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CATALOG

FAIR  
AND  
WIDE

BY LANFRANCO ACETI AND OMAR KHOLEIF

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LEONARDO ELECTRONIC ALMANAC CATALOG, VOLUME 19 ISSUE 5

# Far and Wide

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**LANFRANCO ACETI AND OMAR KHOLEIF**

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**ÖZDEN ŞAHİN AND CATHERINE M. WEIR**

The Leonardo Electronic Almanac acknowledges the kind support for this issue of

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**This catalog is a LEA production with FACT (Foundation for Art and Creative Technology).** It follows the first major retrospective on Nam June Paik in the UK with an exhibition and conference organized by Tate Liverpool and FACT. The exhibition Nam June Paik, December 17, 2010 to March 13, 2011, was curated by Sook-Kyung Lee and Susanne Rennert.

LEA acknowledges and is grateful for the gracious support provided to this publication by the Estate of Nam June Paik. In particular special thanks go to Ken Hakuta, Executor, Nam June Paik Estate.

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# Contents

- Lanfranco Aceti **06** *The Global Play of Nam June Paik: The Artist That Embraced and Transformed Marshall McLuhan's Dreams Into Reality*
- Omar Kholeif **10** *The Future Is Now?*
- Emile Devereaux **22** *To Whom It May Concern: Nam June Paik's Wobulator and Playful Identity*
- Tom Schofield **46** *Data Materialism in Art Making*
- Gabriela Galati **54** *The Electronic Representation of Information: New Relationships between the Virtual Archive and its (Possible) Referent*
- Jamie Allen **70** *Traveling at the Speed of Paik: An artist-researcher visits the Nam June Paik Art Center*
- Jeremy Bailey **90** *A Statement on Nam June Paik*
- Richard H. Brown **104** *Zen for TV? Nam June Paik's "Global Groove" and "A Tribute to John Cage" (1973)*
- 130** *Introductions and John G. Hanhardt Keynote Speech*
- 150** *John G. Hanhardt Q&A session chaired by Sarah Cook*
- 166** *Roy Ascott Keynote Speech*
- 184** *Ruth Catlow Speech*
- 190** *Anton Lukoszevieze performance*
- 200** *Roy Ascott in conversation with Mike Stubbs*

# THE GLOBAL PLAY OF NAM JUNE PAIK

## THE ARTIST THAT EMBRACED AND TRANSFORMED MARSHALL MCLUHAN'S DREAMS INTO REALITY

**What else can be said of Nam June Paik and his artistic practice that perhaps has not been said before?** My guess is not very much... and while I write my first lines to this introduction I realize that it is already sounding like a classic Latin 'invocatio,' or request to assistance from the divinity, used by writers when having to tread complex waters.

Nam June Paik and Marshall McLuhan are two of the numerous artists and authors who inspired my formative years. If one cannot deny Paik's love of play and satire imbued in popular culture and used to disguise a real intellectual and conceptual approach to the artwork, neither can easily be discounted McLuhan's strong advocacy of the powerful tool that technology can be, so powerful that is able to obscure and sideline the message itself in the name of the medium.

"Marshall McLuhan's famous phrase 'Media is message' was formulated by Norbert Wiener in 1948 as 'The signal, where the message is sent, plays equally important role as the signal, where message is not sent.'"<sup>1</sup>

The construction of this hybrid book, I hope, would have pleased Paik for it is a strange construction, collage and recollection, of memories, events, places and artworks. In this volume collide present events, past memories, a conference and an exhibition, all in the name of Nam June Paik, the artist who envisaged the popular future of the world of media.

Paik remains perhaps one of the most revolutionary artists, for his practice was mediated, geared towards the masses and not necessarily or preeminently dominated by a desire of sitting within the establishment. He also challenged the perception of what art 'should be' and at the same time undermined elitisms through the use, at his time, of what were considered 'non-artistic-media.' Some of the choices in his career, both in terms of artistic medium and in terms of content, can be defined as visionary as well as risky to the point of bravery or idiocy, depending on the mindset of the critic.

That some of the artworks may be challenging for the viewer as well as the art critic is perhaps obvious – as obvious was Paik's willing-

ness to challenge the various media he used, the audience that followed him and the established aesthetic of his own artistic practice. Taking risks, particularly taking risks with one's own artistic practice, may also mean to risk a downward spiral; and Paik did not seem to shy away from artworks' challenging productions and made use of varied and combined media, therefore re-defining the field of art and placing himself at the center of it.

*In the following decades, Paik was to transform virtually all aspects of video through his innovative sculptures, installations, single-channel videotapes, productions for television, and performances. As a teacher, writer, lecturer, and advisor to foundations, he continually informed and transformed 20th century contemporary art.*<sup>2</sup>

Therefore, it seems limited to define Paik as 'the father of video art' when his approaches were to resonate in a multiplicity of fields and areas.

*Paik's latest creative deployment of new media is through laser technology. He has called his most recent installation a "post-video project," which continues the articulation of the kinetic image through the use of laser energy projected onto scrim, cascading water, and smoke-filled sculptures. At the beginning of the twenty-first century, Paik's work shows us that the cinema and video are fusing with electronic and digital media into new image technologies and forms of expression. The end of video*

*and television as we know them signals a transformation of our visual culture.*<sup>3</sup>

When Mike Stubbs and Omar Kholeif approached me to create this book, the challenge was to create a structure for the material but also to keep the openness that characterizes so many of Paik's artworks and so many of the approaches that he has inspired.

I found the best framework in one of Paik's artworks that was presented for the first time in the United Kingdom, at FACT, in Liverpool, thanks to the efforts of both Stubbs and Kholeif.

My fascination with the *Laser Cone's re-fabrication*<sup>4</sup> in Liverpool was immediate and I wanted to reflect in the publication, albeit symbolically, the multiple possibilities and connections that underpinned the Laser Cone's re-fabrication and its medium, as well as Paik's and McLuhan's visions of the world to come, made of light, optics and lasers.

*The word laser is actually an acronym; it stands for Light Amplification by Stimulated Emission of Radiation. Nam June Paik undertook a residency with Bell labs, who were the inventors of the laser. It was here that he created his 1966 piece Digital Experiment at Bell Labs, exploring the stark contrast between digital and analogue and his fascination with technology in its material form. His work with Bell set the precedent for artists and musicians to start using technology creatively in a new way.*<sup>5</sup>

This catalog became a tool to mirror and perhaps 'transmediate' the laser installation "made of a huge green laser that [...] conjoin[ed] FACT with Tate Liverpool. Travelling 800 metres as the crow flies, the beam of light [...] made] a symbolic connection between the two galleries during their joint exhibition of video artist, pioneer and composer Nam June Paik. Artist Peter Appleton, who was behind the laser which joined the Anglican and Metropolitan cathedrals in Liverpool during 2008 Capital of Culture, [was] commissioned by FACT to create the artwork, *Laser Link*, which references Nam June Paik's innovative laser works."<sup>6</sup>

The catalog is in itself a work that reflects the laser connections, the speed of contacts, the possibilities of connecting a variety of media as easily as connecting people from all parts of the world. In this phantasmagoria of connections it almost seems possible to visualize

the optic cables and WiFi that like threads join the people and the media of McLuhan's "global village" and the multiplicities of media that Paik invited us to use to create what I would like to define as the contemporary "bastard art."<sup>7</sup>

#### Lanfranco Aceti

Editor in Chief, *Leonardo Electronic Almanac*  
Director, Kasa Gallery



#### A NOTE FROM THE EDITOR IN CHIEF

*For me personally this book represents a moment of further transformation of LEA, not only as a journal publishing volumes as in the long tradition of the journal, but also as a producer of books and catalogs that cater for the larger community of artists that create bastard art or bastard science for that matter.*

#### ENDNOTES AND REFERENCES

1. Nam June Paik, "Cyberated Art," in *The New Media Reader*, eds. Noah Waldrip-Fruin and Nick Montfort, 229 (Cambridge, MA: The MIT Press, 2003).
2. John G. Hanhardt "Nam June Paik, TV Garden, 1974," in *Permanence Through Change: The Variable media Approach*, eds. Alain Depocas, Jon Ippolito, and Caitlin Jones, 72 (New York and Montreal: Guggenheim Museum Publications and The Daniel Langlois Foundation for Art, Science, and Technology, 2003).
3. Nam June Paik/Nam June Paik Studios' official Web site, "John Hanhardt's essay," <http://www.paikstudios.com/essay.html> (accessed January 10, 2013).
4. *Laser Cone*, 2001/2010, Nam June Paik in collaboration with Norman Ballard, installation view at FACT. Photographer: Stephen King.
5. FACT, "Laser Cone," FACT, <http://www.fact.co.uk/projects/nam-june-paik/laser-cone/> (accessed January 10, 2013).
6. FACT, "Laser Link," FACT, <http://www.fact.co.uk/projects/nam-june-paik/laser-link/> (accessed January 20, 2013).
7. Art as a bastard is interpreted, in this passage, as something of uncertain origins that cannot be easily defined and neatly encapsulated in a definition or framework. "Art is often a bastard, the parents of which we do not know." Nam June Paik as cited in Florence de Meredieu, *Digital and Video Art*, trans. Richard Elliott (Edinburgh: Chambers, 2005), 180.

# The Future Is Now?

**Far and Wide: Nam June Paik is an edited collection that seeks to explore the legacy of the artist Nam June Paik in contemporary media culture.** This particular project grew out of a collaboration between FACT, Foundation for Art and Creative Technology, and the Tate Liverpool, who in late 2010-2011 staged the largest retrospective the artist's work in the UK. The first since his death, it also showcased the premiere of Paik's laser work in Europe. The project, staged across both sites, also included a rich public programme. Of these, two think tank events, *The Future is Now: Media Arts, Performance and Identity after Nam June Paik* and *The Electronic Superhighway: Art after Nam June Paik*, brought together a forum of leading artists, performers and thinkers in the cross-cultural field together to explore and dissect the significance of Paik within broader culture.

This programme was developed by a large group of collaborators. The discursive programme was produced by FACT in partnership with Caitlin Page, then Curator of Public Programmes at Tate. One of our primary research concerns was exploring how Paik's approach to creative practice fragmented existing ideological standpoints about the visual arts as a hermetically sealed, self-referential canon. Drawing from Bruno Latour, Norman M. Klein and Jay David Bolter, among many others – our think tank and, as such, this reader, sought to study how the visual field has proliferated across disciplines through the possibilities that are facilitated by technology. At the same time, we were keen to examine how artists now possess a unique form of agency – one that is simultaneously singular and col-

lective, enabled by the cross-embedded nature of the current technological field. ¶

These positions are explored throughout the reader and our programme and in this special edition of the Leonardo Electronic Almanac. Here, the artist who goes by the constructed meme of the "Famous New Media Artist Jeremy Bailey," tracks Rosalind Krauss's influence and transposes her theoretical approach towards video art to the computer, examining the isolated act of telepresent augmented reality performance. Roy Ascott gives a nod to his long-standing interest in studying the relationship between cybernetics and consciousness. Eminent film and media curator, John G. Hanhardt honors us with a first-hand historical framework, which opens the collection of transcripts, before further points of departure are developed.

Researchers Jamie Allen, Gabriella Galati, Tom Schofield, and Emile Deveraux used these frameworks retrospectively to extrapolate parallels, dissonances and points of return to the artist's work. Deveraux and Allen focus on specific pieces: Deveraux discusses Paik and Shuya Abe's *Raster Manipulation Unit a.k.a. 'The Wobulator'* (1970), while Allen surveys a series of tendencies in the artist's work, developed after he was invited to visit to the Nam June Paik Center in South Korea. Galati and Schofield stretch this framework to explore broader concerns. Schofield considers the use of data in contemporary artwork, while Galati explores the problematic association with the virtual museum being archived online.

It is worth mentioning at this stage that there were many who joined in contributing to this process, who did not partake formally in this reader or the public programme. Dara Birnbaum, Tony Conrad, Yoko Ono, Cory Arcangel, Laurie Anderson, Ken Hakuta, Marisa Olson, all served as sources of guidance, whether directly or indirectly through conversations, e-mails, and contacts.

Still, there remain many lingering questions that are not answered here, many of which were posed both by our research and organizational processes. The first and most straightforward question for Caitlin and I was: why is it so difficult to find female artists who would be willing to contribute or speak on the record about Paik's influence? It always seemed that there were many interested parties, but so very few who were eager to commit to our forum.

The second and perhaps more open-ended question is: what would Nam June Paik have made of the post-internet contemporary art scene? Would Paik have been an advocate of the free distribution of artwork through such platforms as UbuWeb and YouTube? Would he have been accepting of it, if it were ephemeral, or would he have fought for the protection of licensing? This question remains: could an artist charged with bringing so much openness to the visual arts, have been comfortable with the level of openness that has developed since his death? There is much that remains unanswered, and that, we can only speculate. *Far and Wide* does not offer a holistic biography or historical overview of the artist's work or indeed its authority. Rather, it serves to extract open-ended questions about how

far and wide Nam June Paik's influence may have travelled, and to consider what influence it has yet to wield.

**Omar Kholeif**

*Editor and Curator*

*FACT, Foundation for Art and Creative Technology*

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1. See: N. M. Klein, "Cross-embedded Media," in *Vision, Memory and Media*, eds. A. Broegger and O. Kholeif (Liverpool and Chicago: Liverpool University Press, 2010).

# The Electronic Representation of Information: New Relationships between the Virtual Archive and its (Possible) Referent

## ABSTRACT

***“Our life is half natural and half technological. Half-and-half is good. You cannot deny that high-tech is progress. We need it for jobs. Yet if you make only high-tech, you make war. So we must have a strong human element to keep modesty and natural life.” — Nam June Paik***

*The present work focuses on the new relationship generated by electronic information between the virtual archive (the Web in a broad sense, certain specialized archives in particular) and its referent (material reality in general, museums, inter-art practices, and artworks in particular). It proposes that the relationship between information, its representation and the referent (or in other words, the relation between reality and the conceptual construction of reality) has to be re-thought.*

by

**Gabriela Galati**

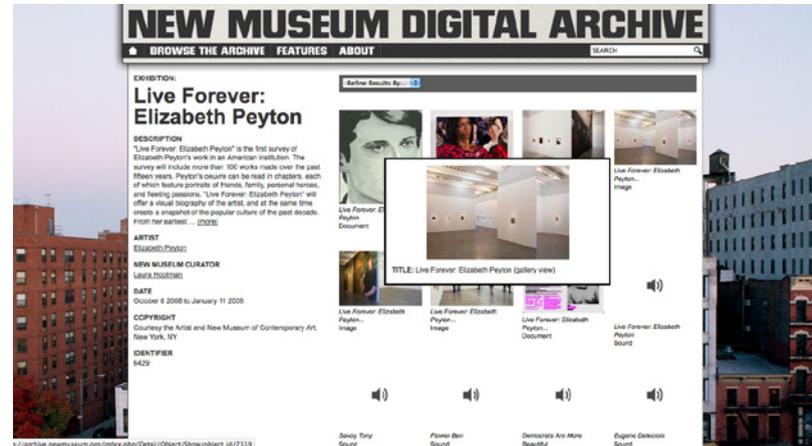
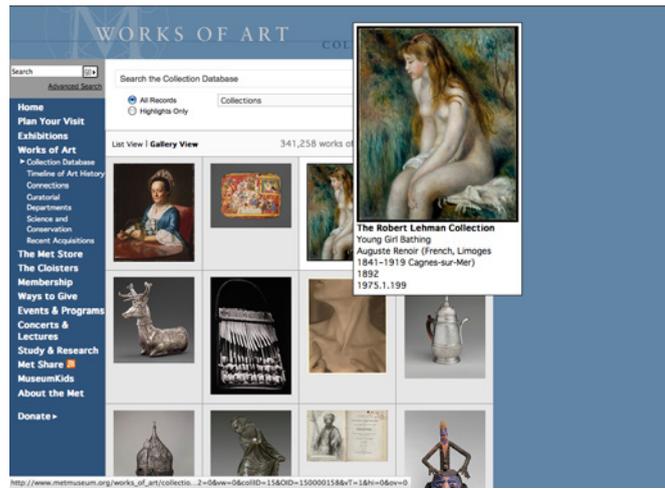
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The present work focuses on the new relationship generated by electronic information between the virtual archive (the Web in a broad sense, certain specialized archives in particular) and its referent (material reality in general, museums, inter-art practices, and artworks in particular). What Nam June Paik conceived as a shift from the telecommunications network to a “multilevel digital communication network,” is now taking place at a highly accelerated pace; with vast unexpected consequences and possibilities for the artistic field. Moreover, it also has a close relationship to what Manuel Castells defined as the “space of flows” or “real virtuality.”

“The space of flows” is the abstraction of time and space and their dynamic interactions within digital age society. Castells developed this idea to “re-conceptualize new forms of spatial arrangements under the new technological paradigm”; a new type of space that allows for distant, synchronous, real-time interaction.

“The space of flows” can be experienced right now, as a “multilevel electronic communication network,” which anyone can access from home. This network is composed not only of websites, but also the 3D photographic representations of place: the street view of one’s house, of a friend’s house, of a possible place to rent, or of a museum. This access can also, in a certain way, make the distance between remote places seem non-existent.

This concept opens up several questions, for example: how is this representation presented? How is this possibility of accessing a



(Top left) screenshot: [http://www.metmuseum.org/works\\_of\\_art/collection\\_database/](http://www.metmuseum.org/works_of_art/collection_database/), (top right) screenshot: [http://archive.newmuseum.org/index.php/Detail/Occurrence/Show/occurrence\\_id/930](http://archive.newmuseum.org/index.php/Detail/Occurrence/Show/occurrence_id/930), (bottom) screenshot: <http://www.googleartproject.com/museums/reinasofia>.

physically distant place in all its details, without actually being physically there, affecting the ways in which this space is perceived?

In this regard, the electronic elaboration of the representation of information suggests following new paths; not only to deal with massive amounts of data, but also to better penetrate the domain of knowledge that every person should possess.<sup>3</sup>

Moreover, the forms this representation of information takes are closely related to the ways in which its perception is structured and shaped. As Lev Manovich puts it, "by organizing computer data in different ways, the interface provides different visions of the world."<sup>4</sup> Therefore, the relationship between information, its representation, and the referent (or in other words, the relation between reality and the conceptual construction of reality) has to be re-thought.

As many theorists have advanced, this representation does not need to be-in-the-place-of a 'physically existent' entity, and that is why the referent is only 'possible.' Postman (1985) defines 'virtual' as being so in practice though not strictly in name; and 'real' as actually existing, and advances that:

*We don't see reality as it is but as our languages are. Our languages are our media. Our media are metaphors. Our metaphors create the content of our culture. [...] There is no separation between 'reality' and symbolic representation. In a way, all reality is virtually perceived.*<sup>5</sup>

Virtual or real, this digitization is changing the status of digitized works; at the same time influencing our perception of them. In the same way language and metaphors build our 'reality' or structure our perception of the world, the Net as a text influences our perception of material reality; in this respect the ambiguous nature of language has to be taken into account.

Thus reality, as experienced, has always been virtual because it is always perceived through symbols that frame practice with some meaning that escapes their strict semantic definition.

*A system that generates real virtuality is a system where reality itself (people's material/symbolic existence) is entirely captured, fully immersed in a virtual image setting [...] in which appearances are not just on the screen through which experience is communicated, but they become the experience.*<sup>6</sup>

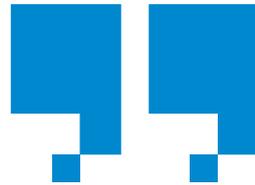
In this sense, a virtual presence is no less real than a material one, so where does the difference reside?

Following Levi-Strauss's statement that the inadequacy between the signifier and the signified is the cause of every mythic and aesthetic invention that aimed to cover this flaw, or this unfit; it is possible to think about the inadequacy between the virtual archive and its (possible) referent in these terms. It is necessary to try to understand what is happening with this non-fit, or over-spill, and accordingly, what is happening in the gap: in the 'inadequacy' between the virtual archive and the physical museum. This over-spill can be considered the intrinsic ambiguity of symbolic production. Moreover, the very well known impossibility to 'translate' symbolic productions is what generates the change in ontological status of digitized work.

In his article *The Archive Without Museums*, Hal Foster<sup>8</sup> advances the hypothesis that photographic reproduction allowed a new "dia-



## Could it also then be said that some artworks are being produced to exist solely for the virtual archive?



lectics of seeing,” represented by the positions of Walter Benjamin: namely, that photographic reproduction strips art of context and aura, and therefore its cult value and exhibition value are lost forever. In contrast, André Malraux claims that the museum guarantees art as such, and photographic reproduction offers the means to put together “the bits and pieces” into the meta-tradition of “style.”<sup>9</sup>

If the museum guarantees the status of art and photographic reproduction permits stylistic affinities, what might a digital reordering encourage?

It is possible then that electronic information and digitalization establish new dialectics in which a museum's legitimizing function is replaced by the virtual archive and/or museum/gallery websites?

Could it also then be said that some artworks are being produced to exist solely for the virtual archive? Moreover, has the time come when on-line documentation of exhibitions that never happened are created and presented?

At the same time, the influence goes in both directions – as Bolter and Grusin<sup>10</sup> described the process of “remediation” – from the digital to the material, in the ways artworks are documented, affecting the processes of legitimization (and probably also of production); and from the material to the digital, when the virtual is anchored to reality in the imitation, or realistic representation of it (especially three-dimensional space).

Without falling into modernist positions about the intrinsic possibilities of each medium, could we find a way in which the new archive can deal with art without imitating physical reality in the display? By exploiting the logic of the hyperlink – and thus of the “over-spill” and of ambiguity – can we create a non-linear, more experimental and open archive which each user could, ideally, build her/his own path through? The question of whether this ‘freedom of choice’ provided by hyperlink logic and the virtual database is only an illusion or a utopian realization of the medium has been widely discussed. However, even if not unlimited, the possibility exists and the medium undoubtedly offers a considerable degree of ‘personalization’ in the paths to follow through a database or archive.

The shift Foster talks about is from the perception of the world as an image, to the codification of the world (these images included), resulting in pure information:

[...] the humanism of the world-become-picture may reverse into the inhumanism of the world-become-information. For in the virtuality of the archive [...] what is real is not what appears at any moment, but what is conserved in memory [...]<sup>11</sup>

In the same way the object is digitized in the archive, the medium loses its original materiality to be converted into a pure image. By being absorbed and re-generated in the virtual database, its status changes to the one of an “image-text,” or of an “info-pixel.”<sup>12</sup> This is the reason why the virtual archive no longer needs a physical referent. It doesn't mean that it has been removed from all physical support, only that the support of the information (memory and database), which constitutes the object's new materiality, does not coincide with the support that presents it to be seen and understood (a screen). Therefore, referential relation is not completely preserved, but it becomes weaker and fragmental.<sup>13</sup> The iconic sign, in Peirce's terms,<sup>14</sup> however, still maintains its relationship of resemblance with the object, but the medium has been converted into an image-text, and info-pixel; its materiality has been ‘translated’ into information, into a code.

This new database is generating a dematerialization of memory and its record. However, this dematerialization is not the same proposed by the Conceptual Art of the 60s, this is a ‘new’ dematerialization, which does not imply an annihilation of the object, but a change in its ontological status. ■

### REFERENCES

1. Douglas C. McGill, “Art People,” *The New York Times*, October 3, 1986, <http://www.nytimes.com/1986/10/03/arts/art-people.html> (accessed September 1, 2013).
2. Manuel Castells, *The Rise of the Network Society, The Information Age: Economy, Society and Culture*, vol. I (Cambridge, MA: The MIT Press, 1996), 407-479.
3. Marco Schirru, “Guide: Un Ipertesto per la Storia,” *AdVersus* VI-VII, no. 16-17 (2009-2010): 61-83
4. Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 75-76.
5. Neil Postman, *Amusing Ourselves to Death. Public Discourse in the Age of Showbusiness* (New York: Penguin Books, 1985), 15.
6. Manuel Castells, *The Rise of the Network Society*, 407-479.
7. Claude Levi-Strauss, “Introduction à l' Oeuvre de Marcel Mauss,” in Marcel Mauss, *Sociologie et Anthropologie* (1902-1938), (Paris: Les Presses Universitaires de France, 1968), 10-32.
8. Hal Foster, “The Archive without Museums,” *October* 77 (1996): 97-119, 109.
9. Ibid.
10. J. David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge, MA: MIT Press, 2000), 20-50.
11. Hal Foster, “The Archive without Museums,” 113.
12. Ibid., 109.
13. P. L. Capucci, informal conversation during a PhD Tutorial, (2010) .
14. C. S. Peirce and V. Welby-Gregory, “Letter to Lady Welby,” in *Semiotic and Significs: The Correspondence between C.S. Peirce and Victoria Lady Welby*, ed. C. S. Hardwick (Bloomington, IN: Indiana University Press, 1977), 121.



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