as well as condenser and omnidirectional microphones.

The design of the 3D-printed pieces was itinerant and evolved throughout the duration of *LOLC*, which spanned from 2022 to 2024 and followed two distinct iterations. The first iteration represented the different latencies and vibrations of each location as 3D spectrograms, resembling waterfalls or a range of mountains. The second iteration involves integrating the y, x, and z axes, which correspond to the time, space, and frequency of the sound. These elements are placed within the geographic location where the information was collected. In other words, this iteration represents the sounds within the area where they were recorded. The model also indicates the time of collection, with the base representing the starting point and ascending in chronological order. Additionally, the perimeter of the model represents both the spatial boundaries of the collected sounds and their specific locations within the investigated area. The result is a collapsed structure that encapsulates these spatial and temporal relationships. Along with a GPS tracking device, it was possible to trace the coordinates of each sound recording session at a given location. As a result, the sound was represented as 3D spectrograms, mapped to the various points where it was collected within the same location. In this way, this method produces sculptural forms that convey a sense of accumulation, with all sounds layered within the same perimeter. The printed version of these models invites observation of how





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these different sound spaces interact and intertwine within the same place. *LOLC* questions artistic methodologies within a setting increasingly dominated by “compressed data,” AI, and the automation of processes. It examines how technological advancements drive these changes and critiques their homogeneous application, particularly within artistic practice.



Figure 6: Palmhuset Art Installation. A small greenhouse containing 3D-printed samples of spectrograms, with sound recorded at Palmhuset. Rendering by the author.



Figure 7: Palmhuset Art Installation. A small greenhouse containing 3D-printed samples of spectrograms, with sound recorded at Palmhuset. Rendering by the author.





Figure 8: Close-up of Palmhuset Art Installation. A small greenhouse containing 3D-printed samples of spectrograms, with sound recorded at Palmhuset. Rendering by the author.





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Figure 9: Close-up of Palmhuset Art Installation. A small greenhouse containing 3D-printed samples of spectrograms, with sound recorded at Palmhuset. Rendering by the author.





Figure 10: Palmhuset Art Installation. A small greenhouse containing 3D-printed samples of spectrograms, with sound recorded at Palmhuset. Rendering by the author.

Firstly, *LOLC* does not emphasise an artistic opposition to automatised processes. Rather, it stresses the necessity of recognising, understanding, reflecting on, and critically questioning these processes, while anchoring them through artistic work. By articulating the concept of automation, the aim is to conceptualise technology as an epistemological and ontological process, rather than solely as the product of historical contingencies. This approach seeks to critique reductionist perspectives on technological development that construe technology as a static and narrowly defined construct. It does not propose an opposition to automation processes within artistic practice. Rather, it underscores the necessity of identifying, interrogating, and representing these recursive processes. Adopting alternative methodologies, such as the interdisciplinary approach used in *LOLC*, is essential for developing art projects that critically and comprehensively engage with the growing presence of “machinic imagination” in everyday life. From a different perspective, human imagination represents a space in which human beings inhabit and coexist with others. This discussion draws on Deleuze and Guattari’s (2007) concept of the “machinic” to explore complex systems or assemblages in which humans, machines, and other components interact. As a result, machinic imagination involves understanding creativity and production as emergent processes arising from these assemblages. However, this perspective alone is insufficient to fully address the machinic imagination in contemporary contexts. To expand on this, Hui (2019) proposes “a recursivity within the structure of modern computing, which is grounded in recursive logic.” This concept examines how computational systems are inherently recursive and how these influences contemporary ways of thinking. For instance, algorithms often rely on self-referential processes to optimise and adapt.





To return to the central argument, in *LOLC*, the iterations of the 3D model design do not dilute the message; rather, they expand the meaning of the original. The iterations recognise processes, advancing the systemic accumulation of different methodologies, both theoretical and practical. Furthermore, electronic imaging through algorithms and software has become the central foundation of social existence and production. *LOLC* seeks to create an “image” and an alternative “vision” for interpreting the local landscape. It emphasises the importance of not opposing automation in art but rather recognising, understanding, reflecting on, and critically engaging with it through artistic practice. Additionally, the project draws on Heidegger’s (1977) concept of “enframing” (*Gestell*), which refers to a mode of revealing in modern technology. This perspective views the world as a resource to be controlled and exploited, thereby obscuring other, more authentic ways of relating to being. At the same time, it considers Hui’s (2018) argument regarding the antithesis of the antinomy of the universality of technology.

The antinomy of the universality of technology by Yuk Hui

Thesis: Technology is an anthropological universal, understood as the exteriorisation of memory and the liberation of bodily organs, as some anthropologists and philosophers of technology have formulated.

Antithesis: technology is not anthropologically universal, but rather shaped by cosmologies that go beyond mere functionalities and utilities.

Although both perspectives are significant in contemporary times, I focus on the antithesis due to its high degree of cultural sophistication. Building on this understanding, I suggest reframing enframing by articulating the histories of cosmotechnics. In Yuk Hui’s (2020) work, refers to the integration of technical systems with distinct cosmological and cultural traditions, challenging the universalist view of technology. He proposes that different societies develop technologies based on their unique philosophical and metaphysical understandings of the world. This approach enables the integration of modern technologies by situating them within alternative frameworks. Additionally, digital technologies can be reinterpreted by redefining their conceptual foundations. This is the point at which technodiversity can be examined from a cultural standpoint. This is not an attempt to refine or justify culture, but rather a call to action—an imperative to envision technodiversity instead of conforming to conventional frameworks of thought and knowledge production. The aim of conceptualising biodiversity in this essay is to reconceptualise technology as both an epistemological and ontological process, rather than merely a by-product of historical contingencies. This approach critiques reductionist views that treat technology as a static and narrowly defined construct. It does not oppose automation in artistic practice but instead emphasises the need to identify, interrogate, and represent these recursive processes. Such an approach is crucial for developing alternative artistic





methodologies that critically engage with these underlying dimensions.

Returning to May's (2019) ideas, he observes that “all imaging today is a process of detecting energy emitted by an environment and chopping it into discrete, measurable electrical charges called signals.” If the act of imaging becomes the central foundation of social existence and production, then contemporary multihyphenation serves to minimise risks—although it remains primarily tied to imaging. More significantly, it belongs to the temporal and spatial structure of algorithmic image transmission. Creating alternative imaginaries, therefore, offers a counterpoint to the homogenisation and reduction of artistic methodologies. Instead, it promotes the expansion of methodologies within artistic practice. This shift invites a reimagining of the world through the experimentation, articulation, and expansion of artistic methodologies in artistic research. Moreover, it requires rejecting pre-established and predetermined endpoints, embracing openness and fluidity in artistic exploration. Additionally, it calls for the introduction of a non-anthropocentric, alternative vision of the world. Adopting alternative methodologies, both practically and theoretically, within artistic practice can provide a means to rethink technology. This approach moves beyond mere functionality, engaging instead with its philosophical and cultural dimensions. Finally, this perspective acknowledges that any design logic, when externalised, inevitably transcends its original framework. The gaps between theory and practice are not only contingent but also serve as sources of inspiration.

In conclusion, this section has developed the concept of biodiversity and automation to further explore the concept of technodiversity. To assess whether technodiversity can broaden the scope of artistic practice, it is essential to examine the concepts of biodiversity and automation. Automation poses the lowest risk among digital technological developments. However, the knowledge gap lies in not fully understanding digital technologies. Alternative artistic methodologies and imaginaries have the potential to highlight these issues. They also raise important questions about how adopting this perspective can supplement other fields of knowledge. This will be explored in the final section.





Supplementing generic models

Digital technologies have greatly impacted art, transforming tools and mediums to open up new creative possibilities. This is evident in innovations such as virtual reality, AI, and digital platforms. However, while these technologies provide new creative opportunities, they also often simplify and standardise artistic methodologies. I increasingly feel that this phenomenon is driven not only by the technologies themselves, but also by the perspectives of those engaged in the creative process. Therefore, this final section examines how interdisciplinary art practice, informed by the idea of technodiversity, can supplement other fields of knowledge.

This exploration examines the concept of supplementing through the perspective of Bernard Stiegler. In his work, the concepts of primary retention and secondary retention are deeply influenced by the work of Edmund Husserl and Jacques Derrida. Building on this discussion, Husserl (2019) defines primary retention as the immediate retention of an experience or perception as it occurs. In other words, it is the awareness of what has just been experienced. This concept, central to Husserl's work, is tied to the "horizon of time," which continuously unfolds as events are experienced. Moreover, secondary retention refers to the retention of experiences after they have passed. It is the way past perceptions and moments are kept in memory, allowing them to be brought into the present. This process enables the recollection of previous experiences, providing a bridge between the present moment and past ones. Likewise, Derrida (1998) draws on Rousseau's (1781) work, which provides a framework to engage with Husserl's concepts of primary and secondary retention. For Derrida, primary retention becomes complex because it is never truly present, never purely "now." Strictly speaking, it is never a simple "presence" of the moment, as it is always already contaminated by what has come before. Derrida calls this the trace—the mark of absence that is always present in every moment. In addition, secondary retention is also marked by absence and difference. This means that the past is never simply recovered or re-presented, but is always deferred and subject to interpretation. Derrida uses the concept of *différance* to demonstrate how memory and time are always deferred. Put simply, this means that what we remember is never the full, original experience. Rather, it is always mediated, altered, and reinterpreted over time. These concepts serve as a precursor to Derrida's notion of supplementation. The supplement challenges and destabilises binaries such as primary/secondary, original/derivative, and presence/absence. It highlights the inherent incompleteness of any system that pretends to be self-sufficient. Stiegler builds upon the concepts of primary and secondary retention, as introduced by Husserl, while also incorporating Derrida's insights into *différance*, as well as the nature of time and memory.





To begin with, Stiegler (2016) claims that “tertiary retention generally refers to the spatialisation of time, facilitating its repetition, externalisation, and transformation. This process transposes the temporal dimensions of retentions and protentions into a spatialised form.” This signifies the implications of technology on memory, subjectivity, and culture. In relation to Husserl, tertiary retention pertains to the externalisation of memory through forms such as written texts, digital media, and other technological artefacts. These externalised forms enable the transmission of memory beyond the individual, spanning across generations and cultures. They add an external dimension to memory and temporal continuity. This form of externalised memory allows human experience to be preserved, shared, and even modified through technological means. On the other hand, Stiegler engages with Derrida’s critique of presence and his concept of *différance*. He uses these ideas to understand how technological artefacts—such as books, films, and digital media—mediate the experience of time and memory. In this context, tertiary retention serves as a way to understand how external technologies function as prostheses that supplement and alter human memory. This external memory enables the transmission of knowledge across time and space. However, it is always mediated and, in a sense, deferred—not simply a faithful reproduction of the past. In the context of digital technologies, they mediate how we interact with and remember the world.

Furthermore, Stiegler adopts Derrida’s notion of the supplement and applies it to his philosophy of technics and memory. Derrida’s supplement refers to something that seems secondary or additional, but actually plays a key role in shaping the primary thing. It is not just an extra, but something that fills a gap and becomes essential to the whole. In Stiegler’s perspective, the supplement, as manifested through digital technologies, is no longer simply something that fills a gap in experience. Instead, it transforms into a prosthesis—a core element of the human condition. Digital technologies serve as memory aids, storing experiences that our biological minds can no longer fully retain. Stiegler posits that without these technological supplements, humans would be unable to transmit culture or preserve knowledge. Technological supplements enable and limit human experience. Although they help drive progress and preserve memory, they also present risks to both individual and collective identity. For Hui, supplementation becomes a philosophical tool. It challenges binaries such as nature/technology, human/machine, Western/non-Western, and alienation/empowerment, while also revealing the interdependence of elements that may seem disconnected. Hui considers technology to be a supplement to human existence. Rather than being merely an external tool, it is deeply integrated into human practices and thought.





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Returning to the question of whether an interdisciplinary artistic practice, informed by the concept of technodiversity, can contribute to other fields of knowledge production, the answer unfolds into three key proposals. Firstly, it redefines the relationship with digital technologies. Secondly, it expands methodologies. Lastly, it critiques technological determinism. Firstly, Gilbert Simondon (2016) states that “the technical cannot be separated from the human, as technical objects possess a human reality due to their creation by human beings.” He challenges Marx's notion of alienation, aiming instead to align culture with the essence of the human being. Simondon suggests that much of this alienation arises from how machines are operated. What truly alienates, he argues, is a lack of understanding of their operability. It is essential to have someone mediate the interface between the technical object and its environment. Both an interpreter and a composer are required to address this issue effectively. For instance, a musician is someone who primarily listens. In other words, a musician works through their sense of hearing, composing sound into rhythm. This places a human being, in the role of organizer, on an ontological level equal to that of both technical objects and nature. An orchestra conductor embodies this role, much like the imagination does.





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Figure 11: Palmhuset Sound Installation. Composed of three illustrations (95 cm × 125 cm each) and a photograph (100 cm × 70 cm). Rendering by the author.



Figure 12: Diptych Based on Palmhuset (2023). Black gouache on watercolour paper, 125 cm × 95 cm. Rendering by the author.





Figure 13: Diptych Based on Palmhuset (2023). Black gouache on watercolour paper, 125 cm × 95 cm. Rendering by the author.

LOLC possesses a distinctly experimental character, both in theoretical and practical terms. The introduction of the concept of technodiversity within this experiment positions it as a form of epistemological tool. A means, a method, a framework, an approach used to acquire, analyse and justify knowledge. *LOLC* aims to “unframe” methodologies and subsequently “reframe” them within an alternative framework. This approach facilitates an understanding of how knowledge is acquired. It also enables an assessment of the reliability of knowledge and helps differentiate between justified beliefs and mere opinions. Referencing Karen Barad’s (2007) agential realism, it emphasises the entanglement of matter and meaning. Which rejects the notion of independent entities (e.g., “humans” and “technologies”) acting separately. This reconceptualises technology and knowledge production processes not as tools external to human action, nor as conceptual and practical elements dislocated from their own premise. Instead, it presents them as interconnected participants actively engaged in the co-production of knowledge. Furthermore, this perspective emphasises their role in the creation and expansion of both artistic and research practices. Therefore, technodiversity can be viewed as fostering pluralistic entanglements between humans and technologies. It reshapes how we engage with and perceive these technologies. *LOLC* invites an expansion of the limits of artistic methodologies, aesthetically and conceptually. Likewise, drawing inspiration from Joanna Page (2023), who argues that “alternative artistic practices examine the historical connections between science, colonialism, and capitalism.” The concept of technodiversity links science with alternative forms of knowledge production. It emphasises that artistic research can help to go beyond the limitations of “technological thinking,” which often prioritises efficiency, control, and predictability. Artistic practice opens up imaginative possibilities and fosters new ways of relating to technology and





nature. Technodiversity challenges the traditional view of progress. It makes connections with the non-linearity of progress, linking it to capitalist and colonial processes. *LOLC* is an experiment that combines technological physical supports with a set of programs, instructions, and computer rules to execute design on a computer. The intention is to explore alternative methodologies of landscape representation, both aesthetically and conceptually. By exploring different acoustic frequencies and latencies, and representing them through artistic media, the aim is to expand the perspective. For that reason, *LOLC*'s methodology tends to be unconventional. Such experiments are typically found in interdisciplinary circles. An interdisciplinary artistic practice allows for a more holistic and critical understanding of the complex and interconnected issues of contemporary life. This is particularly relevant in the context of technology and the Anthropocene. *LOLC* encourages a rethinking of artistic methodologies, both in the context of formal and non-formal knowledge production. Correspondingly, Isabelle Stengers (2018) argues that "slow science is not about scientists taking full account of the messy complications of the world. It is about them facing up to the challenge of developing a collective awareness." This is primarily based on experimentation. Experimenting takes time because it involves trial and error, data collection, and careful analysis. The process often requires testing multiple variables, making adjustments, and repeating experiments to ensure consistent and reliable results. Additionally, unexpected challenges can arise, and ethical or safety considerations may slow things down. The need for accuracy, the complexity of factors involved, and the importance of verifying results all contribute to the time it takes to conduct a thorough experiment. Slow science critiques conventional modes of scientific and artistic knowledge production. It advocates for the introduction of non-conventional methods, methodologies and strategies, such as interdisciplinary. Consequently, approaches like those in *LOLC* can be seen as a resistance to the standardisation of artistic methodologies. Hence, slow science shares many characteristics with technodiversity. Both approaches encourage the development of multifaceted methodologies that can have long-term impacts on both artistic and scientific fields. As Hui (2021) states, "scientific thinking aims to enhance the abilities of the senses, whereas philosophical thinking seeks to cultivate additional forms of perception." This idea relates directly to artistic practice, as it often engages with both sensory exploration and conceptual thinking to expand its creative vision. In art, enhancing sensory perception can deepen an artist's ability to engage with the physical world. Meanwhile, philosophical thinking enables artists to explore abstract or alternative forms of perception. This questions conventional views and encourages new interpretations of experience. Together, these elements complement artistic practice by expanding and supplementing the perceptual and intellectual dimensions of creativity. Subsequently, *LOLC* opens the door to reflecting on the possibilities of artistic practice. It also prompts a reconsideration of the position of artistic research and how it can supplement cultural production. This is achieved by introducing scientific methodologies into the artistic process. Here, time—specifically, slow time—serves as a tool to foster ideas and facilitate their cross-fertilisation between different fields of knowledge. This approach is not intended to create direct interconnections.





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Rather, it aims to generate vanishing points, fields, and topics that are still waiting to be explored. This perspective, situated under the umbrella of technodiversity, critiques technological determinism, particularly the dominant idea that technologies follow a standardised path. Consequently, their applications in everyday life, as well as in scientific and artistic practices, are also shaped by this determinism. It also invites us to consider non-dominant perspectives on the conception of technology. Lastly, this calls for the study and incorporation of knowledge, cosmologies, and philosophies at a local level. In other words, it promotes the pluralism and localism of diversity within a dominant field, such as technology.

To conclude, this section examines the perspectives of Derrida, Stiegler, and Hui on the concept of supplementation. It explores whether integrating the notion of technodiversity into interdisciplinary artistic practice can supplement other fields of knowledge production. This analysis is structured into three parts. Firstly, it redefines the relationship with digital technologies by introducing an alternative approach to critical thought in both epistemological and ontological terms. Secondly, it broadens existing methodologies by challenging traditional methods and established platforms of knowledge production. Lastly, it critiques the linearity of technological progress, offering a critical perspective on technological determinism.





Conclusions

This essay has explored the concept of technology in relation to technologies and artistic practice. Three key considerations guided the investigation. Firstly, it examined the role of sensitivity at the intersection of art and technology within artistic practice. Secondly, it explored how the concept of technodiversity, particularly through the production of alternative imaginaries, can expand the field of artistic practice. Lastly, it considered how an interdisciplinary artistic practice, integrating the concept of technodiversity, can supplement other fields of knowledge.

In the initial part of the discussion, sensibility has been examined from both historical and formal perspectives. The aim was to expand its interpretation as a cultural construct with multiple meanings. Consequently, sensitivity is understood as an entirely cultural phenomenon, implying the existence of diverse forms of sensitivity. These varying sensitivities shape how artistic work is interpreted and expressed, particularly at the intersection of artistic practice and digital technologies.

The second part of the discussion explores the concepts of biodiversity and automation to further develop the notion of technodiversity. To determine whether technodiversity can expand the scope of artistic practice, it is essential to examine these concepts. While automation is one of the least contested developments in digital technology, the real challenge lies in the knowledge gap caused by a lack of comprehensive understanding of digital technologies. Alternative artistic methodologies and imaginaries can help address and highlight these issues.

The third part of the discussion examines the notion of supplementation. It aims to explore whether integrating technodiversity into interdisciplinary artistic practice can complement other fields of knowledge. The analysis is divided into three key areas. Firstly, it redefines the relationship with digital technologies by presenting an alternative approach to critical thought from both epistemological and ontological perspectives. Secondly, it broadens existing methodologies, challenging traditional approaches and established platforms of knowledge production. Lastly, it critiques the linear progression of technological development.

Introducing the concept of technodiversity can expand the understanding of technology, its operability, and its essence. What is more, recognising the need for a technological framework that embraces diverse forms of technology opens the door to new perspectives. In artistic research, this shift brings significant changes. It transforms the systematic approach to thinking, articulating, and producing artistic work, particularly at the intersection of technology, culture, philosophy, and artistic practice.

Notably, working on *Landscapes of Local Culture* has sparked my motivation about how to expand these ideas within my practice. Moreover, I am interested in how these concepts can be applied to situated research. Additionally, I am deeply curious about the “other” histories of cosmotechnics that remain to be explored. This refers to how the notion of technology varies across different cultures and traditions. Such exploration holds significant research value to me.





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Beyond that, *Slow Sounding Vision* has been fundamental in reconstructing my thoughts from an epistemological perspective. It has also been essential in uniting themes, concepts, and aesthetics that previously felt disjointed, fragmented, and incompatible. Above all, it has given me the means to reclaim the detail, the fragment, and the concrete within my practice. Without compromising its experimental and interdisciplinary value. Rather, it has reinforced it.

Furthermore, this essay serves two primary purposes. Firstly, it addresses the need to develop, analyse, and explain specific aspects of *Landscapes of Local Culture*. Personally, writing can be seen as a tool for tracing complex relationships. Secondly, this essay functions as both a platform for exhibiting this experiment and, symbolically, as a means of bringing it to a close.

To finalise, I have immense faith that many others are also on this path, each with their own differences and diversities. Yet, despite these variations, we empathise.





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