

# INTERDISCIPLINARY STRATEGY AND CONCEPTUAL-BASED PRACTICE OF VIRTUAL ARCHIVE: A CULTURAL ANALYSIS ON *ACHIEVE OR ALIVE* PROJECT BY ET@T IN TAIWAN<sup>1</sup>

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## ABSTRACT

At the turn of the 21st century, data and computing in the configuration of new information structures have gradually infiltrated into the cultural sphere and ergo functioned as the central nervous system of the contemporary technological culture. This significant transformation also leaves imprint on performance arts, which has extensively incorporated media and evolved a unique genre known diversely as multimedia performance, cross-media performance, cyborg theater, digital performance, virtual theater, new media drama, and so forth. At the same time, how to preserve this kind of genre has become a serious issue globally. “Virtual archive” proposed by Et@t in Taiwan has empowered spectators to determine their preferred duration, perspective, and scene of the work they’re viewing. Virtual technology, especially VR, has also gradually transformed the admiration of works that had been performed into participatory somatic experiences. Immersing themselves in a world detached from realities, spectators comprehend theater pieces not so much by conscious perception as through a world constructed from image-actor, stage installation, and immersive technology. Spectators employ body-mind fusion again to set out on a fantastic journey across the virtual universe, indulging themselves in the world of image-body interaction. This interdisciplinary research and conceptual practice will take example from several works of art created by Taiwanese artists who dedicate to applying contemporary digital technology to the methodological construction and R&D of non-material archiving technique concerning performers’ body movement. Breaking away from previous practice of single-perspective recording, this project provided a sweep panorama of the performer’s whole body, insofar as to give the spectators a 3D stereo view of the performer’s body movement

## KEY WORDS

Et@t, *Hsiao Ho-Wen Project*, *Shapde 5.5*, virtual archive

Since the 1980s, performing arts has extensively incorporated media and evolved a sui generis genre known diversely as multimedia performance, cross-media performance, cyborg theater, digital performance, virtual theater, new media drama, and so forth. This nascent, changing field still lacks a proper scheme of taxonomy as a research tool and method to disentangle its own portmanteau contents (Bay-Cheng, Parker-

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Starbuck, & Saltz, 2105). The somatic stimulation, liberated participatory space, and script flip-flop characteristic of this media technology not only offer spectators unique experiences, but also alter their interactive relations to theater pieces. Today's digital technology further makes performing arts something more than their earlier incarnations that could only evoke ephemeral feelings of presence. Virtual archive has empowered spectators to determine their preferred duration, perspective, and scene of the work they're viewing. Virtual technology has also gradually transformed the admiration of works that had been performed into participatory somatic experiences. Immersing themselves in a world detached from realities, spectators comprehend theater pieces not so much by conscious perception as through a world constructed from image-actor, stage installation, and immersive technology. Spectators employ body- mind fusion again to set out on a fantastic journey across the virtual universe, indulging themselves in the world of image-body interaction.

To the extend, the dialectic relationship between "liveness" and "virtual collection" of a digital performance work has become an ongoing conversation within the field of performance studies and digital humanities. On one hand, liveness is often seen as a crucial aspect of performance. Liveness refers to the fact that the performance is happening in real time, with both performers and audience members present in the same physical space. On the other hand, virtual technology allows performances to be preserved, archived, and distributed in new ways, and empowers spectators to determine their preferred duration, perspective, and scene of the work they are viewing. To the extend, this article attempts to examine the dialectic relationship between "liveness" and "virtual collection" of a digital performance by examining the conceptual-based practical and experimental VR Digital Collection of contemporary Taiwanese digital performance works titled "*Automated Marionette Project: Hsiao Ho-Wen*" (hereafter referred to as the *Hsiao Ho-Wen Project*) and "*Shou-You Liu's Shapde 5.5*." This article aims to explore artists' profound observations of the humanistic consciousness in the contemporary digital age, and how artists discuss issues related to their personal experiences, life situations, and explore the relationship between themselves and the concept of "memory." Furthermore, the article examines how technology artists use art objects to create spaces, and memory technologies such as reproducibility, quotability, and repeatability, to construct current experiences and preserve past experiences.

### **The Display, Collection and Restoration of Digital Art**

We all have seemed that the fusion of art and technology has become an artistic trend to be reckoned with at the dawn of the 21st century with unprecedented technological advancement. Following this global trend, "digital art" was introduced into Taiwan and started a creative craze. Digital audiovisual, the Internet, computer- based interactive multimedia, digital cinema, and VR have entered the mainstream of artistic development. For the field of contemporary art, it implies a new era in which "concept" is inextricably connected with "digital" (Wang, 2000). It is self-evident that, in contemporary museums or artistic institutions, digital media have metamorphosed into "collaborative art" that can be read in all its manifestations. Although digital art is deeply associated with technology, it has increasingly rejected to be "objectified" and tried to redefine the role as well as the ways of collection and display of artworks (Paul, 2008).

In recent years, the archiving and collection of techno art or transdisciplinary art have been brought into spotlight. The head of the MoMA's media and performance art department Sabine Breitwieser claimed, "collecting 'time-based new media art'" is not simply archiving an object (e.g., painting, sculpture). When it comes to archiving, no works based on the other media are more heavily relying on details than it. Clarifying the rights of use and understanding how to preserve new media artworks are equally important for art museums. In terms of the rights of use, art museums may exhibit, tour, and lend new media artworks, which entails more serious considerations than private collections do. Can we make backups of them? How to display them again? What is the rights of display? In terms of acquisition, we will purchase several pieces of backup equipment apart from the work per se, in order to avoid equipment shortage or production shutdown. In terms of electronic format, the quality, durability, and preservability of Digbeta are better than those of DVD. In terms of maintenance, digital archiving as the way of collection maintenance has been considered imperative for art museums. Besides, when the collected items are on re-display, the biggest challenge lies in how to keep the works safe and sound in face of the large number of visitors in MoMA" (Chen, 2011).

Haidy Geismar (2018) once argued that digital objects roam amidst digital files (i.e., the "noumena" that constitute digital objects) and technologies (display interfaces).

How can we understand the materiality of these digital objects? Conventional dichotomy of material and non-material is apparently no longer adequate, and ergo we must devise a new strategy to grasp digital media in museums. We must treat the digital as material rather than non-material, and meanwhile look for material traces in the relations between the digital and the analogue, information and material, system, and structure, as well as between knowledge and form.

### ***Archive or Alive Project***

The *Archive or Alive Project* is initiated by ET@T, founded by artist Huang Wen-Hao in 1995 to explore all possible art forms and nascent states of production in digital culture. ET@T's organizational mission is to blend concept and practice in a cooperative working environment and objectively observe and reach out to various communities in the contemporary art and techno art field. For almost past 30 years, ET@T has presented the unique characteristics of Taiwan's landscape and the figures through different art forms and perspectives. The organization's goal is to contemplate the connections within Taiwan, and between Taiwan and the world. ET@T hopes that its practice of applying professional knowledge into digital texts, theories, exhibitions, and performances derived from digital culture, will result in abundant experience.

This *Archive or Alive Project* is also dedicated to applying contemporary digital technology to the methodological construction and R&D of non-material archiving technique concerning performers' body movement. Breaking away from previous practice of single-perspective recording, this project provided a sweep panorama of the performer's whole body, insofar as to give the spectators a 3D stereo view of the performer's body movement. This article assumes that, apart from collecting existing objects, this archiving technique can be applied to comprehensively and objectively preserving works from different periods and the body languages that have not been systematically handled by the other archiving techniques yet; thus, we can channel unprecedentedly vigorous energy of art into our archival display with new technologies of data restoration and presentation. Premised on the aforementioned assumption, this research seeks to investigate the digital technology R&D and technological culture analysis accomplished in the *Hsiao Ho-Wen Project* and *Shou-Yuo Liu's Shapde 5.5* thereby explicating how this new performing arts genre transformed ephemeral art into a virtually archived work affording timeless admiration.

Practice-based art research, also known as artistic research or artistic inquiry, is a conceptual-based mode of inquiry that combines conceptual thinking, creative practice, interdisciplinary collaboration with research. It is an approach to knowledge creation that is rooted in the creative and artistic process, and seeks to generate new understandings, insights, and knowledge through the practice of artmaking. Practice-based art research involves the use of artistic methods, techniques, and processes as a means of generating and exploring new ideas, concepts, and perspectives. It often involves the creation of artworks or other creative outputs as a way of testing and exploring these ideas, and as a way of communicating the results of the research to others.

#### ***A. Shou-Yuo Liu's Shapde 5.5***

As a practice of performing arts, Shou-Yuo Liu's *Shapde 5.5* (2014) drew out meaningful and thought-provoking implications from a simple narrative structure. By means of bodily performance, soliloquy, vocal expression, and image overlapping, *Shapde 5.5* was replete with the intertextual imagery distinct from the performance and horizons of conventional theater, embodying the life cycle from born in light and shadow, via the feminine identity developed during coming of age, the autopoiesis of masculine attributes, and the resistance and struggle against aging, to the eventual demise. As a cultural narrative, Liu's body graced the stage. Amidst the four layers of white stretch fabric, his body not only exuded an aura of performativity, but also served as a vehicle for fragmented image narratives. In this work, he invoked the metaphors of a long scarlet dance skirt and suit and tie to represent female and male bodies respectively, so as to evoke the imagery of gender convergence. Besides, the four layers of white stretch fabric on the stage not only constituted the spatial context of this work, but also performed the tasks of capturing and presenting multiple images. Furthermore, the layers of stretch fabric were objects carrying symbolic meanings. Seemingly fragmented, the performer's body images were projected onto these layers of screen-like stretch fabric, as if they were flowing amidst these membranes, echoing one another, and permeating every corner of the stage (Chiu, 2019).

During the six-month implementation, this experimental research project revolved around *Shapde 5.5*, the chef-d'oeuvre of senior theater practitioner Shou-Yuo Liu, and developed the non-material archiving technique, based on which an archiving platform for body language was established. This platform will be helpful for archiving works of multiple performers as well as extending technological applicability and discursive scope. The project's presentation included dancer motion capture and restoration technology application. It also featured in the "Concept Museum of Art" (2019) at the Digital Art Center Taiwan that optimized performing arts archiving technique by integrating display technology with viewer experience. Therefore, the non-material archiving technique developed in this project not only focused on the audio-visual level—i.e., how the work is represented in high definition and verisimilitude—but also considered the spectators' viewing experiences in specific temporal and spatial conditions, rendering the work epochal in representation and contemporary for the spectators.

### ***B. New Vision Li-Yuan: Automated Marionette Project—Hsiao Ho-Wen Project***

"If we compare a dancer's body to a random-access memory (RAM) device, the dancer will become a puppet when someone writes a dancing program in his/her body. Now there is another puppet with similar memorizing ability to the dancer. We may wonder whether the dancer in the real world and the digital puppet capable of interacting and memorizing will cultivate a digitalized relationship of genetic evolution."

—*The creative statement of the Hsiao Ho-Wen Project*<sup>2</sup>

We've seen the untapped potential for our technologies and inventions in the present era, by virtue of which we can conduct avant-garde experiments, thereby ensuring the most radical aesthetic presentation of our creations. A vital issue has underlain the aesthetic practice of digital performance arts to date, that is, the dramatic tension between the live ontology of performing arts and the simulacra-oriented nature of mediatized, non-live and virtual technologies. "Experiment" is one of the characteristics of this tension that grows around performing arts. The experimental procedure disassembles the constitutive elements from an enduring, stable whole on the one hand, and outlines a vision of a new totality on the other. Such radical experiments yield results of generalization and synthetization. Another characteristic is "digitalization," an unstoppable momentum revealed in every detail of digital performance art and substantiated in the fact that what can be digitalized have been digitalized.

Choreographed in three different versions, the *Hsiao Ho-Wen Project* treats automated marionette as its proposition, integrates the live musical accompaniment with the heavy control table above the stage, and features the couple dance by Hsiao Ho-Wen and the android named Anne Huang. Its purpose is manifold, such as new media performance, interactive installation, and so forth. Apart from inventing an automated marionette to develop the interactive control technology necessary for digital performing arts, the *Hsiao Ho-Wen Project* lays greater stress on the investigation into the life experiences mirrored in the body as a vehicle of memories. "Anne Huang" thus becomes a concept, a creative idea of a time-travelling RAM. The dance programs accumulating in her body gradually evolve, repeat, circulate, and metamorphose, which ends up with numerous free bytes that are then replicated to a digital puppet—a virtual RAM, and addresses the question as to whether memories are proved indispensable for the existence of life.

The complete length of the *Hsiao Ho-Wen Project* is 50 minutes. Titled after the dancer Hsiao Ho-Wen and treating traditional Taiwanese marionette as the point of departure, this performance accentuates role-playing in three dimensions: replication, control, and simulation. The script structure can be divided into four acts, viz., "Then, I Become a Human Being," "Vector and Anti-vector," "The Temperature of Soul," and "Am I Hsiao Ho-Wen, or the Puppet Is?" Equipped with 21 control points and driven by 29 motors, the puppet can make various body movements such as squat, rotation, and moving horizontally in the illusory world of bytes interlaced by memories and history. As an automated marionette, "Anne Huang" bears more than a passing resemblance to a time-travelling bite that transcends all sorts of confines. Her/Its memories turn into countless pixels that illuminate high walls and eaves. The formless, flowing sleeves and the fine yet unruly hair appear in the peripheral vision of memories. Which one is the other's prototype? The dance theater tailor-made for the dancer and constructed with literary imagery is intended to weave a weird, disorderly relationship of manipulation between body and soul, which is interlaced by the past and the present as well as

<sup>2</sup> See the creative statement of the "Hsiao Ho-Wen Project," originally titled the "Anne Huang Project."

by the real and the virtual.<sup>3</sup>

Beginning with traditional Taiwanese opera and utilizing digital technology, the *Hsiao Ho-Wen Project* managed to identify the point from which it conjoins with contemporary sentiments. The digitally manipulated marionette interacts with the human dancer in an appealing, graceful, lithe, and gentle manner, hence a peculiar sense of harmony and aesthetics between them. They meanwhile bring a touch of conflict and tug-of-war. It is noteworthy that the movements and dance of the marionette are designed specifically for its interaction with the human dancer. Its body movements are detached from the inherent plot of an opera and turned into independent creative vocabulary integrated with machines, images, audiovisual, plastic art, and human performance.

### Virtual Collection and Experimental Practice-based Research of *Archive or Alive*

The relationship between digital technology and a work of art is twofold: “digital art” suggests that the artwork is digital and produced for a digital medium while “digitized art” refers to art that is reproduced in a digital form. Departure from this perspective, one can realize that spectators can easily have digitized image of authentic art when the existence of art moves from the physical to the virtual world; then, the dialectic discourse might be emerged to discuss how can a performance create an experience we will remember, even if we didn’t view it on site? How can people understand this specific piece of history with their absence? No matter how vivid the images and narrations are, it’s fairly difficult for people to have a feeling of empathy and to immerse themselves in the venue conveying a strong sense of rhythm; hence the question as to how we can preserve a performance venue (e.g., its space, music, lighting, and performer) in a way of capturing its essence. Through concessive projects under the theme of “Archive or Alive,” the idea ET@T proposed is that “the purpose of archive serves not only to conserve objects, but also to keep alive the artistic energy residing within itself in contemporary times.

#### A. Digital Archiving Development of Shou-Yuo Liu’s *Shapde 5.5*

To archive and represent Liu’s Solo Dance *Shapde 5.5*, the project team first asked the dancer to re-enact *Shapde 5.5*, therefore they could record his body movement in the form of a sweep panorama. Then the team discussed with the dancer on the ideal way to represent the archive according to the data output: inviting the spectators to wear VR glasses that allowed them to admire the work from different perspectives at will. The reason this project took *Shapde 5.5* as its case study was to offer professionals (e.g. dancers, researchers, and critics) and amateurs (e.g. spectators with no background in dance) a digital archive that affords repetitive, panoramic reading of the dancer’s body language, from which we expected to see pluralistic applications such as the disassembly and analysis of fundamental movement, the movement learning and training, and the presentation of restored images with VR display devices. This project restored the dancer’s body language with digital technology, which created inimitable digital narrative experiences for the spectators. The major experimental steps shown as follow:

#### 1. Scene Reconstruction



**Fig. 1 Scene reconstruction**

Source: Et@t

According to Liu, the reason he treated the three parts of his solo dance in *Shapde 5.5* as the target of his experiment was because this work represented the results of his exploration and accumulation on bodily performance over the past three decades, unveiling not only his innermost consciousness inside out, but also the relations between the human body and objects (material and non-material): body vs. motion, body vs. nakedness, body vs. costume, body vs. objects (stage props), body vs. sound, body vs. consciousness, and body vs. space-time. Apart from Liu’s bodily performance in *Shapde 5.5*, his “improvisation”— his choreographic originality— was archived as well. With

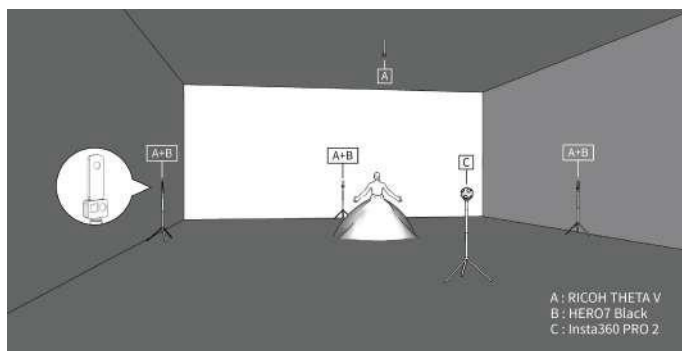
<sup>3</sup> The author is grateful to Huang Wen-Hao from the ET@T for providing related textual and image materials

the assistance from the “Body Phase Studio”<sup>4</sup> in 2018, ET@T and

Liu spent nearly 6 months reconstructing *Shapde 5.5*, including the stage, lighting, projection, and music of its three parts, as well as the rehearsal, recording, panoramic view editing, and VR interface making (Fig. 1).<sup>5</sup>

## 2. The Multi-angle Recording of the Dancer and the Stage Setting

ET@T recorded Liu’s solo dance from five different angles with a total of eight cameras, including an 8K 360° camera above the stage, four 4K 360° cameras (downstage left and right, upstage left and right), and three 4K 2D cameras (on the ceiling and downstage left and right). The dancer shuttled amidst the four layers of stretch fabric on the stage as they were fluctuating with the music and plot. Having mass and quality, the stage was rheological and present from beginning to end. The dancer sometimes stepped on the layers of fabric, and sometimes hid behind them. The spectators will have different experiences if they admire the performance downstage or from the sides of the stage. Therefore, the multi-angle recording ingeniously and appropriately afforded a panoramic stage and a bird’s eye view that would be impossible with a conventional proscenium stage (Fig. 2).



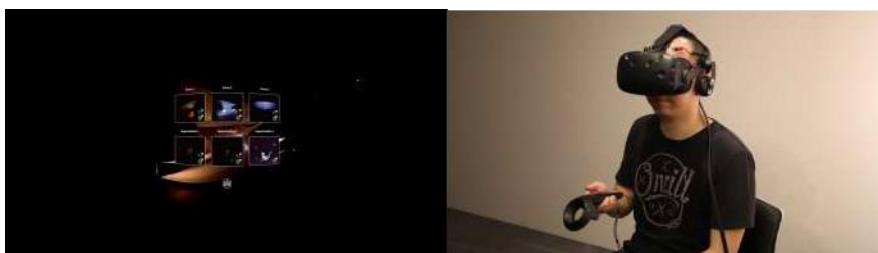
**Fig. 2 The Multi-angle recording**  
Source: Et@t

## 3. Video Production

Given the limited time for recording and the impossibility of simultaneously monitoring the eight cameras, ET@T and Liu recorded the bodily performance and improvisation in *Shapde 5.5* for four times, from which they selected the finest one. Dancing to nobody’s tune, such an unmonitored performance brilliantly echoed Liu’s philosophy underpinning the creation and rehearsal of this work in 2014.

## 4. The VR Interactive Experience—Seat + Handheld Sensor

The overall result was exhibited in the Concept Museum of Art at Digital Art Center, Taiwan. The



**Fig. 3 VR user and screenshot of menu**  
Source: Et@t and DAC.tw

exhibition invited the spectators to take seat while selecting and viewing their preferred parts of virtual image (Fig. 3).

Both the analysis of *Shapde 5.5* and its applications in performance design and artistic creation would be impossible without the 3D stereo view of the dancer’s body movement

recorded with the sweep panorama technology. Given the existing logic of art exhibition and the current schedule of technological R&D, this project not only integrated the “archived body language” with the “archive-generated personal digital narratives,” but also involved techniques of archive display, aiming to

<sup>4</sup> The Body Phase Studio was founded by Mo-Lin Wang in 1991. In 2005, the Guling Street Avant-Garde Theatre Executive Committee was founded by the Body Phase Studio to operate the Guling Street Avant-Garde Theatre. *Shapde 5.5* was staged at the Guling Street Avant-Garde Theatre in 2014, organized and executed by the Body Phase Studio. (Quoted from the Special Issue of GLT Magazine on the 2014 Performance)

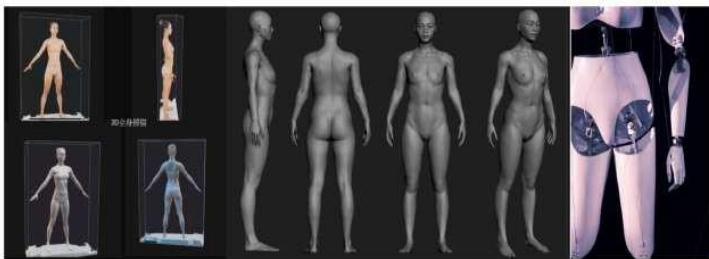
<sup>5</sup> On 14 August 2018, the C-LAB announced the grant-winner of the first CREATORS. ET@T’s proposal “Archive or Alive: The Digital Archiving Development of a Solo Dance by Shou-Yuo Liu” won the grant of NT\$ 1,000,000. It took them five and a half months to complete this project until 31 January 2019

experiment with the technique and discursive design regarding how a performance is “exhibited.”

### **Digital Presentation Of *Hsiao Ho-Wen Project***

The *Hsiao Ho-Wen Project* decomposed experiential phenomena into symbolic bits, making each part of the performance rely heavily on this new form of digital presentation. This project not only altered the standard way of presentation on stage and redefined the accepted role of puppeteer, but also de-centered human actors who used to be the protagonists in regular theaters, thereby embodying the radical aesthetics of contemporary digital performance arts and creating a technological spectacle of new-fashioned interdisciplinary creation. After the sudden death of Hsiao Ho-Wen, the Artist, Huang Wen-Hao, determines to make a new piece of art concerning the digital double of dancer to memorize Hsiao Ho-Wen. This practice-based research would like to discover the practicality of virtual reality, which is called anew ontological technology, taking the example from original work of Automated Marionette Project: Hsiao Ho-Wen and attempts to break away from traditional practice of single-perspective recording. The demonstration of the steps of virtualization of *Hsiao Ho-Wen Project* are:

#### **1. Body Scanning of Dancer and Marionette and Face Modeling**



**Fig. 4 Body scanning and modeling**

Source: Et@t

The steps include body scanning, modeling, material adjustment (including surface simulation of special materials such as eyeballs, hair, clothing, etc.) rigging with the body or face, light source and reflection calculation, object and 3D environment simulation, hair, and muscle dynamic simulation, etc. (Fig. 4).

#### **2. Capturing Motions and Movements**

After the body modeling of the two dancers are completed, the next step is to use "motion capture" technology allowing the models to perform actions, measuring, tracking, and recording the motion trajectories of "digital objects" in three-dimensional space. The optical system works by tracking position markers or 3D features, and then combines the collected data into approximate movements of the actors. Active systems will use luminous or flashing markers, while passive systems will use non-luminous objects, such as white balls or painted dots. The existing motion capture equipment has been developed to be less heavy and more convenient, such as the use of 2D mobile phones to carry apps, without the use of other hardware, studios, or sophisticated sensor devices to generate dancing 3D models (Fig. 5).



**Fig. 5 Motions and movements capture**

Source: Et@t, Solid Memory

#### **3. Scene Construction**

The five steps of building a model are: image information capture, single scene construction, scene linking, repairing, and mapping. The stage scene of the Automated Marionette VR project is a black stage without scenes and props, as well as lighting changes and projection animations required by the plot.

#### 4. Sound and Image Production for Virtual Reality

After the above materials are prepared, the follow-up procedures including “transition,” “Stabilization,” “Pacing,” “Rotations,” and “3D Audio / VR audio.”

Undoubtedly, digitality is one of significant essences of digital performances, and so is the body. Digital technology is ingeniously used by digital performing artists, and they also use digital technology as a creative means to explore the body. because the characteristics of the digital medium pose a number of challenges to the traditional art world, not least in its presentation, collection, and preservation, the phenomenon of digitized artworks needs to be examined more seriously for the art world and the artworks themselves. Here, the arts exist not to be viewed in the sense of temporal succession within the architectural space, but digitized images are produced by the asynchronous interaction of the spectator with the computer program created by the computer specialist.

##### **Technological Embodiment: Digitized Images in Virtual Space**

As Ron Burnett (2004) points out, visualization is about embodiment and the transformation of information into knowledge and understanding through human activity and the conversion of information into knowledge and knowledge by humans into material and aesthetic forms. The digital techniques entering contemporary fields of image production are furthering the expansion and refinement of the culture of image and form, and are bringing a culture of symbolic exhibition and consumption. As a result, the physical bodily existence of originality, of the digitized virtual image, and of the space in between are central to examination. In this context, the role of a digitized image is as a provider of meaning and as an aesthetic object. Images are mediators between all the different layers of what are increasingly complex image-worlds. No technology has had a greater influence on this unfolding history of images than digital form. Digitization of artwork combines all media forms and is a synthesis of language, discourse, and viewing. A digitized art image is not one isolated expression among many and is certainly not just an object or sign. In other words, digitized art images are the outcome of vast and interconnected image-worlds.

Digitized art becomes controversial because of this problem that arises when the physical body of an artwork is thought about as a series of codes, pixels, and signals. Digitized images are one of the most fundamental grounds upon which humans build notions of embodiment. Images, for this reason, are never simply framed by their content. The excess that this process is a direct result of what humans do with digitized images, as they incorporate digitized images into their identities and emotions. Digitized images are used as props to construct and maintain the legitimacy of originality by humankind. It is as if original works of art could not exist without the duplicated images that surround most cultures. The translation of human sight into various forms of expression suggests that vision and images are interdependent. This “human-technology-art” relation is undoubtedly represented in the digitized form of artwork because new digital communications technologies initiate new spatial practices. Digital imaging capabilities open-up unprecedented critical challenges to the visual field. The computer can produce completely artificial images that provide a logical model of visual experience and are indistinguishable in appearance from photographs.

Digital technology obviously is rooted in our *Lebenswelt* (lifeworld). Visual art scholars and other art viewers who are facing this challenge of digital technology may both like and dislike, or agree and disagree about, this most current means of reproduction. Most people like digital images because those images can easily be reproduced and viewed around the world, especially during the global pandemic period. The same group of people, however, dislikes the limitation of digitized images because their visual presences somehow are not accurate, such as colors and scales of artworks are changed. As a result, visualization technology such as computers and other graphic tools make up one of the most developed areas of digital tools, and are the fundamental technologies usable to convert this expanded sensation to a form that the human being can access. The digital simulation capabilities of the computer create a break with the paradigm of representation we have followed since the Renaissance. The digitized form has the capability of combining sound, text, and image within a single database. The image no longer resides in the visual field but in the database of cyberspace, and this system represents a major advance in providing new visualization in our contemporary *Lebenswelt*.

The new visualization develops a new way of connecting the environment to the human senses. The

digitized artwork has significant characteristics by nature of its form. The computer digitizes electronically scanned information about a work of art and transforms it into numerical data, which can be made visible as imagery. In other words, a digitized work of art is then a representation made through encoding information about the lights, darks, and colors of reality captured and digitized through any kind of lens or scanning procedure. Once the lights and darks of a digitized artwork have been reproduced by the computer into its numerical data space, its picture elements or pixels can be controlled individually. They can be altered, manipulated, weighted, warped, or repositioned to create not only a simulation of originality, but also an artificial or parallel “virtual” reality. As a form of digitization, the digitized art image in cyberspace is the object it signifies in its subjects, which is beyond the screen, pixels, and virtual environment. As in the perception of digitized images themselves, it is a matter of contemplating, of perceiving the digitized work of art by way of the silent signals that come at us from its every part. These signals emanate from the traces of the image set down on the digital archive, until such time as that they come to form a tightly programmatic structured arrangement in which one has the distinct feeling that nothing is arbitrary. Thus, we cannot simply say that digitized art production exists only as an immaterial image structure or accumulation of data, without physical substance, because digitized artwork leads necessarily to the physical form of the artwork and maintains a physical presence within a perceptual field. A digitized artwork provides a logical model of visual experience. To this extent, the artwork itself is embedded in digital data and software in the digitized form of art, and it is embedded in the technological surrounding that is directly accessible to the human senses.

The aim of mechanical reproduction doubtlessly is to produce copies that are indistinguishable from an original in as many ways as possible. The gallery or the museum is fascinated by this technological advancement. The proliferation of mechanical reproduction helps these institutions reproduce art images. The spectator sees more advanced technology in today’s internet. Digitized artworks give spectators more opportunities for seeing practice. The rise of seeing practice was also accompanied by the increasing emphasis on the visual since the end of the modern era. Within seeing practice of phenomenological perception, this seeing practice demands a bodily motion, a temporal fixed place for the object, an enhancement of the visual, and the privileging of an elevated visual position. This seeing practice is implicitly taught and followed but is never explicit. It becomes a way of “being-in-the-world,” especially within digital visual culture. We have seen this seeing practice as a proliferation of ways of viewing, and it now becomes metaphorical of the image technologies of the present (Ihde, 1993).

*Archive or Alive* projects revealed multi-perspective horizons in virtual archiving. Firstly, different from traditional moving image, *Archive or Alive* projects not only gave prominence to imagery elements, but also opened new possibilities for multiple screens and plural images with the assistance of digital technology. Besides, dissimilar to the conventional function of cinematographic machines, this experimental work allowed the spectators to discuss its charm from multiple perspectives and indulge themselves in the immersive sound field. Finally, distinct from the common agenda shared by works of video art, this project granted the spectators preference-based option. It is clear that digital technology has directly impacted the analysis of theater and performance, particularly in terms of presence, documentation, and spectatorship. Digital technologies such as high-resolution imaging, motion capture, and data analysis have not only refreshed the spectatorship and scholarly interpretation of contemporary media and performance, but also influenced art collection methods as well as the plans and roles of art museums.

In addition, *Archive or Alive* projects enabled the spectators to admire its “liveness” virtually in different space-time relations and invited them to consciously get involved in this “event” with their bodies and senses. There was no such thing as a “perfect” angle of admiring this work when the spectators entered the realm of this machine- image performance and roamed the venue. To put it another way, the spectators experienced this work in a reality constructed in an abstract and symbolic fashion. They gave feedback, making movement and space meaningful components of their experiences. The (syn)aesthetic experience thus found expression in the abovementioned process. Somatic reactions dominated sematic interpretations in this immersive performance that involved all human senses. Employing the strategy of virtual immersive spectatorship, *Archive or Alive* projects allowed the spectators to associate their memories of viewing with their present admiration, hence the continuation of the somatic-sematic relation, a distinguishing attribute of virtual archiving (Bay-Cheng, Parker-Starbuck, & Saltz, 2015). *Archive or Alive* projects highlighted the characteristic of database-based performance that transforms “performance” into “archive,” so that people no longer miss any piece they want to see. As Bay-Cheng, Parker-Starbuck, and Saltz (2015) pointed out that we are undoubtedly in the midst of the “post-archive moment,” in which an archive metamorphosed from a

collection of objects into a database of them. *Archive or Alive* projects was exactly situated in the dialectical relation that databases dominate, overwhelm, and replace the text of liveness.” This viewpoint coincided with Lev Manovich’s notion of database— a database is “a cultural form of its own”(Manovich 2007). As a cultural form of the contemporary digital generation, *Archive or Alive* projects represented the world as an inventory and refused to order the items in it. These projects simply demonstrated an aggregate of materials and left the rest to the spectators’ participatory autonomy. In these projects, technological media produced the illusion of presence (liveness). The project didn’t really present the body on-site, but vividly showed the human body, objects, and scenes in a way as if they were “present” at that very moment.

### **New Image Politics of Arts in the Digital Age**

Undoubtedly, notions of technology as those artefacts of material culture that we implement are represented in various ways within our environment, and gradually affect human behaviour, perception, and ways of understanding. Among them, “writing” is transformed into a digitally endless text space, speech is spatialised, and a human’s autonomous body is also handed over to automatic digital devices. Thus, we have lost our critical reflective thinking on the techno-system, constructed by human beings, in which we live because technological interventions in daily lives are taken for granted. As Bernard Stiegler (2009) has mentioned, we are living in a “timeless era” in which time is still flowing, yet it does not constitute a pure age with heritage. Instead, it is an era that humans have named after themselves, and human activities on the surface of the planet have overlapped with each other in synchronous recursion. It signifies that humans not only dominate the bio-ecology on the earth, but also directly affect the geological time scale of the earth. Within this relatively complex epiphylogentic ecosystem, the industrialization of memories has skewed linear thinking and abandoned mankind’s existing perception of time. Humanity’s system for imagination and its nervous systems are also expanding due to the communications industry. New systems are constructed in the world through the use of technology-derived structures, as they dwell in an era where the analogue, the digital and the biological are merged. In other words, humanity’s corporal and perceptual intentionality is being transformed as technology is no longer just an independent entity. Furthermore, a kind of paradox emerges with how people should use their bodies to feel and how meaning could be constructed in this human-technology relationship.

Maurice Merleau-Ponty (1962) pointed out that every human experience is one of a kind. As an integrated entity, digital images of art per se in long-distance appreciation faithfully reflect the status quo of the new technology of digital reproduction and its relation to the late-capitalist society (or post-modernity). In the new order of digital culture characterized by image reproduction and salient intertextuality, the focus on technology and form has taken precedence over that on substantial contents, and images have become intensely controversial. Following Walter Benjamin’s discursive context, we may wonder whether digital images of art have also become a symbol that peddles the new cultural values of our society. People begin to present artworks with display technology, and the viewers’ participation in meaning interpretation is a necessary commodity if we are going to produce and embody the symbolic value of artworks. As long as the concept of symbolic value is intimately related to our socio-cultural practice, we must contemplate the meaning of digital images of art as a symbol and how they obtain their symbolic value equivalent to the value of originals.

Artists’ originality is the most fundamental prerequisite for revealing the nature of art. Many debates revolve around art in order to work out a way of survival for it. Debbie Hall (1999) held that the new technology-based reproduction has altered the nature of artworks and our perception of them. New media and digital images have become the primary mechanism of virtual spaces. They create a virtual environment in which all visual, audio and linguistic elements are consumed, transformed, and interconnected ambiguously. The public start to approach traditional artworks through digitally reproduced images, so that virtual exhibition spaces are turned into special yet easily accessible environments. However, what concerned Hall is twofold. On the one hand, replicas replace the aura and authenticity of originals, extend the display ritual, and disenchant cultural values. The consequence has become apparent in people’s aloofness from how the textures, lines, and colors of artworks stimulate their senses. On the other hand, the emergence of digitally reproduced images enables originals to regain their sublimity.

## Conclusion

By combining physical objects and digital devices with virtual images, these artworks transform art objects and rearrange images derived from memories, and ask the question: which memories are real within one's personal experiences? Recollections for the once prevalent objects produced through massive industrial activities conducted in the not-too-distant past are sparked by these sites constructed using ready-mades and with replicable, referenceable, and repeatable memory-oriented techniques to indicate the Epoch where "the past continues in the future" and "residual memories" and "artificial recreations" are observed. These creations from the era of industrialization not only constitute the present experience with the use of possible visions for the future, and they also pass on experiences from the past, with traces accumulated from the knowledge from the past civilization presented.

Undoubtedly, new technologies have affected not only the electronic dimension but also the emotional and spiritual ones, because the contemporary society will eventually incubate a perfect fusion of technology, art, and culture. In this unique phenomenon, electronic media and computer science integrate cultural aesthetics with the concept of mechanically reproduced data, while cultures are constructed as reproducible information or data (Rutsky, 1999). It indicates that, since the age of mechanical reproduction, visual arts are no longer what they used to be. Images of artworks are thick on the ground around us, but not images of originals. As print media get increasingly popular, capitalists have attached great mystique to artists or artworks. Thus, electronic media again appeal to people's senses and transform visual arts into a symbol.

In the 21st century, the Internet serves as the primary channel for people to exchange information and find satisfaction. Today, the representation of visual arts even transcends that in the age of mechanical reproduction because visual artworks can be reproduced and circulated online, and nearly all physical museums in the world have their virtual avatars on the Internet. Reproduction technology has facilitated the popularization of art, and artworks have been taken to the new frontier. However, the authenticity and aura that replicas lack can be found only in precious originals. In spite of the fact that ritualistic meanings have declined in importance in the contemporary society, the ritualistic value of the aura that surrounds traditional art is retained in the original physical spaces of art, whereas the digitally reproduced art and the artistic display in the virtual world still put a premium on their exhibitory value, so as to reflect the political implications and authenticity of originals.

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