

An Old Soul in a Young Body: Reincarnating Time in *Status Quontinuum*

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Introduction

From Frankenstein to Jurassic Park, reviving the dead or extinct continues to captivate our imagination, even when it concerns the rather innocent media equivalent of this occult practice. For artists like Robert Breer, Ken Jacobs, Gregory Barsamian, and Zoe Beloff, excavating the affordance of magic lanterns, mutoscopes, zoetropes, and other obsolete audiovisual devices has become a crucial aspect of their artistic practice. Garnet Hertz and Jussi Parikka coined the term "zombie media" for repurposing obsolescence in contemporary art: "The concept of the archive is increasingly being rethought not as a spatial place of history, but as a contemporary technological circuit that redistributes temporality" (427).

Status Quontinuum (2021)¹, a 3D-printed zoetrope film and installation created by first author Guido Devadder, could not have existed without such a cross-temporal perspective on moving image media. Although created with contemporary technology, the blueprint of the phenakistiscope² serves as the fundamental inspiration for this work. This practice-based essay will explore the DNA of several 19th-century philosophical toys and examine how these

¹ <https://vimeo.com/502209972>

² This device is often spelled as *phenakistoscope* and its inventor, Joseph Plateau, even preferred *phenakisticope*. The spelling adopted here is aligned with authors such as Mannoni (2000), Turquety (2015) and Dulac & Gaudreault (2006).

elements were translated into *Status Quontinuum*, thereby focusing on the "new in the old" (Zielinski) in both temporality and materiality.



Fig 1. *Status Quontinuum*, film still.

Creative Approach and Methodology

Status Quontinuum aims to offer an alternative approach to moving image making, both formally and conceptually. Formally, it is positioned at the intersection of film, animation, and installation art, structured around a three-dimensional loop of radially arranged images. Conceptually, it presents an existential view, somewhere between a poem and a visual metaphor, rather than adhering to a traditional narrative. The work strives to evoke a self-contained universe, symbolizing the Sisyphean struggle of humanity against itself. Initially created on a computer and tested as a CGI simulation, the animated sculpture was later materialized as a highly detailed 3D print, allowing for physical interaction with light and camera. The work is set in motion using

a record player and filmed with a digital camera, synchronized to the rotation, so that each frame captures a new figure in the sequence at the same position as the previous one.

Despite the high-tech equipment involved, the guiding principle behind this work harks back to the early 1830s. The phenakistiscope, invented almost simultaneously but independently by Joseph Plateau (1832) and Simon Stampfer (1833), consisted of a slotted disc with a sequence of images, which could be experienced as animation by looking through the apertures of the rotating disc into a mirror. As will be clarified in the following sections, engaging with this apparatus from a contemporary perspective significantly differs from the 21st-century moving image media we are accustomed to.

Consequently, firsthand involvement with this abandoned medium is an essential step for this type of artistic research. In his introduction to *Deep Time of the Media*, Siegfried Zielinski articulates media archaeology as a call for action: “Now, if we deliberately alter the emphasis, turn it around, and experiment, the result is worthwhile: do not seek the old in the new, but find something new in the old” (3). This statement entails a compelling view on media archaeology from an artistic research perspective. Seeking the new in the old not only distinguishes media archaeology from media nostalgia but also implies approaching the old from its own singular affordances rather than from a teleological view. Furthermore, experimentation is foregrounded, leading the way towards experimental media archaeology at the intersection of theory and practice (Fickers & van den Oever), for which Erkki Huhtamo contrived the concept of “thinkering” as an interlocking sequence of practice-based and discursive research.

Temporality

An extensive series of experiments with early moving image devices preceded the creation of *Status Quontinuum*, ranging from replicas of historical artifacts to digital simulations and hybrids

of both. The wider context of this research is a practice-based PhD titled *From Post-cinema to Pre-cinema and Back: A Media Archaeology of Loop Animation*, by Guido Devadder, supervised by co-authors Steven Devleminck and Roel Vande Winkel. One of the most salient characteristics identified during this stage of the research is the absence of the frame as a confined spatio-temporal unit in the phenakistiscope. Unlike moving image media as we know it today, every image in the sequence that makes up a phenakistiscope animation is visible simultaneously.

Benoît Turquety elucidates a tendency to isolate the individual frame in subsequent devices, corresponding with an evolution towards linearity and narrativity over the course of the 19th century. From the panoptic view of the phenakistiscope, the cylindrical construction of the

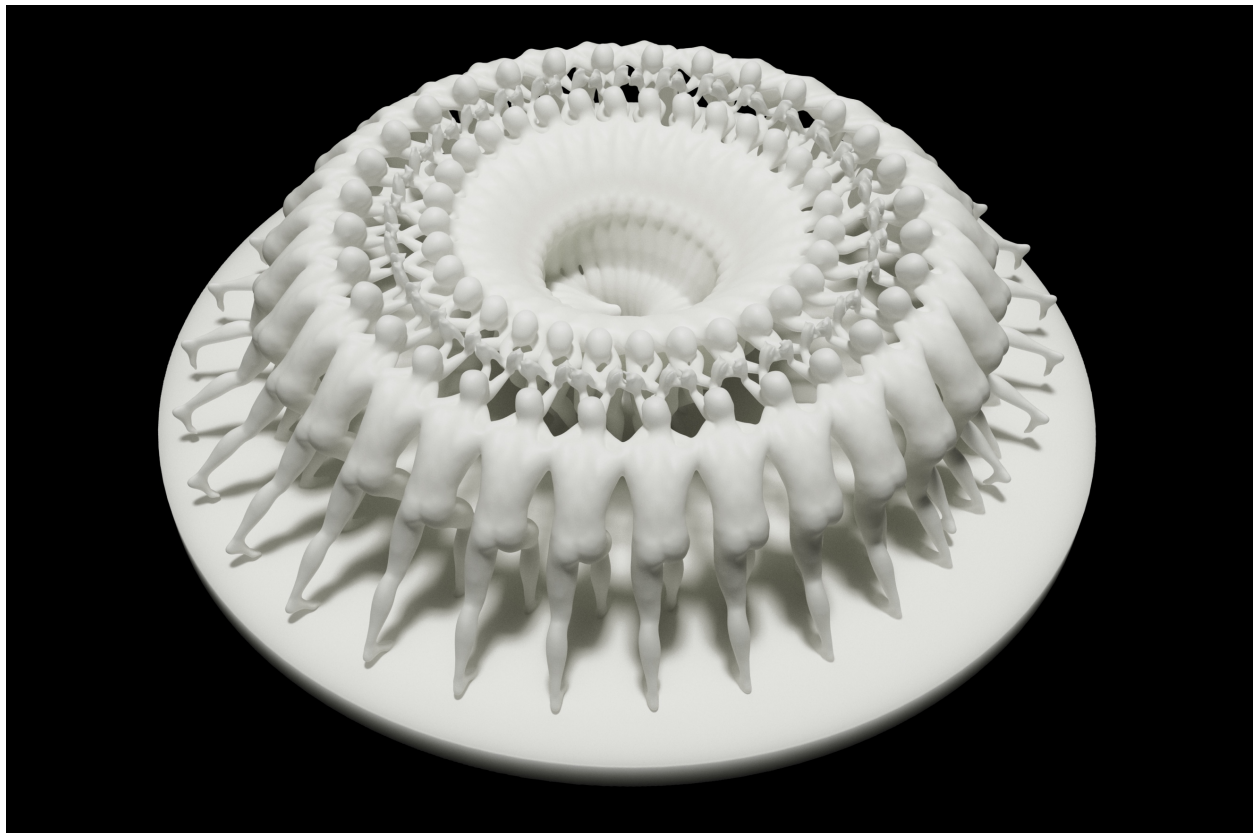


Fig 2. Digital prototype render.

zoetrope inherently limits the number of visible figures, focusing attention on the image opposite the viewer. Interestingly, Turquety quotes from Ottomar Anschütz's patent of the tachyscope or Schnellseher, an adaptation of the zoetrope, to demonstrate this attempt toward more segregated framing. Contrary to the typical zoetrope, the tachyscope was oriented vertically, thus aiming to optimize the isolation of adjacent images: "The constant vision of several animated images at different stages of the movement, as happens with common stroboscopic devices, often proves a distraction for the eye" (Anschütz in Turquety, 279-280). Yet, from a 21st-century perspective, it is precisely this panoptic distraction of the eye inherent to the phenakistiscope that stands out and emerges as the new in the old.

In the original apparatuses, the perception of motion was achieved through a slotted disc or cylinder that functioned as a shutter-gate mechanism. This proto shutter was modified in subsequent adaptations of the phenakistiscope, first by Émile Reynaud, who ingeniously used a polygonal mirror for his praxinoscope in 1877, which he later also integrated into his Théâtre Optique in 1889. A similar approach is still used in the legendary Steenbeck flatbed editing table, where at the heart of the machine lies a glass polygon serving the function of the shutter, making it more closely related to the Théâtre Optique than to the Cinematographe.

Anschütz introduced a significant innovation with his Elektrotachyscope, or Elektronischer Schnellseher, which synchronized a rotating disc to a Geissler tube that generates short flashes of light (Rossel 44). This foreshadows the stroboscopic shutter used in many contemporary adaptations, such as the works of Toshio Iwai and Gregory Barsamian. The method used in *Status Quontinuum* owes a significant debt to Eric Dyer, who pioneered the use of a digital camera as an external shutter, utilized in his film *Copenhagen Cycles* (2006): "I discovered, around 2002, that using a fast shutter speed on a digital video camera would act like

the strobe light in that you could point the camera at these spinning sculptures and the animation would pop to life in the camera" (Dyer in Macdonald 89). This creates an interesting tension between the unmediated perception—where the sequentiality of the images is lost in motion blur—and the camera-image, which reveals the animation in full detail.

When presented as an installation at the exhibition *Turn On*, the audience was invited to explore *Status Quontinuum* interactively. A tablet computer, functioning both as a camera and screen, was provided to the visitors, allowing them to become creators of their own visual experiences, echoing the interactive haptic qualities of the original phenakistiscope. Unlike early devices that relied on manual rotation, a record player is used for *Status Quontinuum*, which qualifies it as a phonotrope. Although the term phonotrope was coined by Jim Le Fevre in 2010, the method of using a record player to display phenakistiscope animations is much older and has been in existence since at least the 1920s. Little is known about the Kinephone or Gramophone-Cinema (ca. 1920) in existing literature. A photograph from the Bill Douglas Cinema Museum indicates that it was produced by Reid & Co from Secunderabad, India. It consisted of a series of picture discs equivalent to the phenakistiscope on top of which a slotted shutter disc was placed. A mechanism resting on three small wheels and secured with a metal rod was placed between both discs, causing opposite rotation. Another predecessor, the Japanese Baby Talkie, was constructed similarly to the zoetrope, with the slotted upper part slightly inward bent. Likely dating from 1932, it was to be placed on top of a record, allowing simultaneous enjoyment of image and sound (Kusahara 123). In the 1950s, Red Raven Movie Records used a funnel-shaped polygonal magic mirror, based on Reynaud's praxinoscope and Toupie Fantoche. This mirror was placed on top of a 78-rpm record with a phenakistiscope animation at its center, establishing synchronicity between image and sound (Gilbert 51).

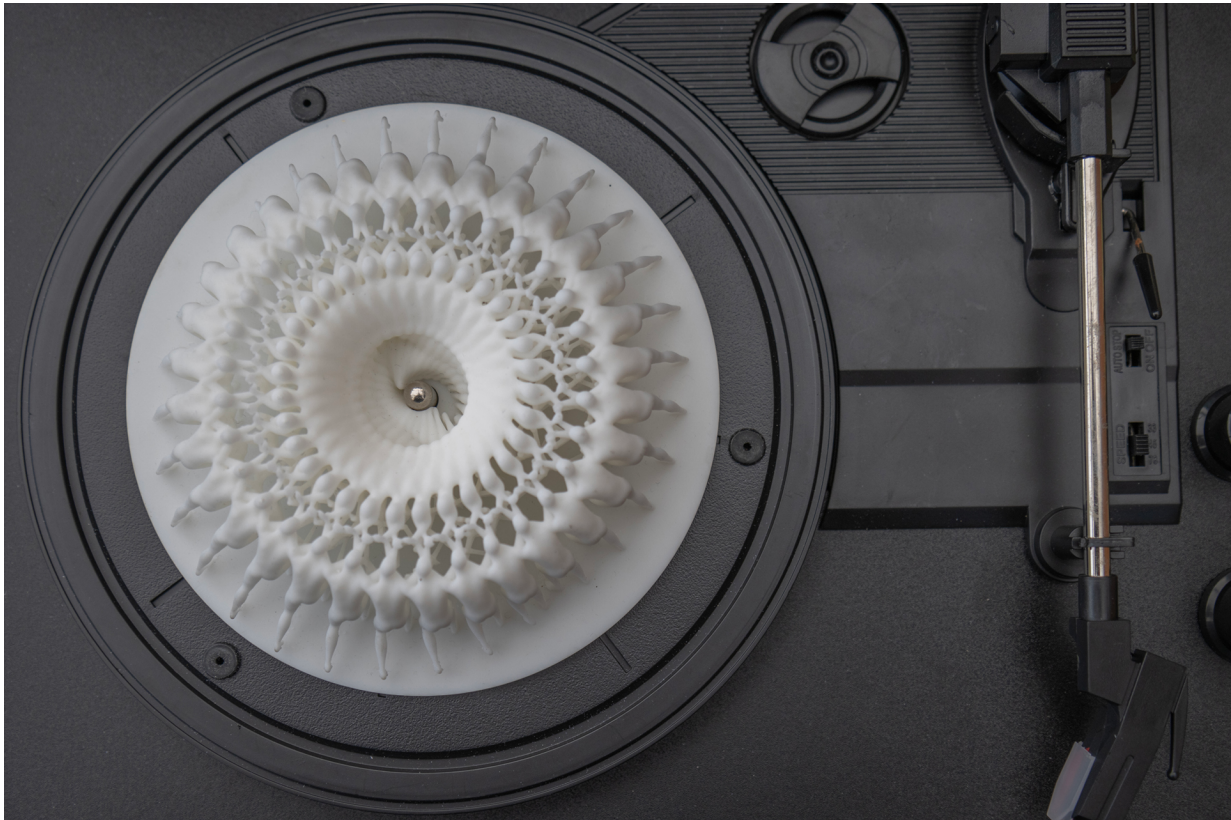


Fig 3. Installation print for the exhibition *Turn On, Rotondes*, Luxembourg, 2024.

For the filmed version of *Status Quontinuum*, the pitch control on the record player proved to be a valuable asset. By allowing adjustments to the rotation speed, this feature enabled the figures to appear stationary when synchronized with the camera's frame rate or to drift in either direction when the speed was altered. This capability was not possible with the original phenakistiscope or zoetrope, where the position of the apertures strictly determines the position of the images when set in motion, irrespective of the rotation speed. However, it was common practice to vary the number of images on the circumference of the disc. When the number of apertures matched the number of figures, they appeared stationary. Adding more images caused them to seem to drift in the same direction as the rotation, while fewer images caused them to appear to drift in the opposite direction.

Contrary to its 19th-century predecessors, temporality in *Status Quontinuum* is shaped through the interplay of a digital camera and a record player. Notably, the latter is used subversively, outside of its intended function: a record player was never designed as an image playback device, nor was the pitch dial meant to adjust the tempo of an animation. This appropriation of serendipitous affordances is not uncommon within artistic practices informed by media archaeology, such as circuit bending (e.g., Reed Ghazala, Paul DeMarinis) or glitch art (e.g., Rosa Menkman, Nick Briz). These practices share a common denominator: they exercise user agency over existing media and technology, akin to hacktivism and DIY culture (e.g., Hertz and Parikka; Parker).

Materiality

Since its digitization, moving image media has become more ubiquitous yet more intangible than ever. Contemporary animation often remains confined entirely to the digital realm. Although *Status Quontinuum* also originated as a series of bits and bytes on a hard drive, the digital version serves merely as an intermediary stage towards the materialized 3D-printed sculpture. Inevitably



Fig 4. *Status Quontinuum*, film still.

and intentionally, the transformation from digital to physical introduces noise—the imperfections in the printing process or dust and dirt adhering to the resin—which becomes an integral part of the work. When the sculpture is set in motion, these spatial artifacts translate into temporal noise, akin to dust and scratches on analog film.

Engaging with a physical object allows for an interplay between material properties, light, and camera, all crucial for establishing the atmosphere in *Status Quontinuum* as a film. The resin used for 3D printing is not entirely opaque, similar to human tissue, but allows light to permeate and diffuse within the material, a phenomenon known as subsurface scattering, which enhances the sensation of the object appearing alive. The camera plays a pivotal role in this process, functioning not only as a shutter but also introducing depth of field and a second layer of noise from the camera sensor.

Three-dimensional phenakistiscopes or zoetropes were largely absent in the 19th century, with one notable and well-documented exception. In 1887, French scientist Etienne-Jules Marey constructed a three-dimensional zoetrope depicting a seagull's flight cycle in ten delicately sculpted wax figures (Canales 344). Despite its aesthetic qualities, Marey's objective was primarily scientific, providing a synthesis of motion based on his chronophotographic analysis of birds in flight—for which he developed his famous chronophotographic gun. In his book *Physiologie du mouvement: le vol des oiseaux*, Marey states: “To get the most out of these relief figures, in terms of analyzing flight movements, it was necessary to examine them with Plateau's apparatus [...]. A modification of the phenakistiscope known as the zoetrope, which has been in widespread use for some years now, lends itself very well to this use” (180-181). In contemporary adaptations, three-dimensional work has become more prevalent, exemplified by artists such as Gregory Barsamian, Eric Dyer, John Edmark, and Mat Collishaw. The tangibility

of the moving image—a convergence of the new with the old—offers a plausible explanation for this tendency.

Compared to traditional sculpting techniques, digital creation methods and 3D printing significantly enhance consistency in form and movement, as each step in the animated sequence must be an individual object. This technique, known as replacement animation, differs from the prevalent approach in stop-motion animation, which involves manipulating a single object or puppet in small increments. Replacement animation, however, consists of a sequence of slightly different, separate objects. For *Status Quontinuum*, these radially arranged objects were combined and printed as a single unit with a resin-based 3D printer. It is worth noting that the difference between a vertically oriented phenakistiscope and a horizontally oriented zoetrope becomes irrelevant when a camera is used as an external shutter in this setup. What emerges is a hybrid between both devices, where the camera can take up any position, such as capturing the entire piece from above or singling out a detail from a side view close-up.

In bridging historical artifacts and contemporary media, 3D printing has become a transformative tool within media archaeology and artistic research. This technology facilitates novel artistic approaches at the intersection of analog and digital, as demonstrated by works such as *Man at Work* by Julien Maire or *The Hidden Image Life of Lenses* by Deirdre Feeney. Additionally, 3D printing assists in generating tacit knowledge of historical media objects. A compelling example is Tim van der Heijden's Kinora Viewer Replica Project, which utilizes CAD modeling and 3D printing to create a working prototype of this mechanical flipbook. Construction of a replica "can serve as a heuristic method: it provides insights into the materiality of the object and a fuller understanding of its design and functions" (Van der Heijden and Kolkowski 32).

As a 3D-printed animation, *Status Quontinuum* functions both as hardware and software, a form of hyper-indexicality it shares with the original phenakistiscope, where image and apparatus were joined as one (Dulac and Gaudreault 233). The process of separating both starts with the zoetrope, where different paper strips could be placed inside the drum, leading to an increasing tendency to disconnect content from signal carrier to facilitate multiplication and distribution. Reuniting them in *Status Quontinuum* and similar works leads to the question of what constitutes the final work: the object, the video, or both? This presents a promising opportunity for further research into potential dissemination methods, considering the digital origin and open-source reproducibility and adaptability of this type of work.



Fig 5. *Status Quontinuum*, film still.

Conclusion

As illustrated by the analysis above, the DNA of the old is manifestly present in the new. Despite the digital creation and manufacturing methods used in *Status Quontinuum*, little about the work

is unequivocally new on a technical level. Image arrangement, physicality, various types of shutters, and even three-dimensionality and the use of a record player all have predecessors dating back at least a century.

The "new in the old" primarily manifests in the abandoned perceptual qualities of devices such as the phenakistiscope—characteristics often considered shortcomings at the time of their invention. *Status Quontinuum* re-evaluates these eccentricities, which is only possible through a transhistorical dialogue. Out of this dialogue, the entanglement between temporality and materiality, circularity, simultaneity, and tangibility emerge as the new, broadening the scope of what the moving image can be.

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