Creating the artworld of literature and technology: The Electronic Literature Collection as a key resource for digital art research

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Abstract
This article introduces electronic literature as a key field of study within digital art, which is considered part of the artworld as established by scholars on the basis of the Institutional Theory of Art. This perspective suggests that digital art has its corresponding artworks, publics and systems, but within the domain of digital technology. Thus, it is argued that electronic literature both in theory (as key term and through key research) and practice (though selected artworks) has evolved as a fundamental area of study which connects art and literature through computer systems. The ultimate aim of this article is not merely to justify the importance of electronic literature within digital art, but to try to identify the best electronic literature archive for both librarians and researchers. To that end, a comparative study of key online archives (Electronic Literature Collection, Gallery 9, Rhizome ArtBase, Turbulence, Whitney Artport) that satisfy both artworld (institutional galleries and collections) and archival requirements (access to full artworks, as well as search and retrieval options connected to electronic literature) has been conducted. The comparison favours the Electronic Literature Collection as a key resource for its research portal of the same name, although some further reflections are provided on this area of study in order to encompass transmedia storytelling.

Keywords
artworld, digital art, electronic literature, archive
Creación del mundo del arte de la literatura y la tecnología: la Electronic Literature Collection como recurso fundamental para el estudio del arte digital

Resumen
Este artículo presenta la literatura electrónica como campo de estudio dentro del arte digital, considerada como parte del mundo del arte conforme a la definición académica de la teoría institucional del arte. Esta perspectiva sugiere que el arte digital posee sus obras de arte, públicos y sistemas correspondientes, pero inscrita en el ámbito de la tecnología digital. Se argumenta, por consiguiente, que la literatura electrónica, tanto en la teoría (como término clave y a través de importantes estudios) como en la práctica (por medio de obras escogidas) ha evolucionado hasta convertirse en un área de estudio fundamental que vincula el arte y la literatura mediante sistemas informáticos. El objetivo último de este estudio no es simplemente justificar la importancia de la literatura electrónica en el arte digital, sino también intentar encontrar y presentar el mejor archivo de literatura electrónica para su estudio por parte de bibliotecarios e investigadores. Con este fin se ha llevado a cabo un estudio comparativo de archivos en línea relevantes (Electronic Literature Collection, Gallery 9, Rhizome ArtBase, Turbulence, Whitney Artport) que satisfagan simultáneamente los requisitos del mundo del arte (galerías y colecciones institucionales) y archivísticos (acceso a obras de arte completas, así como opciones de búsqueda y recuperación en conexión con la literatura electrónica). La comparación se decanta por la Electronic Literature Collection como recurso fundamental para la investigación del mismo nombre, aunque se agregan algunas reflexiones ulteriores a esta área de estudio para abarcar la narrativa transmedia.

Palabras clave
mundo del arte, arte digital, literatura electrónica, archivo

Digital art understood as a (digital) artworld

This article first focuses on the consideration of art as part of and creating what we call an artworld. Coined by philosopher Arthur Danto, the term artworld was first used in an article of the same name in the early 1960s:

To see something as art requires something the eye cannot decry - an atmosphere of artistic theory, a knowledge of the history of art: an artworld. (Danto, 1964, p. 580)

The notion of the artworld was later expanded by scholars such as George Dickie (1971), Howard Becker (1982), and Stephen Davies (1991). Dickie turned the artworld as presented by Danto into the Institutional Theory of Art, encompassing:

A work of art is an artifact of a kind created to be presented to an artworld public.

An artist is a person who participates with understanding in the making of a work of art.

A public is a set of persons the members of which are prepared in some degree to understand an object which is presented to them.

The artworld is the totality of all artworld systems.

An artworld system is a framework for the presentation of a work of art by an artist to an artworld public. (Dickie, 1997, p. 92)

Second, we can establish that digital art is a set of artistic manifestations that has become increasingly mainstream since the term net art (or net.art) was coined by artist Vuk Ćosić in the early 1990s supposedly after having received a truncated email with the words net.art in it (Weibel and Druckrey, 2001, p. 25), and after artists Alexei Shulgin and Natalie Bookchin wrote and published online the foundational manifesto Introduction to net.art (1994-1999).

Thanks to widespread broadband Internet access, particularly in Eastern European countries, the term and practice of net art gave way to an assortment of art forms (computer art, software art, virtual and augmented reality projects, digital games) created with and distributed via networked computers.
When studied both in art and academic contexts, digital artworks have been broadly classified in terms of one of two aspects: the technical setup and the type of content.

It is worth noting that digital art reading lists tend to focus on its technical setup, as indicated by titles such as Christiane Paul’s *Digital Art* (2003) or Edward Shanken’s *Art and Electronic Media* (2009). But the type of content digital art tends to privilege is also significant because not only are they technological artworks, but also artworks about technology. This is particularly prominent in titles and terms like the following:

- **Information arts** as described by Stephen Wilson (2002);
- **Internet art** by Rachel Greene (2004);
- **Media art** in Oliver Grau (2007) and Hans Ulrich Reck (2007);
- **New Media** by Mark Tribe and Rena Jana (2006) or Christiane Paul’s own *New Media in the White Cube and Beyond: Curatorial Models for Digital Art* (2008), plus Domenico Quaranta’s *Media, New Media, Postmedia* (2010);
- **Or virtual art** as described by Grau (2003) or Frank Popper (2007).

However, no matter the extent to which art forms have evolved since modernism (and the above-mentioned terms such as media art or new media art partly account for those changes), there seems to be some resistance to accepting forms of digital art as part of mainstream or contemporary art for two reasons: politics and the semantics of digital art.

Regarding the political aspects and attitudes of both the artists and the institutions they work with, early net.art connected with the historical avant-garde by emphasising the need to avoid institutions altogether by publishing and sharing artworks directly online (see the *Introduction to net art manifesto* for a complete description of that opposition; see also Paul, 2011).

Regarding the semantics of digital art, and, as previously emphasised, this type of art is strongly focused either on technological setups (as shown in the term software art, see Manovich, 2013) or on technology as a topic for creation.

Meanwhile, contemporary art seemingly adopts a much more (and more varied) thematic approach (see, for example, relational aesthetics as defined by curator Nicolas Bourriaud in 1998) linked to storytelling or narrative persuasion strategies which help succeed in the art market (as dissected by researcher Christian Salmon in 2010, and as described by art economist Don Thompson in 2010 and 2014).

Art world professionals continue to criticise the strong emphasis digital art places on the means (the technology) to present and thematise itself (see Bishop, 2012), despite the fact that contemporary art is using digital technologies extensively (as proven, for instance, by the organisation of LOOP Barcelona, the pioneering video art festival and fair since 2003).

But tensions between contemporary art and digital art only seem to have reinforced the ability of digital creations and creators to establish the same set of artworld rules, but in different contexts.

If we look at a (new) media organisation such as Rhizome, which was created by artist Mark Tribe in 1999 as a mailing list, we see it has evolved into an online platform to both host and disseminate digital artworks. Thus, it can be argued that Rhizome as a digital art organisation presents the following artworld features (table 1), which make a strong case for accepting the definition of a (digital) artworld as a parallel but similar term to that of the artworld.

<table>
<thead>
<tr>
<th>Artworld features according to George Dickie</th>
<th>Rhizome as a digital art organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A work of art is an artefact of a kind created to be presented to an artworld public.</td>
<td>Rhizome hosts artworks in its ArtBase which can be explored by online users.</td>
</tr>
<tr>
<td>An artist is a person who participates with understanding in the making of a work of art.</td>
<td>The artworks at Rhizome ArtBase are created by professional artists.</td>
</tr>
<tr>
<td>A public is a set of persons the members of which are prepared in some degree to understand an object which is presented to them.</td>
<td>Any user researching its website is part of Rhizome’s public. Moreover, Rhizome hosts occasional offline exhibitions in partnership with the New Museum in New York City, where it has its offices.</td>
</tr>
<tr>
<td>The artworld is the totality of all artworld systems.</td>
<td>Including not only Rhizome but any other organisation or event connected to digital art, based in NYC/USA/rest of the world. See for example: ARS ELECTRONICA (founded in Linz, Austria in 1979), Transmediale (founded in 1987 in Berlin, Germany) or ISEA (founded in the Netherlands in 1990 as the Inter-Society for the Electronic Arts).</td>
</tr>
<tr>
<td>An artworld system is a framework for the presentation of a work of art by an artist to an artworld public.</td>
<td>Rhizome is part of the artworld system, in its digital art chapter and through its digital artworks, artists and public (users).</td>
</tr>
</tbody>
</table>

### Introduction to electronic literature within digital art

To provide a more specific focus on digital artworks as part of the artworld, this article will examine the specific category of what is and has been known variously as hypertext literature, hyperliterature, ergodic literature, digital literature or electronic literature as a set of art forms where computer systems and literary content intersect.
The first term, hypertext literature, was more commonly applied to offline pieces created with software like Storyspace, HyperCard or, later, Director. Michael Joyce’s afternoon a story (1987) or Stuart Moulthrop’s Victory Garden (1992) are two prominent artworks of this kind.

Hyperliterature has been historically understood as providing continuity and specificity to the terms hypertext (annotated and interconnected text) and hypermedia (as a more visual interconnected update of hypertexts), as originally defined by researcher Theodore Nelson in the 1960s (see Nelson, 2003, 1992).

The second term, hypertext literature, would go on to become more commonplace once broadband Internet usage became widespread. In the early 1990s, computer scholars such as Brenda Laurel (1993) and Janet H. Murray (1997), and literary scholars such as Marie-Laure Ryan (1991, 2003, 2004, 2014, 2015), George Landow (who penned the Hypertext trilogy in 1992, 1997 and 2006), N. Katherine Hayles (2002, 2008), and Espen Aarseth (1994, 1997) started referring to hypertext literature or, sometimes, ergodic literature, to study the background and present expressions and capabilities of hypertextual literature.

Through the early 2000s, new terms digital literature and electronic literature would also come to operate as literary synonyms. To find out which of them is more prominent in 2016, all the above-mentioned key terms were searched on Google, with the following results (table 2).

<table>
<thead>
<tr>
<th>TERM</th>
<th>OVERALL HITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>“hyperliterature”</td>
<td>2,580</td>
</tr>
<tr>
<td>“hypertext literature”</td>
<td>6,770</td>
</tr>
<tr>
<td>“ergodic literature”</td>
<td>23,600</td>
</tr>
<tr>
<td>“digital literature”</td>
<td>73,440</td>
</tr>
<tr>
<td>“electronic literature”</td>
<td>176,000</td>
</tr>
</tbody>
</table>

The lesser hits in connection to the first two terms hypertext literature and hypertext literature situate them as historical expressions based on 1990s theory and practice, wherein hypertext fiction is also relevant.

But the scope opens up as more synonyms are introduced: ergodic literature has had its share of followers particularly connected to Marie-Laure Ryan’s and Espen Aarseth’s works and the use of the broader term cybertext, a synonym to hypertext that not only involves literature but any digital text.

Regarding digital literature, as happens with cybertext, might sometimes translate into literary artworks but is most often assimilated into electronic literature, which also provides the most hits and therefore must be the most relevant term to focus on as the literary segment of digital art (reference works like the Routledge Encyclopedia of Narrative Theory, however, suggest digital narrative as an umbrella term to encompass reflections on literary computer artworks, see 2005, pp. 108–112).

To contrast art and literature, if we google digital art (13.9 million hits) and electronic art (444,000 hits), the conclusion seems to be that digital art encompasses all sorts of computer-related creative manifestations (either artworks conceived within an artworld context, or as simpler experiments like Photoshop-based collages), while electronic art seems to be circumscribed to a particular type of art.

The New Media Art Encyclopaedia created in 1998 by European art centres such as Paris-based Centre Georges Pompidou and Centre National des Arts Plastiques starts describing electronic art in historical terms as making “use of advanced technologies such as computers, lasers, video, holography, and certain means of communication”, where also “the content of the exchange is less important than the network used and the operating conditions of the exchange”, which highlights its technological setup and a link to Fred Forest’s theory of Aesthetics of Communication (1983).

If we focus on literature, the results from searching digital literature (73,440 hits) and electronic literature (176,000 hits) seem to suggest that the latter is the more prominently used by literary or art scholars, whereas digital literature represents a much broader term involving literary digitisations and various digital paratexts such as literary criticism, blogging and other text-based forms.

So, after showing that electronic literature has become the main term for referring to computer-based literature, it is essential to narrow it down to a more specific definition. The Electronic Literature Organization, a non-profit organisation founded in 1999 by scholar Scott Rettberg, novelist Robert Coover and businessman Jeff Balowe, the main goal of which is to “foster and promote the reading, writing, teaching, and understanding of literature as it develops and persists in a changing digital environment”, provides the following inclusive definition of electronic literature on its website:

Electronic literature, or e-lit, refers to works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer. Within the broad category of electronic literature are several forms and threads of practice, some of which are:

- Hypertext fiction and poetry, on and off the Web
- Kinetic poetry presented in Flash and using other platforms
- Computer art installations which ask viewers to read them or otherwise have literary aspects
- Conversational characters, also known as chatterbots
- Interactive fiction
In order to choose the best archive for electronic literature, the following online archives have been chosen as possible candidates into account the research background on computer-based narrative conducted by the author of this article (Herrera, 2001, 2015), the following online archives have been chosen as possible candidates to present the best information on electronic literature artworks:

- The Electronic Literature Collection (also known as ELC) from the Electronic Literature Organization (several curators, volumes from 2006, 2011 and 2016).
- Gallery 9 at the Walker Art Center in Minneapolis (curated by Steve Dietz, USA, 1997-2003).
- Rhizome ArtBase on Rhizome (several curators, USA, since 1999)
- Turbulence from the New Radio and Performance Arts Inc. (several curators, USA, 1996-2015)

In order to choose the best archive for electronic literature, the following criteria have been established:

- Is it an active and updated website? (The website is online and it has been updated recently as part of an ongoing project.)
- Is basic information for the artworks available in English? (English is understood as the lingua franca for online communication and, therefore, also for online art.)
- Does it provide full-access to individual artworks? (Either through inframes, by hosting the artworks or through links to full artworks.)
- Does it provide practical search and retrieval functions for electronic literature artworks? (In particular, through tags classifying the artwork as electronic literature or another narrative synonym.)
- Is the person or people behind the curation of the artworks legitimised as an arts professional? (That is, he/she has a reputation, curriculum or active profile within the digital artworld.)

The choice of archives and the criteria chosen to examine them necessarily excludes the following types of archives:

- Archives not related to artworld systems in terms of institutions, curators or any other artworld element (as is the case with Hermeneia’s Antologia de literatura digital, hosted by the Universitat de Barcelona. Its extremely large collection of digital literature classified with 60 tags matching those of the Electronic Literature Collection deserves careful examination, but within another theoretical framework).
- Archives specialised in art history prior to 1994 (birth of net. art) or in digitised artworks (as happens with traditional art collections).

After comparing the five archives, the answer to which one seems to provide a particular insight into the area of electronic literature as part of the digital artworld is the Electronic Literature Collection.

These three volumes account for almost 200 artworks which have been thoroughly selected and classified as forming an electronic literature canon. These artworks are fully accessible through the three volumes of the collection, easy to locate as narrative pieces through specific tags, legitimised by the curators behind their selection and altogether connected to the Electronic Literature Organization.

However, it is fair to mention that a systematic approach to electronic literature should also consider Turbulence’s archive as a very significant competitor to the Electronic Literature Collection. In this case, the suggestion for librarians and scholars would be to complement the extremely specific approach to narrative forms of the ELC with that provided by those Turbulence artworks thematically connected to any narrative explorations, and not necessarily grounded in text-based content.

The historical value of the other archives analysed (Gallery 9, Rhizome Arthub, Whitney Artport) is by no means diminished. However, the fact that Gallery 9 and Artport were built and designed before the development of web 2.0. technologies (as defined by Tim O’Reilly in 2005), which currently use a significant amount of tags to classify individual artworks, and the smaller sample of artworks they provide, as well as the transformation that Rhizome’s ArtBase seems to be undergoing to put artworks running on outdated computer systems on a level with its current archival platform, works against their suitability as more substantial electronic literature resources.
Table 3. Comparing five key digital art archives to identify the best one for researching electronic literature artworks.

<table>
<thead>
<tr>
<th>ELECTRONIC LITERATURE COLLECTION</th>
<th>GALLERY 9</th>
<th>RHIZOME ARTBASE</th>
<th>TURBULENCE</th>
<th>WHITNEY ARTPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>English information (Y/N)</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Full-access to individual artworks (Y/N)</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Search and retrieval options</td>
<td>VOLUMES 1 and 2 provided search by authors, titles and keywords. VOLUME 3 expanded search options to countries and languages. All 3 provide narrative keywords such as poetry or interactive fiction, and feature around 200 artworks in total.</td>
<td>Through artworks, archives, people, writings, exhibitions, themes and projects. Thematic search provides narrative keywords such as hypertext, which is connected to 13 exhibitions. However, searching through narrative returns the exact same exhibitions, so the sample of exhibitions is limited.</td>
<td>Through date, name and title of the artwork. References to other technological or thematic aspects in the archive up until 2015 (see the Herrera, 2015, ibid.) have now been erased.</td>
<td>Through project, artist or keyword. The list of 250 plus keywords does include several narrative terms, such as narrative itself (44 entries) or electronic literature (16).</td>
</tr>
<tr>
<td>Curation legitimised</td>
<td>Curators include international scholars and artists, such as Nick Montfort (V1), Talan Memmott (V2) or Leonardo Flores (V3).</td>
<td>Steve Dietz was and is an active art curator, now working as director as the art organisation Northern Lights.mn.</td>
<td>Dragan Espenschied operates as Digital Preservation programme manager. All other curators have been renowned professionals of digital art.</td>
<td>Directors Helen Thorington and Jo-Ann Green have long careers as, radio producer and artist and academic, respectively.</td>
</tr>
</tbody>
</table>

Conclusions and challenges for the digital research of electronic literature

The acknowledgement of digital art (and electronic literature) within the artworld remains a difficult issue which scholars and curators might try to address by disseminating (information on) their artworks. To that end, several digital art archives have been analysed in order to locate the best resource on electronic literature as a particular field of study.

Research seems to indicate that, so far, the Electronic Literature Collection provides the best resources for identifying electronic literature practices within digital art. The fact that this collection is online, accessible in English and ongoing both as a collection and through other, recently created, online platforms (the organisation’s website, the Electronic Literature Directory and a Facebook group) seems to indicate that, however minor an area of research, electronic literature will be available for any scholar or curator interested in it.

Regarding the centrality of American archives for this type of study, the bias as to what scholars and curators might be missing if an online collection is not fully available in English and supported by powerful institutions in terms of economic and technological resources is an important discussion, but it should be addressed elsewhere.

Regarding archival issues, however, it is worth noting that not only have web 2.0 technologies increased user intervention during the past ten years, but so too have their creative expectations. Users are accustomed to creating, editing and uploading content through blogs and social media, and those capabilities are non-existent or still limited in the art archives analysed for this article.

Moreover, another significant, related topic to discuss is the connection of electronic literature to transmedia storytelling (as originally...
described by researcher Marsha Kinder in 1991, and popularised by scholars like Henry Jenkins in 2006, or Carlos Scolari in 2013), which poses the question: will web-based and hyperlink-based archives suffice for future generations of electronic literature scholars and artists? Transmediality means the ability to created related (but not identical) narrative content through different platforms or devices, so that it opposes the convention of artwork uniqueness that the ELC and other online archives are still fostering. Thus, the Electronic Literature Collection as an ongoing electronic literature archive within the digital artworld, or any other related archives, will have to decide whether it should expand its formats and operating systems for the future electronic literature artworks.

References


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**Recommended citation**


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