Re-Format It: Techno-Logic

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Introduction

The music video for 'Technologic,' a song from the album *Human After All* (2005) by the French electronic music duo Daft Punk, will provide a starting point by which to consider the notion of format.[1] The video features the two band musicians donning their trademark robot masks and, in a rigid robot-like fashion, playing their electric guitars. Located between the pair is a robot, not a human wearing a robot mask but a doll-like, digitally controlled, robotic puppet that narrates the lyrics in a computer-generated voice. These lyrics, often projected on a screen, re-present technological procedures/processes that allude to the digital image of the twenty-first century (even whilst appropriating older media, the cathode ray tube television for example). The processes consist of a repetition of actions: "Plug it, play it, burn it, rip it, drag it, drop it, zip, unzip it, touch it, bring it, pay it, watch it, turn it, leave it, start - format it."[2] The chorus – a repetition of the word techno-logic – the defining word that encapsulates all the others, is preceded by the only word amongst the series of action commands that is emphasised: *format* it. It is emphasised by a deliberate and distinct pause and accompanied by a fold in the musical composition that anticipates and pronounces the word(s) techno-logic (or rather techno... logic). 'Format it' always precedes 'technologic.' The video editing mirrors the frenetic pace of the digitised voice narration. The edited shots range from close-ups of the puppet's face and mouth to medium shots and sequences where the puppet sees itself on a television screen performing the song. Within the video, the cathode-ray tube colour television monitor and the mosaic-like vertical pattern it generates evoke pre-digital visual imagery that are in the process of being re-appropriated by the digital.[3] Whilst older media are referred to, the verbal signification is a harbinger of an electronic era that appropriates these older media formats. Through this act of appropriation, digital media are in the process of producing their own form. Informational circuitry finds its expression through the verbal pace of enunciated commands that transpose any linear structure. Zip, surf, drag, scroll, zoom are some of the recurring action commands. In *The Language of New Media,* Media theorist Lev Manovich

[1] Bobtron, "Daft Punk – Technologic," (YouTube, June 2015), 04:51.
[2] Ibid.
[3] Within the video there are other references to older media formats, this includes for example the 'special presentation' title sequence that refers to 1980s opening sci-fi film credits and television programs as well as to video game graphics.

explains in respect to the language of computer-based commands that the "human-computer interface includes ways of manipulating data, that is, a grammar of meaningful actions that the user can perform on it."[4] These commands thus resemble "ways in which the user interacts with the computer."[5] The non-hierarchical image of information is adequately captured by the enunciated action 'format it' that signifies and activates a constant 'flickering'[6].

The short video prompts, via different overlapping media (sound composition, visual editing and lyrics, juxtaposed references to both digital and analogue media), a re-consideration of contemporary media operations as becoming increasingly both a.) independent of a fixed space and time and b.) not (always) necessarily converging with one another. The importance attached to the word format in the music video is telling in this respect. According to the Oxford English Dictionary format is defined as:

> Noun
> 1.The way in which something is arranged or set out.
> 1.1 The shape, size, and presentation of a book or periodical.
> 1.2 The medium in which a sound recording is made available.
> 1.3 *Computing* A defined structure for the processing, storage, or display of data.
>
> Verb (formats, formatting, formatted)
> 1 (especially in computing) arrange or put into a format.
> 1.1 Prepare (a storage medium) to receive data.[7]

These multivalent notions of format might begin to inform a contemporary understanding of 'technologic.' Jean-François Lyotard in his paper on 'Logos and Techne, or Telegraphy' states that current technology "is thus, through its specific manner of inscription, indeed productive of a sort of memorization freed from the supposedly immediate conditions of time and space."[8] If memorisation is freed from immediate conditions of time and space, via new media formats, then how might we re-consider the space of the perceiving body and by extension our understanding of architecture? The same question of *format* haunts architectural representation in face of the new 'techno-logic' inherent in visual media. If the visual image of the self, and its actions

[4] Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 69.
[5] Ibid.
[6] See 'Chapter Two. Virtual Bodies and Flickering Signifiers' in N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 24–49.
[7] English Oxford Dictionary, "Format," accessed 7 June, 2017, https://en.oxforddictionaries.com/definition/format.
[8] Jean-Francois Lyotard, *The Inhuman*, trans. Geoffrey Bennington and Rachel Bowlby (Cambridge: The Polity Press, 1991 [1988]), 50.

are being re-*formatted* as part of a digitised process, so too are the durational, lapsed and looped spaces that the self occupies. In this article I will attempt to explore through the *diplorasis* – a custom-made media installation of my own making – how the space of the perceiving body is affected by digital media formats.[9]

      The initial section **Code It: *Diplorasis* – Autoscopic Perceptual Machines** will outline the functioning of the *diplorasis* in order to account for the split between the body and its projected image that is induced within the installation setup. This will then lead to **Write it: The Now** where the past presence generated by the *diplorasis* will be explored in relation to Lyotard's writings on time and consciousness. In the following section **View it: From Duchamp's *Étant donnés* (*Given*) to Akamatsu's *Time Machine! Version 5***, the understanding of the spatio-temporal body will be re-thought in relation to the temporality of vision. Marcel Duchamp's Étant *donnés* and Akamatsu's *Time Machine! Version 5* provide useful cases where visual media formats trigger a paradoxical notion of time. These visual installations incorporate particular media assemblages, yet they reverse some of the limitations that are inherent in these particular media (linear perspective, video playback). This reversal occurs by actively involving the body within specific media formats. The final section of the article, **Re-format it: Architectures of the Contemporary Body**, aims to re-think architecture through the provocations offered by techno-logical new media formats and their incorporation within the perceptual/cognitive body. The temporal explorations offered by Duchamp's ***Étant donnés*** and Akamatsu's *Time Machine! Version 5* might thus become extended and transformed with new and emerging media (as is the case with the *diplorasis*).

Code It: Diplorasis – Autoscopic Perceptual Machines

The *diplorasis* is a multi-media installation/device of my own making (2014-2019). The installation – located inside an abandoned house in Nicosia – is essentially a constructed corridor (Fig. 1).[10] The corridor (6 metres x 1.2m x 2.4m tall) made from timber struts holds up more than 120 mirror panels (most of these measure 60 x 40 cm). The inside of the corridor, excluding the curtain entrance, and a sandblasted translucent glass panel (located at the far end) is composed entirely of mirrors. The outer shell of the corridor – the exposed

[9] The *diplorasis* was developed as part of my doctoral research entitled *Mediated Visualities: Architecture Representation and the Digitized Body* (2019). Production was supported by Savvas Socratous (hardware/software engineering), George Athanasiou (photography) and Andreas Laoutas (electrical engineering consultancy). Visual material can be found at http://www.para-sight.org/installations-devices/4589953031. The description of the *diplorasis* has been presented in conferences, publications and featured in an exhibition. Earlier stages of its development have been exhibited at the Acadia 2016 Exhibition and published in the accompanying exhibition catalogue. *Posthuman Frontiers: Data, Designers and Cognitive Machines*, University of Michigan, Taubman College; George Themistokleous, "Diplorasis: The Other Side of Vision," in *Acadia 2016 Posthuman Frontiers: Data, Designers, and Cognitive Machines: Projects Catalog of the 36th Annual Conference of the Association for Computer Aided Design in Architecture,* ed. Kathy Velikov, Sandra Manninger and Matias Del Campo (Acadia Publishing Company, 2016), 146–51. See also: George Themistokleous, "Image as Virtual Construction," in *Inter- fotografía y arquitectura / inter-photography and architecture,* ed. Rubén A. Alcolea and Jorge Tárrago Mingo (Pamblona: Servicio de Publicaciones Universidad de Navarra, 2016), 190–99; George Themistokleous, "Mediating the Interval," in *Image Temporality: The Relation of Time, Space and Reception of Visual Media, Yearbook of Moving Image Studies (YoMIS)*, ed. Lars C. Grabbe, Patrick Rupert-Kruse and Norbert M. Schmitz (Darmstadt: Büchner-Verlag, 2017).

[10] The house is a single storey residence (built in 1948) located in the area

timber frame - contains eight DSLR cameras. The juncture between the outside and inside is negotiated via two-way mirrors.

Upon entering the mirrored corridor, the participant observes the sandblasted translucent panel at the far end of the corridor. This panel vaguely outlines a mechanical instrument that lies behind it (Fig. 1). Within this glass panel is a cavity in the shape of a human head with two peepholes (Figs. 2, 3). The participant walks towards the screen and positions their head inside the wall cavity. When the participant looks through the peepholes, they encounter a stereoscopic projection of themselves from a previous position inside the corridor space of the installation (Fig. 4). The stereoscopic images are then being replaced with another view of the participant. As the images change, they become increasingly misaligned and manipulated (Figs. 5, 6). When viewing the projected images, the visitor becomes aware that their image was captured when they were walking along the corridor, that is in the space behind them (at the very moment when they see themselves). The photographic cameras within the device are attached to sensors and have been programmed to capture different views of the moving participant, and then to digitally split (and in some cases manipulate by warping) the images before sending them to LCD screens that project the image back to the participant. The cameras are placed on the reverse side of the mirrored corridor and have been concealed from the participants' view via two-way mirrors (and controlled lighting conditions).

of Agios Andreas, Nicosia. The abandoned house was until recently inhabited but due to structural damage the owner decided not to continue renting it for tenancy. It is located less than a kilometer from the UN controlled buffer zone but shouldn't be confused with the abandoned buildings that are located in (and near) the buffer zone, and have been deserted since 1974.
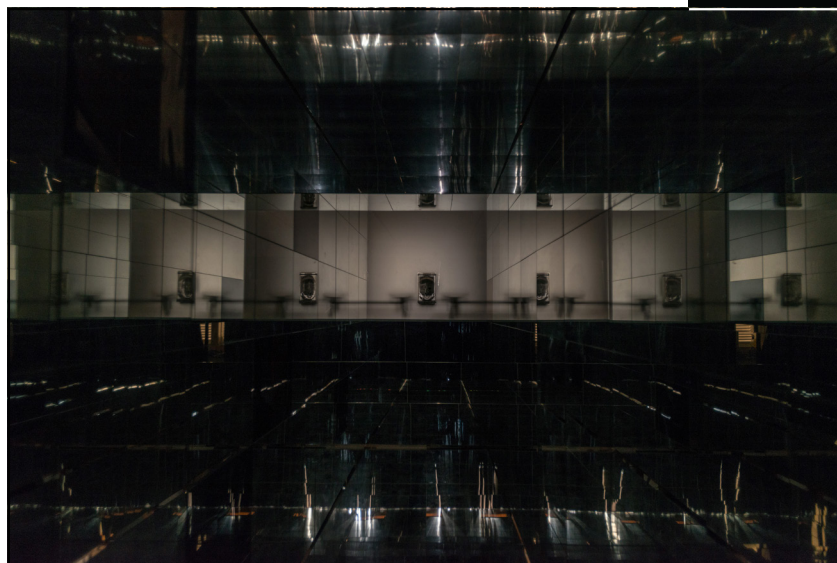

Figure 1: *Diplorasis, 2018, mixed media, dimensions: 700cm x 290cm x 320cm (external dimensions), photograph by George Athanasiou, private installation, Nicosia, Cyprus.* George Themistokleous.

Figure 2:
Diplorasis, cavity - made from acrylic sheets - for positioning human head with two peepholes, the projected screen-images on either side would be projected on-to the mirrors, 2017, collage photograph by author, Nicosia, Cyprus. George Themistokleous.
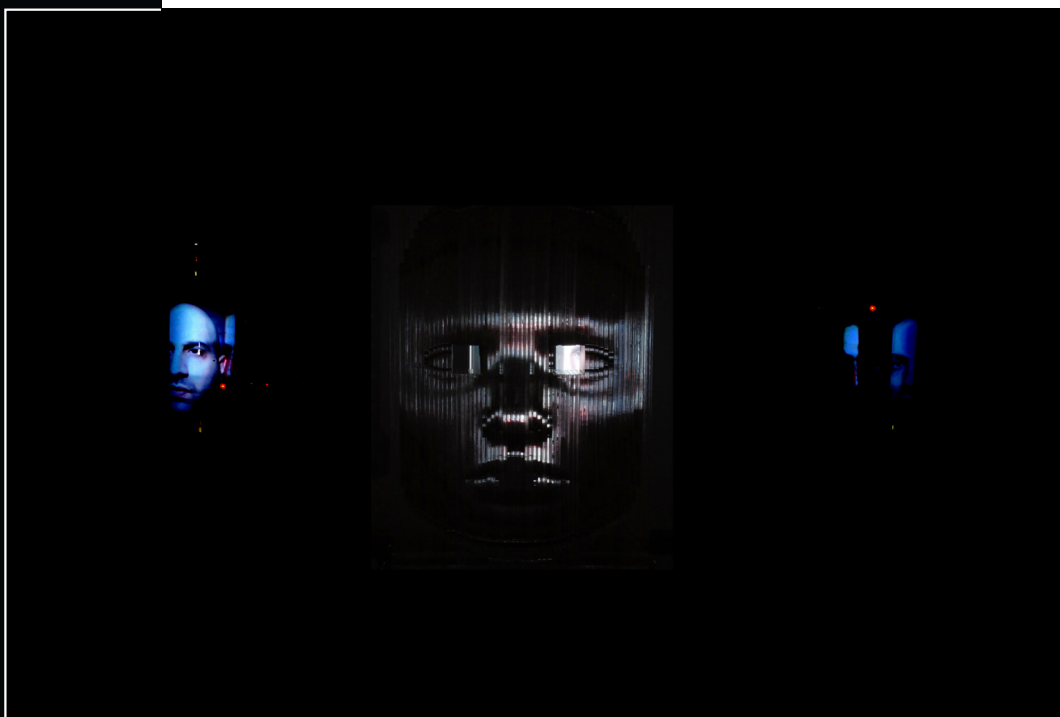

Figure 3:
Diplorasis, view of projected stereogram through one eye-hole, 2018, photograph by author, Nicosia, Cyprus. George Themistokleous.

Figure 4:
*Diplorasis,
stereograms of
participant.
2018.
Automated
digital recordings.
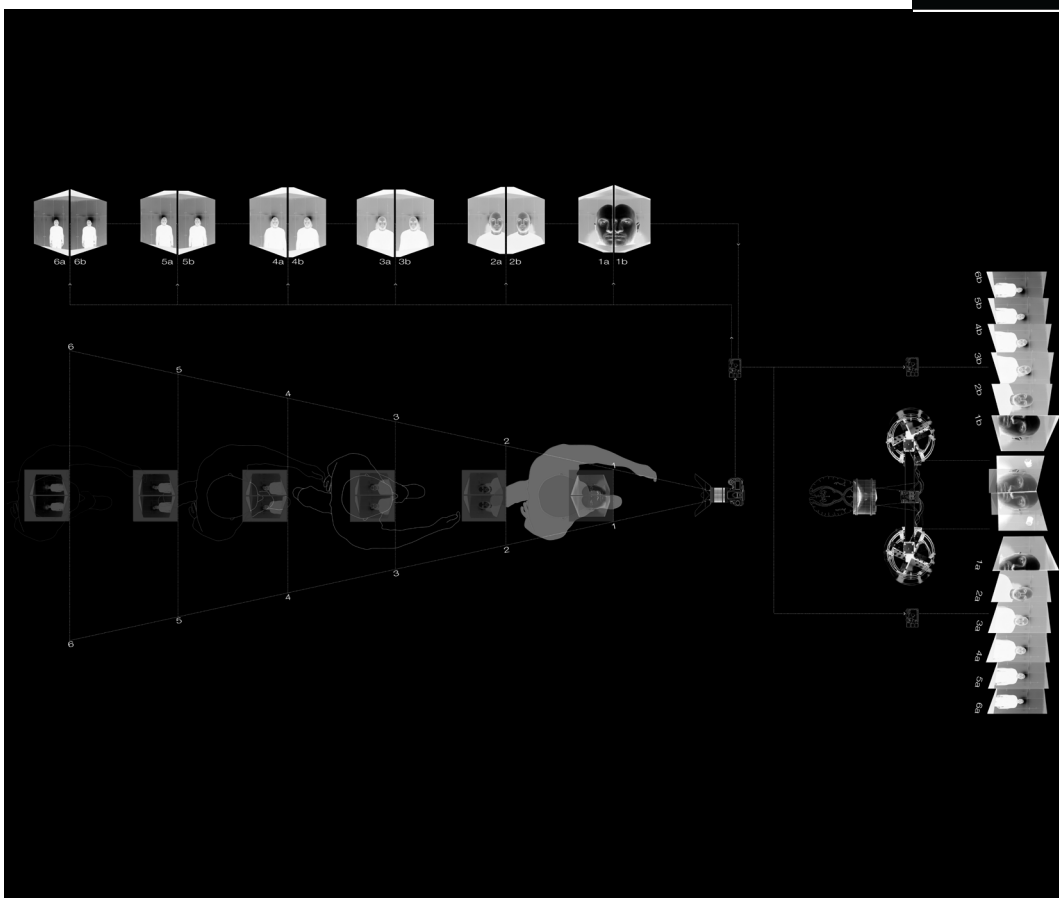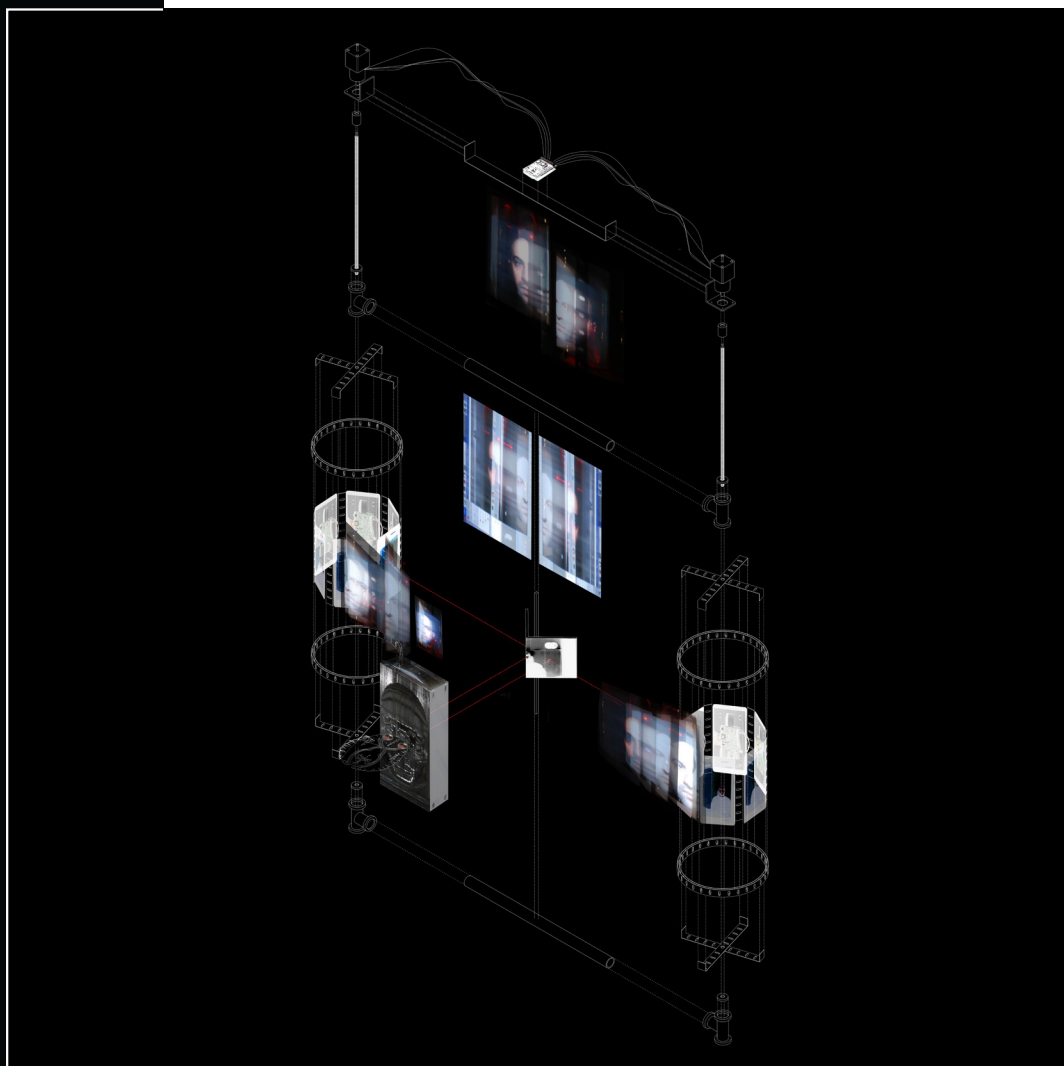Nicosia, Cyprus.*
George
Themistokleous.

Figure 5:
*Diplorasis
plan diagram,
prototype
version 2,
2016,
digital drawing*
George
Themistokleous.

Figure 6:
*Diplorasis
exploded isometric
collage,
prototype
version 2,
2016,
digital drawing.*
George
Themistokleous.

[11] The *diplorasis* utilises the
Wheatstone stereoscope,
invented by Sir Charles
Wheatstone in the
1830s. For more on the
Wheatstone stereoscope see
Jonathan Crary, *Techniques
of the Observer: On Vision and
Modernity in the Nineteenth
Century* (Cambridge, MA:
MIT Press, 1990).

The installation uses various software and hardware processes (DSLR cameras, stepper motors, LCD screens, Arduino microcontrollers, Raspberry Pi computer chips, ultrasonic sensors, programmable LED lighting, network router) that are set up in relation to the configuration of on an older medium, the Wheatstone stereoscope, invented in the 1830s.[11] The Wheatstone stereoscope frames and separates the eyes in order for each eye to view one of two corresponding but slightly misaligned images that is projected on the mirror placed directly in front of the separated eyes (Fig. 7). Thus, each eye independently receives the image projected on the slanted mirror it faces, causing the mind's visual cortex to attempt to bridge the gap and overlay the two images. This operation reveals and emphasises the transition from distinct dual monocular reception to the binocular fusion in the mind. The

image that is induced in the mind, by bridging the two distinct but related images, becomes an image with three-dimensional 'depth.' The stereoscope is a device where the relations between referent and represented image are discontinuous. The stereoscopic image within the *diplorasis* aims to extend the Wheatstone stereoscopic operation by attempting to incorporate a digital feed of the viewer's own body as they have just passed through the installation space. The uncanny closeness of a neutral image 'out there' evoked by the Wheatstone stereoscope is now subverted as the digitisation of the image allows for the unexpected self-projection and self-manipulation; the device becomes an auto-scopic machine.
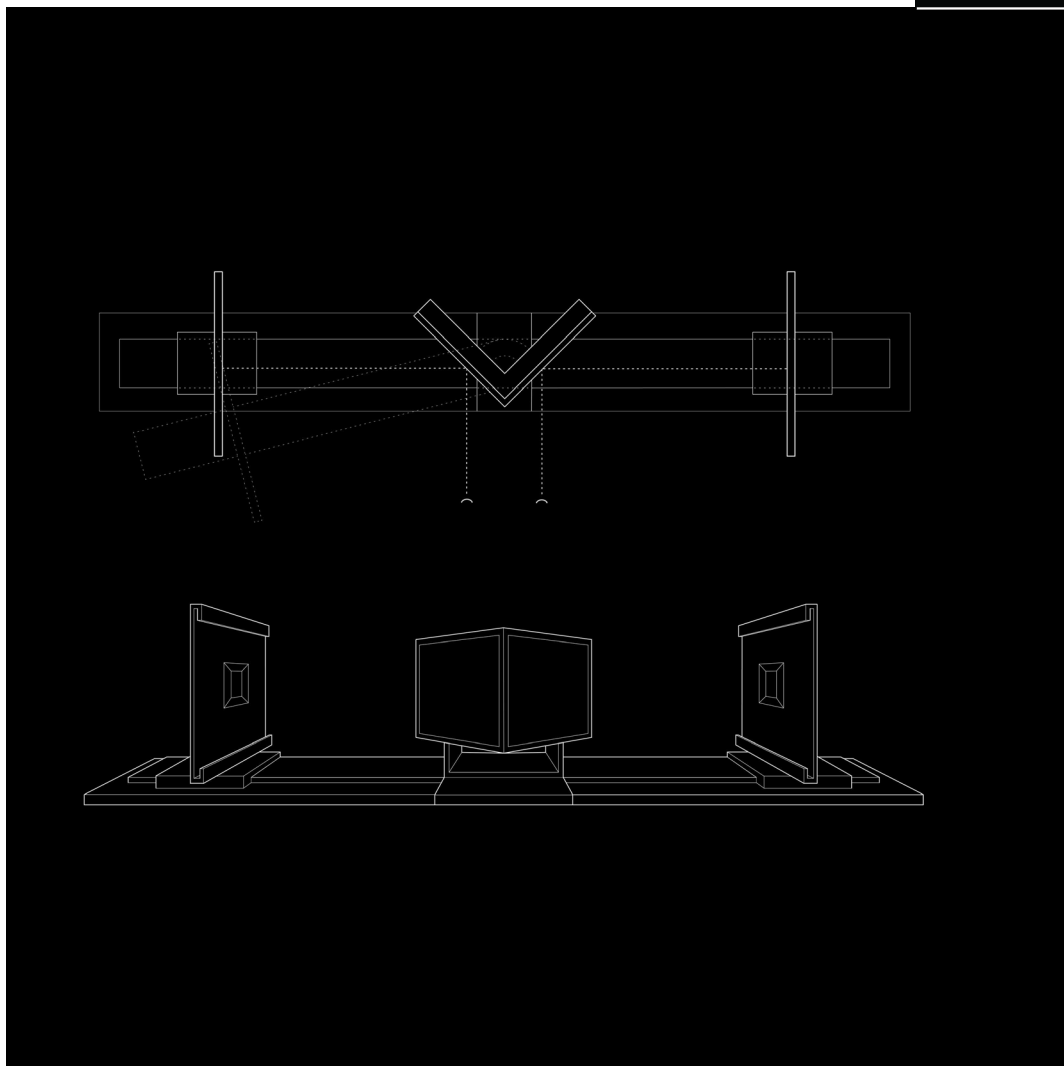

Figure 7:
Drawing of Wheatstone's stereoscope, 2015, digital drawing. George Themistokleous.

Throughout the duration of the visual experience, one has a solipsistic perception of oneself. The space and time of the experience, induced via a precise control of the actual space (and its digital operations), produces an-other occurrence. The confrontation of the actual self and its discontinuous self-projection triggers a re-thinking of how architectural space might be considered in the informational age. The discursive nature of the project involves particular digital and analogue configurations that engage with a re-thinking of visuality. What makes the architecture of this visual encounter? As the physical environment has been designed to correspond to its electronic manipulation, the space is neither a completely immersive environment (i.e. in the sense of a VR headset environment) nor an actual space.

Write it: The Now

Material and digital formats converge and diverge in the *diplorasis*. The material construction provides a physical armature for the project assemblage. The conventional structure is partly offset by being almost completely covered by mirrors. Within the corridor, both standard and two-way mirrors are juxtaposed; the standard mirrors act as decoys that, to a certain extent, conceal the appearance of the two-way mirrors. The formatting of the image via code is made to operate within the material field of the mirrored corridor. The participant's moving body is captured via ultrasonic sensors. A number of these sensors and DSLR digital cameras are connected to Raspberry PI computers allowing for the capturing of images to be triggered by the person's movement. The interface between the computer and the camera is implemented via the gPhoto application that also facilitates the download of the captured image to the computer memory for further processing.[12] Effectively the images of the participant are converted into data (format) that can be processed and stereoscopically re-produced. The data image files are made into a stereoscopic pair and sent to LCD screens via Wi-Fi networks within a matter of seconds. The electronic processes involve multiple software formats (OpenCV, gPhoto). As the image is 'formatted' through the synthesis of analogue and digital environments, how does the viewer visually perceive this mediated image?

[12] Description of the electronic operation has been adapted from a text explanation by Savvas Socratous – the software engineer for the *diplorasis*. Unpublished.

The formatted image produces a paradoxical occurrence. The particularities of the synthetic image trigger a moment in which the viewer stereoscopically perceives themselves viewing themselves. This forming of an image of time that is already in the 'past' yet made present, might also extend to the origin of the term format as defined by the Oxford English Dictionary: "Mid 19th century: via French and German from Latin formatus (liber) 'shaped (book),' past participle of formare 'to form.'"[13] It is the past participle of the word form that galvanises an inchoate movement of the past with(in) the present moment. In his paper 'Time Today' (1987), Lyotard states when writing about the 'now,' that "[t]his present cannot be grasped as such, it is absolute. It cannot be synthesised *directly* with other presents. The other presents with which it can be placed in relation are necessarily and immediately changed into presented presents, i.e. past."[14] He furthermore claims that "we omit the inevitable transformation of present into past" whilst reading.[15] Interestingly, Lyotard writes on the absoluteness of this present that because "the presenting present cannot be grasped: it is *not yet* or *no longer* present."[16] Returning to the formed/forming of the image, this paradoxical state occurs for the viewer who is seeing a three-dimensional projection of themselves in the immediate past.

It is important to emphasise that the viewer does not simply encounter a reflected mirrored image but a simulated three-dimensional projection of themselves from co-existing past, future (the potential of the manipulated image) and present instances. In other words, they encounter a perception of themselves from the point of view of another, i.e. in stereoscopic depth. Such an image that folds in on itself is impossible due to the anatomy of human vision, as one can never see one's own face or back or look at oneself from a distance without some sort of technological prosthetic. In this respect, the *diplorasis* bears some resemblance to 3D scanning technologies, where cameras record the body in the round for further manipulation. In line with Lyotard's presentation of time yet moving from the medium of the text to overlapping visual media, "the event," in this case the *diplorasis*, "makes the self incapable of taking possession and control of what it is. It testifies that the self is essentially passible to a recurrent alterity."[17] Within the *diplorasis*, the digitised visual media – through a particular assemblage – tricks the conscious viewer by folding past moments within

[13] Dictionary, "Format," accessed.
[14] Jean-Francois Lyotard, *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington and Rachel Bowlby (Cambridge: The Polity Press, 1991 [1988]), 59. Original emphasis.
[15] Ibid.
[16] Ibid. Original emphasis.
[17] Ibid.

the presented present.

Lyotard claims that technology, in the form of writing, allows "its users to stock more information, to improve their competence and optimize their performances."[18] He also claims that the expanding technological prosthesis that facilitates knowledge of the objective world, is contradicted by another notion of the technologic, as "being prepared to receive what thought is not prepared to think."[19] In this paper and through the *diplorasis* I am addressing this latter notion, whilst acknowledging that the drive for optimal performance usually hinders the creative application of techno-logic. Yet, the optimal performance of a technical setup is, somehow paradoxically, necessary in the development of the *diplorasis*. In other words, the optimisation of the controlled (framed) parameters in the *diplorasis* function in order to subvert the framing of this controlled image. The conflicted meaning of the term techno-logic is already pervasive within its Greek etymology, as the compound term technology derives from *techne*, meaning art/craft and *logos*, meaning reason.[20] In order to further develop this line of enquiry it is worthwhile to turn to both analogue and digital installations that deal with the body's perceived temporal dissonance.

View it: From Duchamp's Étant donnés to Akamatsu's Time Machine! Version 5

"Duchamp's great pieces are a plastic gamble, an attempt to outwit the gaze (and the mind) because he is trying to give an analogical representation of how time outwits consciousness," explains Lyotard.[21] Duchamp's *Étant donnés* (1946-66), a diorama accompanied by a detailed installation manual, offers a possible means by which to further consider the paradoxical relation between consciousness and time. The viewer, or voyeur as they are referred to in Duchamp's instructions, observes, through a pair of barely noticeable peepholes, a painting of a reclining naked female body within a landscape. Her legs are spread open and the viewer faces her crotch. With one arm she holds a gas lamp. A pierced brick wall frames the overall scene. Duchamp's optical machine makes the representational medium of linear perspective, a medium that excludes the sensory body, ironically tangible.[22] The perspectival viewing and vanishing points are literally connected to the pierced brick wall (picture plane) and vagina

[18] Ibid., 62.
[19] Ibid.
[20] The vexed reading of technology that is implicit within its etymology has been explored by Martin Heidegger in the seminal essay 'The Question Concerning Technology'. See Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper Perennial, 2013 [1954]), 3–35.
[21] Lyotard, *The Inhuman: Reflections on Time*, 79.
[22] Leon Battista Alberti in his *Della Pittura* (trans. *On Painting*, 1436), would become the first architect to write a treatise on the theories of perspective. In the introduction to an English edition of *Della Pittura*, art historian Martin Kemp describes Alberti's reliance on 'a simplified version of medieval optical science' by claiming, 'the basis of our perception of the relative sizes of objects is the visual pyramid or cone, comprising light rays converging to or diverging from a notional vertex within the eye.' See See Martin Kemp, "Introduction" in Leon Battista Alberti, *On Painting*, trans. Cecil Grayson (London: Penguin Books, 2004 [1436]), 12.

respectively, playfully reminding us that, as Lyotard stated, "he who sees is a cunt."[23] Art historian Rosalind Krauss writes in respect to Duchamp's *Étant donnés* that "the vanishing point, or goal of vision, is manifested by the dark interior of a bodily orifice, the optically impenetrable cavity of the spread eagled 'bride,' a physical rather than a geometrical limit to the reach of vision."[24] Linking *Étant donnés* to Jean-Paul Sartre's elaborations on 'the look,' Krauss goes on to claim that "what comes next is not the capture of the spectacle but the interruption of the act. For the sound of footsteps announces that the gaze of someone else has taken him both by surprise and from behind."[25] Whilst observing the scene of the naked female body, the voyeur becomes an object of the other's gaze. The staged optical machine thus becomes extended to its wider context, the public institutional space of the museum. The subjective/objective hinge reveals a temporal paradox, the voyeuristic subject is positioned within the space of the 'not yet' or 'no longer'.[26]

The setup in *Étant donnés* brings to the fore a particular relation between the viewer and the gaze of the other. This momentary encounter is made possible by the overall arrangement of the diorama. The peepholes are almost imperceptible and one has to look carefully in order to find them. Then when one does peek through them, the eyes are framed separately, blocking out any peripheral vision and ensuing visual control that the body has of its environment. The viewed scene of the reclining figure is further framed by the jagged brick wall outline, extending the framing of the scene within the depth of field. The painting appears to recede in depth as it is slanted while smoke is emitting from the gas lamp held up by the woman. This intimately constructed view of the erotic object binds the participant in an illicit act of peeping within a public space. The visual act is contingent on what is not seen. The nuances of experientially seeing the subtly animated scene gives way to the unexpected feeling of being watched. The body becomes thus positioned at the hinge between viewing subject and a viewed object. Drawing on this particular interval from Duchamp's diorama, the *diplorasis* attempts to articulate this line of enquiry via digital media. The operation of *Étant donnés* is activated by the evocation of an-other body (actual or imagined). If in Duchamp's work the gaze of an-other is dependent on another subject's presence, what happens in the *diplorasis*

[23] Rosalind Krauss, *The Optical Unconscious* (Cambridge, MA: MIT Press, 1994), 113.
[24] Ibid.
[25] Ibid., 112.
[26] Lyotard, *The Inhuman: Reflections on Time*, 79.

when the gaze in the form of a hybrid – both subject and object (machinic) – is re-projected back onto the self? In order to further understand how this human/machine gaze is articulated in the *diplorasis* it becomes useful to turn to the concept of the cyborg.

Donna Haraway famously proclaimed in *A Cyborg Manifesto* that the cyborg "is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction."[27] Within the *diplorasis* the organic body is positioned in relation to its computational prosthetic extensions. As such embodiment becomes mediated through informational processes. Literary critic N. Katherine Hayles attempts to trace how notions of embodiment are entwined with informational systems. In *How we Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999) Hayles states that the computer's capabilities "indicate how the user's sensory-motor apparatus is being trained to accommodate the computer's responses."[28] She furthermore claims that "central to the construction of the cyborg are informational pathways connecting the organic body to its prosthetic extensions."[29] Echoing this line of thought, in the *diplorasis* the space of the immediate environment becomes a prosthetic extension to the body. The machinic setup directly correlates with the bodily participant, its operation attempting to overwhelm the viewer with an image that exceeds the human faculties of perception. This intensive perception moves beyond a conscious subjective framing, producing an impasse between the body and its represented (and manipulated) image. This is similar to Hayles's description of the science fiction novel *Limbo* (1952) by Bernard Wolfe, where "the body is integrated into a cybernetic circuit, modification of the circuit will necessarily modify consciousness as well."[30] If in *Étant donnés* the evocation of the gaze displaces the viewing subject, in the *diplorasis* the viewing body becomes displaced by a machine/organic body hybrid that is re-projected onto the viewer. *Time Machine! Version 5* (2005), an interactive media installation by Japanese artist Masayuki Akamutsu, explores a similar split perception of the self.[31] In this installation, as the viewer is approaching three screens his/her image is being recorded by a video camera and then projected on the screens. By moving their hands, they can manipulate their projected image through the use of a trackball. Via these movements,

[27] Donna Jeanne Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist Feminism in Late Twentieth Century" in Donna Jeanne Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature* (London: Free Association, 1991), 149.
[28] Hayles, *How We Became Posthuman*, 47.
[29] Ibid., 2.
[30] Ibid., 115.
[31] Masayuki Akamatsu, "Tm5 - Time Machine! Version 5 2005," (YouTube2015).

the image of the viewer becomes multiplied, blurred or extended. Media theorist Timothy Murray writes about Akamatsu's installation that "a turn to the left travels the image back to the future, into the present."[32] The self's rupture is played out between the gesturing sensible body and its projected images. According to Murray the viewer's perception "remains open to the vicissitudes of the video image's instantiation in time and the subject's entrapment in the doublings of time itself."[33] In both *Étant donnés* and *Time Machine! Version 5* the viewer's perceptual spatiotemporal coordinates become displaced. The different media employed in each installation both utilise prior media formats yet move beyond the limitations of the media involved. *Étant donnés* by literally re-producing the confinements of the perspectival image, re-creates a psychological optical machine which impinges on the viewer's temporal perception(s). Akamatsu's installation overcomes the limitations of the analogue filmic image. Through the advent of digital interactive media, the screen was no longer a passive receptive surface for projections. Therefore, it became possible with this medium – based on the digitisation of the image – to overcome the traditional distance between viewer and screen. Despite their crucial differences, in the work of both Duchamp and Akamatsu the viewer's embodied experience is the hinge that activates a split perception of time.

Re-format it: Architectures of the Contemporary Body

The *diplorasis* is situated within computer-based digital cultures. As Manovich writes "we are no longer interfacing to a computer but to culture encoded in digital form."[34] Digital image processes offer the possibilities to further explore how the fractured self induces a paradoxical sense of time. In the *diplorasis*, the split between an informational spectral other and the sensory body that responds to this other begins to form a new understanding of the body and its re-presentations. This becomes possible through the creative application of digital media formats.

Within the *diplorasis* the viewer becomes caught in a game of identification with what they see, how this seeing comes about and who is seeing (controlling the machine). Yet, the format, any format, at the moment of perceiving the image, is dismantled – it is not so much formatted but de-formatted. De-formation here

[32] Timothy Murray, "Time @ Cinema's Future: New Media Art and the Thought of Temporality," in *Afterimage of Gilles Deleuze's Film Philosophy*, ed. D. N. Rodowick (Minneapolis: University of Minnesota Press, 2010), 365.
[33] Ibid.
[34] Manovich, *The Language of New Media*, 70.

is linked to Lyotard's description of Duchamp's *Le Grand Verre* (*The Large Glass,* also known as *La mariée mise à nu par ses célibataires, même* or in English *The Bride Stripped Bare by her Bachelors, Even*), a large freestanding sculpture featuring, amongst other materials, two large glass panels. Duchamp's *The Large Glass* unsettles the forms that are depicted in the glass panels. The different materials used in the artwork – paint, varnish, shattered glass, lead wire, foil – affect the different densities of dust that accumulates on the panels.[35] Through its relation to these dust accumulations, *The Large Glass*, becomes a surface that constantly de-forms in front of the perceiving viewer. Lyotard writes: "What the viewer sees on the Glass is the eye and even the brain in the process of forming its objects; he sees the images of these imprinting the retina and the cortex according to the laws of (de)formation that are inherent to each and that organize the screen of glass."[36] As the image in the *diplorasis* oscillates between formations – the three-dimensional emergence of self-projections and de-formations – stereoscopic binocularity, pixilation of some images, and deformations of the self-projected images – any notion of a coherent temporal experience collapses. In line with the impossibility of representation found in Duchamp's *Étant donnés*, the *diplorasis* attempts to pursue how the temporal hinge between past and present moments plays itself out on the body via computational means.

The changing modes of formatting, reformatting and deformatting thus challenge conventional definitions of architecture and its representations. Discursive spatial practices, such as the *diplorasis*, begin to question the limits of architecture and its modus operandi. Architectural historian Mario Carpo in his seminal publication *The Alphabet and the Algorithm* undertakes to explore the effect of the digital on architecture. The digital age, according to Carpo the third technical age following hand-making and mechanical making, is marked by differential variation. Compared to its predecessors in the mechanical age, Carpo writes, "the degree of variability (and indeed, interactivity) that is inherent in the transmission and manipulation of digital signals is incomparably higher."[37] Carpo furthermore emphasises the "on-going disappearance of the object" brought about with the advent of the digital.[38] What is proposed here is to shift the focus from considering the digital as 'invisible

[35] For a discussion of *The Large Glass* in relation to dust, see 'Dust: From Form to Transformation', in Teresa Stoppani, *Unorthodox Ways to Think the City* (Abingdon: Routledge, 2019), 144–85.
[36] Krauss, *The Optical Unconscious*, 113.
[37] Mario Carpo, *The Alphabet and the Algorithm* (Cambridge, MA: MIT Press, 2011), 6.
[38] Ibid., 5.

algorithms' as Carpo characterises it, to re-thinking how the digital allows for new material relations to come into being, and how these relations affect embodiment. Thus, it is important to be reminded of Haraway's insistence that the virtual is not immaterial. According to Haraway, "humans wherever you track them, are products of situated relationalities with organisms, tools, much else."[39] The relationality that Haraway suggests exists between human and non-human agencies is crucial in thinking of the space/time within the *diplorasis*. It resists the systematic limitation of the body in virtual media as an informational node. Indeed, this would be akin to the body in perspectival representation. The body in the electronic age is located at a complex intersection where it confronts its spatiotemporal limits.

It becomes pertinent to speculate how architecture is changing and continues to change in relation to the changes accrued by the body's changing coupling with the machinic. Thus we are reminded of Carpo's statement that "the history of architecture features a conflation of different technological timelines – its modern history is linked to the industrial revolution".[40] And while the same materials that were introduced with the birth of modernism in the late nineteenth/early twentieth century are still predominant in the building industry, electronic technologies are what radically alter our understanding of time and space. Hence, media theorist Marshall McLuhan's claim that "the extreme bias and distortion of our sense-lives by our technology would seem to be a fact we prefer to ignore in our daily lives" becomes more prescient today.[41] As imaging formats increasingly conflate with (in) the bodily schema we need to question the very boundaries between body and its prosthetic technologies. The body's perceiving coordinates, its mnemonic capacities shift with the electronic age as space and time is increasingly reliant on mediated environments. The way of thinking associated with the electronic age does not expand consciousness but instead enhances the ability to sense and conceive a paradoxical time. These shifts in the thinking of the body's space and time made possible by emerging media formats brings us in closer proximity to "what thought is not prepared to think."[42]

[39] Nicholas Gane and Donna Jeanne Haraway, "'When We Have Never Been Human, What Is to Be Done?' Interview with Donna Jeanne Haraway," *Theory, Culture & Society* 23, no. 7–8 (2006): 146.
[40] Carpo, *The Alphabet and the Algorithm*, 6.
[41] Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge, MA: MIT Press, 1994 [1964]), 191.
[42] Lyotard, *The Inhuman*, 59.

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