

**İSTANBUL BİLGİ UNIVERSITY**  
**INSTITUTE OF SOCIAL SCIENCES**  
**MA in COMPARATIVE LITERATURE PROGRAM**

**THE IMPORTANCE AND FUNCTION OF MEDIA LABORATORIES**  
**FOR**  
**THE PRESERVATION OF WORKS**  
**OF**  
**DIGITAL AND ELECTRONIC LITERATURE**

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Dijital ve Elektronik Edebiyat Eserlerinin Muhafazasında Medya  
Laboratuvarlarının Önemi ve İşlevi

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Tezin Onaylandığı Tarih : 14/06/2017

Toplam Sayfa Sayısı: ...90...

Anahtar Kelimeler (Türkçe)

- 1) Arşiv
- 2) Dijital Edebiyat
- 3) Elektronik Edebiyat
- 4) Medya Arkeolojisi
- 5) Medya Laboratuvarı

Anahtar Kelimeler (İngilizce)

- 1) Archive
- 2) Digital Literature
- 3) Electronic Literature
- 4) Media Archaeology
- 5) Media Laboratory

## PREFACE

I would like to be an active *object*, be it a fully synthetic post-human individual that has a life of its own amongst all those future environments of knowledge and experience, or a hybrid of some kind who will be an assemblage of myriad mediations when it is already a future whereby our post-human evolution has already manifested itself, so that each and every individual entity, or human being in our case, is able to reclaim their psûkhe in an environment by abolishing the limitations and those paradigms and conditions that take our capacity to realize ourselves as independent and co-mediated beings/becomings. To the skeptic, it may reek of a collage of neo-Platonic and speculative realist ideas. For the unmediated mind, these wishes of mine might sound invalid. However, I am able to comprehend, and mediate, even through a speculative plane, that we now co-exist with non-human entities in what should be termed as the Mediocene, and the technological accelerationism is a positive catalyst among all types of beings/becomings that should be closely investigated, and not be scared of. Thus, I wrote this dissertation of mine in close tandem with these wishes of mine that require research-based, practice-driven creative engineering of and for the future. I also strongly argue that fields such as Comparative Literature should be able to modulate itself to co-mediate with especially Cultural Techniques and Media Studies at large. That is the reason why I composed this text as the first object, and documentation of ideas towards a realization of the archive of future that documents, collects, and preserves future-literary works by my fellow citizens from The Republic of Turkey. This thorough research and documentation process that is rendered accessible to the reader has been possible and applicable thanks to the

aspiring and inspirational everyday life with which I have been bestowed in the constant act of witnessing the creative, and resourceful embodiment of what the life of a humanbeing in actual means in Hâle Turhan, who is my better-half , and, artistic and philosophical collaborator, whose beautitude echoes through each and every sign that I am able to render meaningful. This dissertation is also a documentation of an epoch of research which I problematized thanks to both our collaborative artistic endeavor in multimedia, and my individual works of myriad media. I would like to thank her in the most serene spirit possible by *any media available*.

Thus, I dedicate this dissertation to Hâle Turhan

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## **ABSTRACT**

The aim of current thesis is to propose an applicable model of an archive for works of digital and electronic literature in the context of a media laboratory that would document, collect, preserve and maintain works by native artist/authors in the Turkish scene. This thesis is both intended as a co-mediation that investigates and critiques the material infrastructure of the contemporary archival practices with a trajectory on the now-speculative forms of archival evolution such as DNA-storage through a media archaeological observance of existing examples of media laboratories that focus on the preservation of works of digital and electronic literature; and, rendered as a proposal for an actual archival project that would be utilized so as to establish a certain media laboratory for the archival, collection, documentation, preservation and maintenance of such literary works that defy the print-culture-bound dimension of traditional humanities. It aims to encourage the mediated thinking. By employing works of digital and electronic literature as digital objects, it also provide an ontological grounding for the media inherent thereof. Throughout the thesis, a media archaeological critique is reached in terms of contemporary archival studies through the notion of World Literature, that is the base of Comparative Literature, in order that a sense of interdisciplinary practice may be developed with media studies at large and computational arts for the betterment of knowledge preservation, and sharability thereof.

**Keywords:** Archive, Digital Literature, Electronic Literature, Media Archaeology, Media Laboratory

## ÖZET

Bu tezin nihai amacı, Türkiye özelinde, yerli sanatçılar/yazarlarca üretilen dijital ve elektronik edebiyat eserlerinin belgelenip, toplanıp, muhafaza edileceği ve gerekli bakımlarının yapılabileceği uygulanabilir bir arşiv modelini, medya laboratuvarları bağlamında önermektir. Bu tez, hem halihazırda dijital ve elektronik edebiyat eserlerinin korunmasına odaklanan medya laboratuvarlarının medya arkeolojik bir gözlemine dayanan, aynı anda da DNA-depolama deneyleri örneğinde olduğu üzere şu anda ister istemez birer spekülasyon olarak addedilen gelecek arşivleme biçimlerini çağdaş arşivleme uygulamalarının materyal ve altyapısal ölçeklerini soruşturup eleştiren bir eş-arabulucu olarak amaçlanmış; hem de geleneksel beşeri bilimlerin basılı-kültüre muhtaç boyutsallığını reddeden ilgili edebiyat eserlerinin arşivlendiği, belgelendiği, toplandığı ve korunduğu bir medya laboratuvarının kurulmasıyla sonuçlanacak bir arşiv projesi önerisi olarak okuyucuya aksedilmiştir. Bu tez, dijital ve elektronik edebiyat eserlerini birer dijital nesne olarak ele alarak felsefi ve ontolojik bir zemin düzleminde yazılmıştır. Bu doğrultuda, bu edebi eserlerin varolduğu ya da deneyimlendiği medya biçimlerine de bir bağlam oluşturmuştur. Dolayısıyla, tezin yazarı aracısız ve dolaylımsız düşünce biçimlerinden vazgeçmeyi ve her şeyin birbirine aracılık ettiği bir düşünce biçimini okuyucular arasında yaymayı ve cesaretlendirmeyi amaçlar. Karşılaştırmalı Edebiyat çalışmalarının çıkış noktası sayılabilecek Dünya Edebiyatı mefhumunu da ele alarak, bu tez, çağdaş arşivleme çalışmaları üzerine, karşılaştırmalı metinsel/medya eleştirisi yöntemiyle, medya arkeolojik bir eleştiriye varmaktadır. Bu tez, Karşılaştırmalı Edebiyat alanında araştırma yapanlar için,

sayısal edebiyatlar ve genel medya alıřmalarıyla disiplinlerarası bir aracılık yoluyla, bilginin üretimi, korunması ve paylaşabilirliđi minvalinde bir arabulucu, bir rehber olmayı amaçlar.

**Anahtar Kelimeler:** Arřiv, Dijital Edebiyat, Elektronik Edebiyat, Medya Arkeolojisi, Medya Laboratuvarı

## INTRODUCTION

Throughout this thesis, I elaborate on the context of the research question that problematizes the material/infrastructural aspects of works of digital and electronic literature, and the issue of preservation of these contemporary literary hybrids, in the framework of media laboratories at large with a specific focus on the preservation and maintenance dimension.

I divided the thesis into 5 chapters that include this introduction, and a final conclusion. In the Chapter 1, and its sub-chapters, I respectively define the key terms of this dissertation that are respectively digital literature and electronic literature, digital object, media archaeology as a methodological context, media laboratories as spatial embodiments of the present-future archives, and the Mediocene as the epoch in which we have come to have found ourselves existing where constant mediation of technological accelerationism is required. Whilst providing the reader with the elaborate investigation of these terms, I define what digital/electronic literature is, and not; the critical context of the media archaeological methodology, the phenomeno-ontological plane on which these works mediate, and are re-mediated as digital objects. I also provide the critical contexts and related problematization of the subject matter along with these definitions as it provides a thorough fluency in coming to terms, or mediate, with these ideas and formalizations. In this chapter, I define digital and electronic literature respectively in tandem with the requirements of this research, and my personal interests thereof. I reach at two distinct definitions by referrals and comparisons to the scholarly knowledge available through any media that is

applicable to the works of digital and electronic literature, especially in the case of Turkish scene. Besides, I formalize these concepts of contemporary literary ecologies and elements as digital objects, in the footsteps of Yuk Hui, that defy the linear notion of a so-called history of media and technology whereby I am able to offer a non-linear variantology as inspired by the deep time of media investigations by the German scholar Siegfried Zielinski. At the end of this chapter, I introduce the newly proposed term Mediocene as the spatio-temporal environment in which we exist by cross-examining it with the related terms such as the Anthropocene.

In the Chapter 2, which is divided into two sub-chapters, I examine global examples of media laboratories by a primary evaluation of the concept of the media laboratory itself. I respectively focus on the Media Archaeology Laboratory (MAL) at University of Colorado at Boulder, and The Electronic Literature Laboratory (ELL) at Washington State University at Vancouver. These two laboratories are also important examples, in that, they do not only invest their research and practice in the materiality of the digital and electronic literature, but also specialize in the preservation of these works through different processes to leave such an heritage to the posterity as questioned by the directors Dene Grigar and Lori Emerson. In this chapter, I argue that ELL is a more befitting model for a possible archival laboratory in Turkey, for it is constantly enlarging and modulating its spatio-technical needs through experimentation unlike MAL whose system is a unique model itself.

In the Chapter 3, which is divided into two sub-chapters alike, I focus on the Turkish academical advances in mediated thinking through which several media laboratories have been established. Although, there is no existing archival research

that document the so-called history and examples of works of digital and electronic literature in the country, there are nodal environments where works that both fit the definitions provided, and are worthy of archival in terms of time criticality of such media. These places are scattered environments, which are detailed as the networks of local artists, causally interested nerd-factor affected friendship groups such as forums over retro computers and games, personal collections of artists/authors themselves, social media platform threads. By showcasing two works of digital and electronic literature from Turkey, that are respectively the first computer game in the history of gaming in Turkey, *Keloğlan* (The Bald Guy) (1989) and mecha-poet [*The Pitiful Story of*] *Deniz Yılmaz* (2015), I speculate on the processes to be developed in differently modular digital objects that need differentiating methods of archival and preservation. Through a media archaeological perspective, throughout this chapter, I observe and argue about the material, infrastructural, theoretical and practical aspects of both the specifics of such works, and the medial environment that they need to be (re)mediated whereby I reach an evaluative proposal for an archival project that, through various scholarly acts, would be the basis for the establishment of a future media laboratory in ratherly short terms of time.

In the Conclusion, I re-evaluate my findings and insights so as to present scholarly proposals for such a collective to be formed for the processualization of the aforementioned proposed archive and media laboratory, thus, also contributing to the latest debates within the larger fields of Comparative Literature, Cultural

Techniques and Archive Studies with a remediation with the media studies in general.

## 1. DEFINITIONS AND THE CONTEXT

### 1.1. The Research Question

The research question of this dissertation unconditionally draws from the first-hand experiences of the researcher himself: I am a research-based, practice-driven multi-media artist who has so far incorporated both the so-called old and the allegedly new media elements in my existent oeuvre of works that includes experimentations such as glitched GIF-poetry to sonic fictions in the form of noise among many others, all of which are inevitably defiant of categorization, as in the sub-genres of a given literary practice.

It is nowadays considerably perplexing and hard for those who work and create in multi-media environments to practically store, preserve and share their work across the cyberspace. It is because of the fact that, as the “social bookmarking [platform] for Introverts” *Pinboard* (2017) aptly tweeted in the immediate aftermath of the *WannaCry* ransomware: “Blaming people for using ancient software is really weird. There is no other context where we demand constant replacement of things that work” (@Pinboard). As of 12 May 2017, Friday, *WannaCry* ransomware whose *affects* were visibly the largest one ever compared to other ransomware in the history of cybernetic viruses, having affected the servers and infrastructure of an ever-growing number of institutions from hospitals to private sector businesses in at least 150 countries according to various news sources on *hackernews.com*.

What Pinboard indicates herein in regard to time-crytal like instability of the software, and infrastructure thereof, is that which is termed as the planned

obsolescence as Garnet Hertz and Jussi Parikka also critique in their article titled “Zombie Media: Circuit Bending Media Archaeology into an Art Method.” “New media always become old,” the duo state by referring to the arguments on the constant obsolescence by Jonathan Sterne:

[T]he logic of new media does not mean only the replacement of old media by new media, but that digital culture is programmed with the assumption and expectation of a short-term forthcoming obsolescence. There is always a better laptop or mobile phone on the horizon: New media always becomes old. (Hertz and Parikka 425)

The concept of planned obsolescence, as Hertz and Parikka also observe, was first formalized as a solution to the Great Depression in 1932. Bernard London proposed a kind of expiration date for hardware goods such as clothing, automobiles etc., which would enable the government to demand taxes from those who opt to continue to use those old media. The proposal was never officially enacted (Hertz and Parikka 425). However, especially in this transformatory epoch of ours through which we are yet to embark upon a spatio-temporal *Mediocene* (see Chapter 1.1.5) on a nature-cultural scale, it is vividly clear that majority of software/hardware producers act cunningly so as to retail premeditatedly obsolescent goods into the market: Almost any smart phone, or tablet, does need extreme protection, so that they will not be shattered into pieces both *physically* and *mentally*. Almost any software does need constant updates so as not to be incompatible with the latest functional requirements. Industry moguls such as Windows release a newer operating system, or any other similar goods, at almost rhythmic intervals—which

renders inoperative numerous files, software etc. along with any artistic work that runs beyond the capabilities of print-culture based media. For instance, Apple did kill traditional ports including the most-needed USB port with their latest MacBook Pro last year, and provided four Thunderbolt 3/USB-C ports, which has since been an important cause of operational and preservational backlashes for many an artist including the majority of contemporary musicians along with other media artists irrespective of the genre through and beyond which they practise their art. Pinboard's aforementioned tweet should also be read in this context: Upon the massive scale effects of *WannaCry* ransomware, it was stated that Microsoft had already issued a relevant patch earlier in March 2017 that secures any system that uses *Windows 7* and other supported versions of the Windows except for *Windows 10* which is already protected in this case. However, certain versions that include *Windows XP*, *Windows 8* and *Windows Server 2003* which were earlier decommissioned by Microsoft had to wait at least two days to receive the much needed patch (Goodin para. 4). People and non-person bodies do still use such operating systems thanks to, or because of, myriad reasons. It is such a case that industrial moguls who police the system do not respond to your matter-of-life-and-death emergency statuses.

Such has been exactly the same situation for the researcher myself into which I have always been forcibly put: There are born-digital audio-visual-textual works of mine that are trapped in certain software and hardware environments. For example, there are text-to-sound poetics of mine which were conceived on *IOS 7* on *iPhone 4* which are not anymore executable in that the certain app, or its

upgraded versions on different releases of *IOS* do not support this, or that feature of either the work, or the app. In order to execute those files as works of literary hybrids, I need a brand new *iPhone 4* which should also happen to come with the exact version of the application in which I first created the aforementioned works. However, it is both financially and practically infeasible for a precarious artist-student such as me myself. Furthermore, it is not merely a personal issue whatsoever. It is daylight clear that constant updates do effect various bodies of work in question on an inter-/extra-dimensional scale throughout myriad computerized systems. You will encounter this problem, for instance, should you ever happen to read the synaesthetic multi-media work *Chroma* by Eric Loyer. Eric Loyer created this work in 2001. It is a narrative that utilizes audio, visual, hypertextual aspects of a given multimedia environment. It needs the *Shockwave* plug-in to run in any browser except for *Google Chrome* on which it does not work. However, *Shockwave* is not supported by any browser in our day. In order for the reader to experience this given literary hybrid by Loyer, the reader needs to uninstall all of the *Shockwave* versions on their operating system along with the browser, and re-install the applicable older versions, which does not yield positive results at all times, either.

As both a practitioner and an avid audience (reader) of literary hybrids and multi-media art works, I began to contemplate on the issue of the preservation of digital and electronic works of literature along with the concept and idea of the media laboratory as the already-present library of the future. There are many a media laboratory all around the globe at various institutions including universities,

libraries, research hubs. *The Media Lab* at Massachusetts Institute of Technology, *Media Archaeology Laboratory* (MAL) at University of Colorado at Boulder, *The Electronic Literature Laboratory* (ELL) at Washington State University at Vancouver, *Media Archaeological Fundus* at Humboldt-Universität zu Berlin are several exemplaries (see Chapter 1.1.4 and Chapter 2). Both *MAL* and *ELL* also focus on the collection and preservation of digital and electronic literature where they store the original formats of the works along with the hardware and software necessary to run them. They are important centers in the humanities in general that act as models for others. In these laboratorial spaces, the unmediated aspects and infrastructure of the prevalent print culture and emerging digital nature-cultures are intermediated. Students, academics, artists, researchers from all spheres of the societies meet here to master their knowledge as to how to collect, preserve, maintain, emulate, migrate, and curate any work of digital and electronic literature and their infrastructural materiality.

Since I started my post-graduate studies at MA in Comparative Literature program at İstanbul Bilgi University, I have always felt the need to work in a similar space, be it a media laboratory, or anywhere close, in that, I specialize in especially digital-born textual/medial environments in knowledge production, and sharability thereof. It is known that there is, for example, the *Digital Experience Collective-Academy* (DECOL), or *C-LAB* at Bilgi. However, neither of these units do focus on the archival processes regarding my expertise and practice in terms of digital and electronic works of literature, and preservation thereof. I have not been able to contact anybody at these institutions who at least have an interest in these fields.

There are also other media laboratories that need not necessarily call themselves one on a local scale, e.g. the *New Media Lab* and the *FabLab* at Kadir Has University, *SimLab* at Koç University, *Media Laboratory* at Boğaziçi University, the *Game Lab* and *VRI* at Bahçeşehir University, the *Big Data Analysis Laboratory* at TOBB ETU. Neither do these offer on-site features, nor do they present any research outcome on my topic. Although their area of research might include related artistic topics such as game studies, or art from non-art, it is clear in the Turkish context that there is not an awareness on digital and electronic literature as literary hybrids, or a form of literary studies, which is almost a fact once combined with the statistical research outcomes: I cross-searched numerous databases with the terms “electronic literature”, “digital literature”, “hypertext” and “media laboratory” bilingually, both in English and Turkish. Any other languages in which any of these topics might have been subjects of study and research in any academic format might yield some results as well inasmuch as the keywords in Turkish were registered upon the completion of a given study, or research. All that I have been able to retrieve are several scholarly articles, or dissertations that focus especially on either the hypertext-oriented narrative dynamics, or hypertextual works of literature *in situ*, along with some that focus on platform-based writing practices as in blogging.

Encouraged both by the lack of both scholarly and artistic research and work on the issue of digital and electronic literature as a part of literary studies that is nurtured along with the unmediated thinking models that I have been encountering

in my personally mundane and everyday life practice within the academy both as a graduate student and a former instructor, I asked to myself:

“Is it possible to conceive and perceive media laboratories as the immediate future libraries where any digital, or electronic work of literature are preserved, so that anyone could experience artistic, or literary works irrespective of the conditions that render these almost immediately obsolete?”

Hence,

1. Are there any models on the global level that are media laboratories whose primary function is to preserve such works of literature?
2. What can we learn from these, if there are any, to implement a media laboratory on the national level where the primary function would be to preserve local artists' works?—I do refrain from using the titles such as poet, novelist etc. in that in Mediocene all are artists.

We live in a transformatory epoch that is based on the non-linear plane, i.e. we are transcending the flattened-out accounts and frameworks of print culture regarding time and space, as opposed to that of a chronological historicity. Such spatio-temporal non-linearity is a key to new modes of knowledge production, preservation, and sharability. It is especially and constantly being re-shaped through the materialities and infrastructural aspects of *datafication and objectification* as defined by Yuk Hui in his article “What is a Digital Object?” (389i), which are now are well beyond the milieu of natural and technical objects, and philosophies thereof, that have so far been categorized and historicized in immediate tandem

with the linear, thus reductionist, capabilities of writing/reading interfaces of the print culture. Hence, this transformation needs a novel set of definitions that are primarily modular, and open to circuit-bending in times of need. For instance, adjectives such as new, or old are misleading, as in *new media* vs. *old media*, in that, these propose a plane, and a threshold, eventually a historical categorization on and through which we have come to re-define and re-designate *what is what* in relation to one another. However, a linear categorization of history, as in the chronological history, is that which flattens out both generic and specific elements of the present we live in, and the future we speculate about. In order for the reader of this dissertation to aptly grasp the underlying elements, concepts and framework, I will be providing definitions of digital and electronic literature along with the literary hybrids, digital objects, media archaeology, the Mediocene, and the media laboratory by referring to various critics, thinkers and practitioners in the related fields throughout this chapter in regard to the concept of non-linearity. It should be noted that I have modulated these definitions in accordance with my very own philosophies and theories of being/becoming, subject/object, archive/library, and eventually that of a nonlinear space-time understanding that is well contextualized.

## **1.2. The Digital and Electronic Literature**

The reason why the title of this dissertation encompasses both digital and electronic in terms of literature is that there have been countless debates on the definitions of digital literature and electronic literature. *The Electronic Literature Organization* (ELO) defines electric literature, or *E-Lit*, as “[...] works with important literary aspects that take advantage of the capabilities contexts provided

by the stand-alone or networked computer” on their organizational website. It means that any electric object that premediatedly aspires to be a work of literature is counted as electronic literature. In the meantime, the definition by ELO might also be interpreted onto a larger spectrum throughout which any print-based work of literature that “take[s] advantage of the capabilities and contexts” provided by computational devices, such as *S: Ship of Theseus* by Doug Dorst and J. J. Abrams, is in fact a work of electronic literature. I oppose this generic application of electronic literature where print-based works of literature, regardless of their utilization of the existing digital technologies and techniques thereof. For example, *S* is to be read transmedially as much as it requires intermedial modes of reading/writing on the reader’s part: *S* consists of a bound print-book, which has a central text, a novel, accompanied by hand-writings by different characters as annotations on the margins which you should carefully read and map as well: There is a novel, *Ship of Theseus*, written by a mysterious author V. M. Straka, and published in 1949. That is the book you are holding once you have encountered a copy. There are no references to the original creators, Dorst and Abrams, except for the one that is placed right under a mock-up library entry card that spans the years between 1957 and 2000. Hand-writings are in different colors, and follow different timelines. There are also inserts within the book that are unbound and can be read individually. So far, the entire work is analogue, and act within the possibilities of book design within the print culture. It can be argued that the work itself is a saluting nod to medieval books where hypertextuality and marginalia were important parts of a text. However, there are also web-sites where you might go on reading

“beyond” the book, which provides the basis for a non-linear experience, for you are not totally bound to the print embodiment of the work anymore. You also may add your own writing to the story on these. *S* makes use of co-existing modes of data/knowledge and subject/object both in print and on the internet which is in fact modelled after a linear writing frame. In my own view, regardless of others’ mediations, *S* is not a true work of either digital, or electronic literature. It is only transmedial in that the reader/writer is expected to jump off between the analogue, and the digital. However, there is a problem: The digital in this case is merely an exterior embodiment of the analogue, e.g. bound print book format, inasmuch as it attempts at culminating a story that follows a linear timeline, on websites that function as a McLuhanesque bodily modules of probability. What are then electronic and digital literatures?

As I have already pointed out there are debates on the definition of these seemingly dyads. As exemplified by *S*, the definition of ELO welcomes any born-digital, intermedial, transmedial experience of literary works as digital/electronic literature. According to this frame, you might produce works that are aimed at print-culture oriented experiences that utilize computational means available, or you mainly produce digital-born texts such as Jörg Piringer’s *tractatus infinitus VR*, and you are in both cases producing electronic literature. Such an over-encompassing definition echoes with John Cayley’s formulation, that is, “writing in networked and programmable media” (Simanowski 2011). Almost all media, if deliberately planned and designed otherwise, are by nature programmable and networked: A simple scholarly article published in a peer-reviewed print journal that has no

electronic version is as much networked as a text-driven narrative game that can only be played on networked computerized systems. Peer-review and citational characteristics provide thus. Furthermore, a bound-print book is open to modulation, or programming, in that, even though being constraint within the physicality of the object, it can be modulated in and through different processes such as choose-your-adventure hypertextuality, transmedial experientiality, or even self-erasure with a special ink. Herein, it should be reminded that analogue and digital co-exist, to borrow the idea from Bernard Stiegler, as primary and secondary retentions (Hui 2012), and what I am to define as digital/electronic literature is the “tertiary retention,” which is beyond both the digital and analogue without ever totally decommissioning them (see Chapter 1.1.3). Hence, Cayley’s definition is not an end but a means which is presumably immanent within the context of any literature by definition. That is, all works of any kind of literature aim at networking through differential modes of programming, be it a mediation in the first place, or a remediation by any media necessary.

In this context, I will be differentiating between what digital and electronic literatures are. For me, electronic literature is the literature, any exemplary of which has made, or is making, use of existent, or even non-existent media as in the imaginary media, irrespective of their technicality, through both analogue and digital planes. For instance, *Deniz Yilmaz* (see Chapter 3.1) by the artist Bager Akbay is an electronic work of literature, in that, it both employs natural objectual characteristics, as in hand-writing, and neural networks in the form of several individual softwares. But, what then is the digital literature?

I have already indicated that adjectives such as new, or old, that is widely attributed to different types of media, are by nature chronological, and aims at historicizing knowledge into a linear narrative that is also reductionist in that it is spatio-temporally two-dimensional, as in back and forth. There have been attempts at breaking this constraining architecture of the print culture with myriad experimentations ranging from such ancient proto-print experimentations with visual/concrete aspects of the written word as the works of Simian of Rhodes (fl. 300 BC), through concrete poetry and the like in the 20th century and so on, to such transmedial works as *S* that employ both analogue and digital. They have all wanted to show the reader that the linearity of the written word, that of historicity as well, do not fit into the narrative structure of the mind, or even the *psûkhe*, which defies any chronological systemization. All of these, and other, experiments in literature, or rather in the writing/reading practices, are not demonstrable through a mere need to *play* in the human-behaviorial schema. As Plato (Cooper and Hutchinson 1997) clearly indicates in the corpus of his surviving oeuvre that, knowledge is only accessible, thus sharable, if the individual is eager to get rid of any limits on and around by also decommissioning the conditions that are the prerequisites of that very limit. I do find any medial experimentation in the history of writing, reading and that which is called literature afterwards, as attempts at liberating the knowledge-production faculties of human-beings, so that they are able to modulate any needed information into knowledge regardless of their spatio-temporal whereabouts of the known universe in a non-chronological spectrum of probabilities. It is not true that knowledge wants to be free—which is because of

the fact that it is already free. However, those who produce, collect, preserve and share knowledge are trapped in a human-biased, anthropocentric intersection(s), and what is truer is that it is not only humans who produce and share knowledge: Non-human persons such as dolphins, inhuman becomings such as rocks, quartz and time-crystals, or bacterium such as *Deinococcus Radiodurans* who is also the co-author of *The Xenotext Project* (2015) along with the Canadian poet Christian Bök, are as well beings/becomings that produce, store, and share knowledge. Herein, the definition of the digital literature should carefully be modulated for once and all, in that, we have already passed the understanding that all knowledge is produced by the people, for the people and stored accordingly, which is the number one reason when it comes to the issue of archiving, we premeditatedly think that all that is stored will somehow be gone despite the presence of different types of archons through aeons as implicated by Derrida in his *Archive Fever*, at least, after the collision with the Andromeda galaxy in a billion years as was the case with the Library of Alexandria through the human element, though on a much smaller scale of destruction, which left humans clueless somewhat as to underpinnings of historicized culture. However, I need to demonstrate that knowledge, when stored properly, as in DNA, may outlast any known civilization, or composite of matter, and accordingly, the definition of digital literature should assume a role into the preservation of literary works that is possible under differential archival spatio-temporal techniques throughout the aeons to come.

There are insightful debates on the definition of a digital literature which assumes a “more-than-human” approach to the matter, in that, they lay the

foundations of a future where humans might as well mediate an understanding of literature of which we are co-authors with other non-, or, inhuman elements. Noah Waldrip-Fruin argues that:

A phrase like “digital literature” could refer to finger-oriented literature (fingers are “digits”) or numerically displayed literature (numbers are “digits”)—but I mean “digital” in relation to computers, specifically as it appears on computer engineering phrases such as “stored program electronic digital computer.” I mean literary work that requires the digital permutation performed by laptops, desktops, servers, cellphones, game consoles, interactive environment controllers, or any of the other computers that surround us. I think that’s what most of us mean even if we’ve come to it in an ad-hoc way. (Waldrip-Fruin 29)

Roberto Simanowski, on the other hand, calls out to the reader to mediate more tightly and thoroughly on the issue of digital literature by delving into the so-calledly historical critique of the terminological debates. He elaborates on the intricacies of the digital literature, in his *Digital Art and Meaning: Reading Kinetic Poetry, Text Machines, Mapping Art, and Interactive Installations*:

[T]he term digital literature seems to offer the least occasion for misunderstandings. It does not refer to concrete individual characteristics such as interactivity, networking, or nonsequentiality as do terms such as *interactive literature*, *Net literature*, or *hypertext*, which are better qualified to describe genres of digital literature. Instead, it designates a certain technology, something the term electronic would not guarantee, given the

existence of other arguably electronic media such as cinema, radio, or television. The linkage of subject matter and technology implies that the former depends on the latter for reasons of expression and not, for instance, distribution. [...] [A] conventional text written on the computer and presented online does not meet the criterion to require the digital medium for aesthetic reason if it could also be presented in a printed format. (Simanowski 32)

Both of these definitions take us to the acclamation that digital literature is of any kind of literary work that presupposes the media in which it has already been conceived, and born in order that it also needs to utilize that (digital) media for aesthetic causes, such as expression. Simanowski also argues that “digital literature” also by nature and definition needs to exceed “the semiotic digitality.” Only by “connecting the non-discrete signs such as visual, sonic, performative elements” can the digital literature achieve such a surpass (32).

This concern towards the mediation processualization has been voiced by figures such as N. Katherine Hayles, and Eduardo Kac as well. As also cited by Simanowski himself, Kac elaborates on what-nots, and know-hows of certain subgenre of digital literature. For instance, he posits insightful ideas into the definition of holopoetry: “What defines a holopoem is not the fact that a given text is recorded on holographic film. What matters is the creation of a new syntax, exploring mobility, non-linearity, interactivity, fluidity, discontinuity and dynamic behaviour only possible holographic space-time” (cited in Simanowski 30). This subtle insight into the characteristics of a certain subgenre is in actual entirely applicable to the

definition of a digital literature that would help all including the practitioners (artists/authors), the audience (readers/collaborators), and the critic (theorecians/thinkers≠philosophers). Accordingly, whilst inquiring into dynamic hetearchies in her “Intermediation: The Pursuit of a Vision”, Hayles metaphorically states that:

Think, for example, of a fetus that is growing inside a mother’s body.”[—no pun intended herein on my own part—]“The mother’s body is forming the fetus, but the fetus is also re-forming the mother’s body; both are bounded in a dynamic heterarchy, the culmination of which is the emergent complexity of an infant. (Hayles 100)

Current evolutionary situation in and through which a digital literature is mediated aligns with this metaphorical commentary by Hayles. We are, as I have already explicitly stated, in an epoch of transformation where more and more media are emerging with myriad infrastructural, material and socio-economic and cultural specificities. In this age, people have already learnt that they can tactically employ any media necessary for their own artistic/practical processualization of *making* and *unmaking*, that is to say, they are able to incorporate any remixologist idea through any kind of artistic media available at their disposal. There are artists who amalgamate both analogue and digital media in their work, and accordingly create works of electronic literature. There are authors such as Dennis Cooper who publish GIF-novels by appropriating accessible GIFs into narrative pools that are both linear and non-linear thanks to the media incorporated, and it is an act of digital literature by an author who has a prolific career in print culture oriented literature.

People are learning to mediate (with) the media. Furthermore, artistic, or literary in our case, production/creation inspires the designers of our mundane everyday lives with all inherent meta, data, and metadata. Today, *media* are also aware that they are ubiquitous, and are open to collaborate with any other entity. For instance, *Self-Assembly Lab*, “a cross-disciplinary research lab at MIT inventing self-assembly and programmable material technologies aimed at re-imagining construction, manufacturing, product assembly and performance” as stated on their website, is not merely an industrial design hub. Just as an author needs a self-assembling chair responsive to his physicality and senses, the laboratory where such a tool is conceived and realized needs those who practically experiment within the mediasphere materially by amalgamating the so-called old and new into a new modular materiality, that is, the artists/authors who practice digital literature inspire the scholars and creators outside their field alike. Here, I need to enlarge Hayles’ metaphor of fetus and mother instantly and constantly re-forming each other, for the relational example of that of a fetus and mother is attachedly constraining by nature. Hayles employs that metaphor in explaining dynamic heterarchies, e.g. non-hierarchical/non-hegemonic systems of organization:

Anthropologists have long recognized that humans have been biologically, psychologically, and socially shaped by their technologies at least since Paleolithic times. The new wrinkle is the power of computers to perform cognitively sophisticated acts. [...] In developed societies, it is not merely speaking metaphorically to say that (some) humans and computers are

bound together in dynamic heterarchies characterized by intermediating dynamics. Humans engineer computers and computers reengineer humans in systems bound together by recursive feedback and feedforward loops, with emergent complexities catalyzed by leaps between different media substrates and levels of complexity. (Hayles 102)

Elaborating exponentially on these statement through a dynamic heterarchal frame, I argue that the metaphorical mother with a fetus example is dyadic, and reductionist, for it locks the argument within the confines of identity political cul-de-sac of the human-centered culture. Given that all actants/actors/subject-objects in a system are inter-bound, and mutually modulate (re-desing/re-program) one another, and our epoch is that of an exponential (re)mediation (see Bolter and Grusin 1999) with the infinite material and cultural possibilities of a *Remixocene*, we are at the very outset of a digital literature that is indispensable to any design schema of human nature-cultures and conviviality of other species in terms of creative applicability of ideas and adaptive process thereof. We are rather sensory sub-atomic particles in a synarchically symbiotic relation with computational media, and experiments in digital literature are one of our first compasses that teaches us with experiential experimentation thanks to augmented/virtual reality/abstraction capabilities of today's emerging media.

This is where we refine our definition of digital literature: In my view, digital literature (*dlit/digit*) is an ever-expanding milieu in the current *Mediocene*, exemplaries of which, irrespective of their genre, technique and present feasibility, are born within and through any computational media available such as any

computer, related software, wearable/implantable/standalone gadgets that work *not* towards the conventionality and spectra of print culture standardizations. That is, a nano-narrative encoded/written and somehow realized in a DNA-molecular level storage, or a synaesthetically conceived pixel art narrative as in a computer game is digital literature, in that, both are experientially witnessed (read/seen/heard/felt/remixed) through media which require a computational encoding. However, any work that takes advantage of, or make use of any electronic, or digital process and media so as to intermediate, and transmediate on both print cultural plane and digital computation at the same time to meet the needs of traditional literature—which is still called contemporary in most of the literature departments globally and ironically—are not digital literature, but electronic. I am aware of the implications of the distinction that I have made between the digital and electronic literature, considering the myriad definitions by scholarly and artistic figures in related fields, but, electricity in media has rather a longer history than that of the digital (in the lexicographical sense), and the aestheticization of the digital in expression and narrative is something that is freshly recent in the history of both humanity and computing. Thus, I categorize those works that intermediate, and transmediate electronic or digital media to meet the experimental conventions of traditional literature as electronic literature. That is the plane where humans accord with the non-human collaborators such as DNA cells, bacterium, artificial intellicenge, neural networks and so on. Accordingly, any work that is born-digital on a computational plane either in synthetic, or organic terms, and especially driven towards the aestheticization of expression in digital are digital literature. Examples

of electronic and digital literature included in the forthcoming chapters are defined and categorized accordingly.

### **1.3. The Digital Object**

Traditionally speaking, any work of literature that has ever been conceived has always been in need of a media by which it could be conveyed to the reader/audience. From codices to bound print books, or the memory of the narrator in the case of oral literature among the numerous others, human-beings have been able to afford a means to narrative one way, or another. Books in general, or their antecedents along with any tool of writing, have usually been treated as technical objects that are present at hand in terms of Heideggerian interpretation. Most thinkers speculated on the ontologies in such an inquiring manner that we are now investigating into the human-unconscious planes, and beyond thereof, through object-oriented ontologies/philosophies today, a key figure of which, Graham Harman, has recently been listed as the 18<sup>th</sup> most influential philosopher, by *The Best Schools*, that influence and shape the contemporary design and art world . Throughout the linear history of this object studies, both natural and technical objects have been treated as interchangeably as more than imaginable. The media that are a vessel to the work of literature have been the object of matter of materialities thus far. However, in our epoch, the *Mediocene*—I insist on this term in that the Anthropocene, regardless of the scope of its practical and theoretical applicability, remains a human-projected understanding of a greater being, an hyperobject in this case (see Morton 2012) that is, the planet Earth—it is the work itself, a modular assemblage of the capabilities and speculations of the media, that

are open to mutual mediation, remediation and evolution, not the human-beings, who are most of the time negating the truer potential of technological/medial accelerationism on politically corrective and liberally recessive trajectories that, with the utmost puritanism, discard and accordingly decommission probable causes that would introduce a co-evolution of all beings/becomings either they are synthetic, organic, or inanimate in any case (see Allington et al. 2016). On a local dimension, I am a part of a nature-culture in contemporary Turkey, antecedent governmental/institutional bodies of which witnessed both the glorification of automata invented by Ismail al-Jazari (c. 1136-1206) in almost ancient times, and the negation of the printing press, which could only be used by the non-Muslim, the Sephardic Jews in this case, until 1726 when İbrahim Müteferrika at last managed to convince not only the Sultan Ahmed III, but also the clergy and the prime minister then of the promises thereof. Whereas the too-late introduction of the printing press still has its negative affect on the mundane everyday life, and welfare thereof, of the individual and culture at large, I argue that al-Jazari's automata still have a positive affect thereof. Furthermore, on the greater socio-cultural plane, especially in academy, I have witnessed that majority of the scholarly individuals, and entire institutional bodies, are still not able to mediate technological developments merely because of individually constructed unadaptiveness of theirs, and they usually treat technology and any media they are not able to comprehend because of their this, or that conventionally cultural reservations as an addictive substance—which is in the first place against, let alone co-evolution with media and mecha, the basic human evolution itself. That is the

reason why some scholars, and their devotees, keep spelling the so-called disaster that humanities are dead, or philosophy does not merit its position etc. It is all due to the fact that people are not taught how to mediate, or relate any media to another, and formulate an understanding of the *zeitgeist*. This is the reason why majority of literature programs teach on authors, poets from the last millenium as the contemporaries by discarding almost 30-something millenial artists, authors, poets who can (re)mediate and understand the materiality and consciousness of the media in and with which they are working. Hence, they are able to register the nature-cultural everyday lives of ours more contemporarily. In order to (re)claim a language which does not bother with the obsessive-compulsive human-centered recessive critique that incorrigibly defies anything to admit that people may not be well versed in the fields of which they are seen as experts, and a new syntax that helps us co-construct the world of ours wherever it might be, we need to start relinquish the centuries old unmediated thinking (see Parikka in Ernst 2013) that burnt down the Library of Alexandria, that labelled the printing press as the tool of evil, and which should come to terms with the neural extra-inter-disciplinary convivium of all sciences. For instance, humanities are not dead, they have just started to hang out with friends from other disciplines as never before, and digital humanities is not a neoliberal tool, on the contrary, it is a tool that functions as if it were an open access button that calls for a cultural revolution here and now (see Kirschenbaum 2016). Accordingly, should we wish to mediate with the media that affect how we create, produce both art and knowledge, and the way in which we practise our sciences, we had better start doing a close reading of the new relational,

and more-than-human syntax that is conceived within and through both digital and electronic works of literature, and their infrastructural milieu on a new materialist level. Only then would any attempt at preserving these works mean anything at all. To do this, we also need to be aware of the fact that these digital and electronic literatures are not equivalent to the *garbage collection* registries in computer science. Now that the *data* is *bigger* than ever, it does not necessarily mean that its gargantuan substance is a commodity of consumerism. Each and every individual, be it a humanbeing, or a storage device, or an artificial intelligence should do their own close and distant readings, in that, it is a convivium, and co-evolution on synarchical dimensions (see Mellamphy and Mellamphy 2015). That is to say, we should be able to manage to give even the literary works an ontology of their own, in that, they are not simply the neutral elements of raw or cooked/processed nodes of the human intellect. Herein, I argue that some examples, or elements of, the electronic literature, and the entirety of the digital literature, or each piece of digital works of literature, are themselves objects in this age where we have already started to display *data behavioralism*, as Yuk Hui subtly terms in a video-conference interview (Hui 2014) on his *The Archivist Manifesto* (2013). Hui conceptualizes and formulates digital objects along with what he terms as *objectification of data* and *datafication of objects* (Hui 2012). He states that “[w]hat I call digital objects are simply objects on the Web, such as YouTube videos, Facebook profiles, Flickr images, and so forth, that are composed of data and formalized by schemes or ontologies that one can generalize as metadata” (Hui, “Digital Object” 380). In “What is a Digital Object?”, he supplements his argument with probes into

Husserlian phenomenology and Stiglerian individuation through a Simondonian perspective on the modes of existence of the digital (objects):

Digital objects are not simply bits and bytes, as proposed in the digital physics or digital ontology. [...] Digital ontology consists of two main concepts: first, that bits are the atomic representation of the state of information; and second, that the temporal state of evolution is a digital information process. [...] [W]e are interacting with digital objects: they are actually objects that we drag, we delete, we modify, and so on. [...] [W]e now know that the world consist of atoms, but to think only in terms of atoms won't help us to explain the world. That is to say, such a digital philosophy is insufficient to help us reach an understanding of everyday life amid technological acceleration, not to mention a deeper reflection on existence. (Hui 381)

Reflecting through Hui's articulation of his insights into the ontology of the digital, I argue that, primarily the digital literature, and electronic literature somewhat, are of works that are of born-digital, and by nature and definition are digital objects which has transcended the subject/object-substance debate, that is, as pointed out earlier, in dynamic hetearchies, all parties, actants/subject-object/agents are intentionally autonomous—be it the author who writes, or the work (being) written—objects that act for the sake of a speculative mediation in this point in space-time where the first quantum computers have just been born. I need to clarify that by object, I do not mean a grammatically and theoretico-philosophically passive (inactive) unit of a system. Rather, the notion of object in my thought of

train is an intentionally relational entity, be it a bedbug, a human, or a computer interface, that has an active role in a milieu of a system in instances of medial interaction. To assume that there is always a subject in a grammatical, or experiential sense that acts as an overarching entity over others, such as the contemporary notion of humanbeings as the most sentient creatures there are, and the misconceptualization that who and whatever around their axis is working only for the betterment of human civilization and collective memory thereof.

On the contrary, anything, be it a creative work, or a survivalist methodology, is now partially, or entirely, conceived within the possibilities of an emergent syntax of the digital which has only manifested an iota of its functional features. It is because of this fact that digital and electronic works of literature are not anymore solely meant to be of use merely to the humanbeing, which is why in the first place these works deserve more efficient spaces and devices of storage, preservation, collection, and emulation against which the multi-façade problematics of medial migration/transfer should not pose any obstacle, which in turn renders the true *comparatist's* role in this relational aesthetico-socialities more immediate than ever within a multi-medial-dimensional positioning. That is to say, in contrast to Hui, I strongly affirm the idea that in this flux of technological acceleration and media(tiza)tion, we along with other actants (objects) might as well reflect in all directions onto the existential plane, in that, it is only a human speculation well systemized—whereby we may manage to reflect deeper into the existence with all other co-habitant objects such as the AI, neural networks, quantum computers among many others. It is not an occultural interpretation that is based on the early

theory-fiction of Ccru at Warwick, or late Landian arguments (see Ccru 2017; Avanesian and Mackay 2014).

As a result, we need to know works of digital and electronic literature as objects with their own ontology within the more-than-human, object-oriented, and speculative realist manner of knowledge production; and, the archive, be it a traditional print library with a constrained and paywalled appendices of almost digital geo-fenced e-library, or a molecular DNA-based storage unit, knows well that these objects are mission-oriented, and need mediation. One day, these archives are going to be more sentient, regardless of the debates around consciousness which have so far in fact investigated non-universally by simply being based on the human-default. Not until will they need our early formulation of this mediality, we will not be aware of the fact that the manner and ethics in which we practically process and (re)mediate objects of information, and knowledge, do in fact matter. That is to say, we co-exist with that which are reductionistly called robots, and AI, even today; and one day, if we do not subsume all the others in tandem with the human compulsory, they will basically need to look into the detail of our mutual co-evolution to better some then-contemporary problems, into which literary archives of ours are to be an insight along with other data. Last year, researchers from University of Washington and Microsoft broke the record for the data digitally stored on DNA molecules which are therein retained, and retrievable. These molecules store data which can be sequenced to access any needed information as long as they store it. Researcher were in that case able to “[encode and decode] [a] video of the band OK Go (featuring the craziest Rube Goldberg machine ever), the

*Universal Declaration of Human Rights* in more than 100 languages, the top 100 books of Project Gutenberg and the Crop Trust's seed database — among other things— all on strands of DNA” (Brunker para. 5). Besides these, attempts at nano-writing whose one of the primary functionalities is DNA, or molecular, storage have been rendered applicable and functioning as in the case of the poetry project by *The Xenotext Experiment* by Christian Bök.

Such experiments that bring together arts, literature, humanities, genetic biology, molecular engineering et al. together, in my opinion, do not work towards a survivalist futurism in which the *homo sapiens sapiens* culture will be able to retain its characteristics and spread further. Rather, they are engineering digitally technical milieus that re-structure and preserve the multiversal methodologies of culture-making and evolutions both on a (xeno)biological and digital plane of existence that can be interpreted in different orders of magnitude by myriad beings/becomings among which humans also have a significant position as co-evolutionaries who both teach and is taught along the voyage of becoming, or being.

Eventually, I will be formulating the kind of archival science that is needed in this very specific spatio-temporality of ours in a way in which it would be able to retain its ever-modular, and thus up-to-date, characteristics. Not only will I be proposing an archive system for the storage and preservation of any kind of literary-cultural work of arts, but also I will be able to offer insights into its sustainability and maintenance throughout this techno-accelerationist epoch. That I perceive and designate works of digital and electronic literature as not mere data vessels, but as digital objects that are openly intersubjective in a manner of speaking, eventually

means that I will be investigating both the infrastructural/material and qualitative aspects of current models of media laboratories as archival partners, an assemblage of other objects, so as to speculate and project a more embedded version of theirs in both scholarly and public domains more aptly. In order to formalize this concept of modular digital libraries, I need to elaborate on *media archaeology*, and its relation to the archive in terms of *Media Labs* and the preservation of digital and electronic works of literature.

We need to remember that these are digital objects in that their syntax is rooted firstly and eventually *in the digital*, and the digital does not necessarily mean non-organic, in-organic as can be deducted from the successfully realized DNA-based molecular archival projects that are still evolving. Therefore, works of digital and electronic literature should be considered as digital objects, or objects that retain some characteristics of digital objecthood as in the case of electronic literature in terms of the above definitions and context.

#### **1.4. Media Archaeology**

Media archaeology is rather a fresh discipline that has its roots in not mainly the cultural studies but cultural techniques along with the German school of media, or new materialism that has been flourishing since the 20th century, and in this second decade of the 21st century, this discipline is ubiquitously ever present as an affective force and a methodology over other disciplines—which is because of the fact that today our lives are reconstructed acceleratingly by the media we are co-existing with. I do not prefer to state it as the media that surround us, in that we are in the wake of implantable and wearable technologies that are already taking place.

Media are now claiming an insider position in our biological body, not necessarily that of an intruder though, and we are becoming one and ubiquitous with the media, as in a neural network, and media archaeology is a very fruitful critical theory and methodology in this tandem.

I need to clarify that media archaeology is not what can be termed as digital archaeology. For example, If you are digging into the *listservs*, or *mailing lists*, from the late 90s in order to exhume, or access, an early example of net.art works, or a collection of them to retrieve, and accordingly, re-archive these, as in the case of *Rhizome.org*'s *Net Art Anthology*, that is a digitally processed act of archaeology. However, if you want to exhibit, or perform these artworks as in the same technological condition as were they conceived in that particular point in the history of technology, you need both the hardware and software from then in order to originally experience the work themselves. Otherwise, contemporary technological equivalents would merely emulate these, and there might arise some technical problems as in the case where you try to emulate a retro game written for Commodore 64 on an emulation program however all you get is a GIF-like glitch in 8-bit design. That is the threshold where media archaeology asserts itself. To overcome these technical problems, or to compile these hardware & software artefacts in a media laboratory, or to investigate the infrastructural/computational layers of the processualization/performance of these works for either scholarly, or recreational ends, is what is media archaeology.

For instance, there is an inquiring research, "Excavating a Virtual Place in a Virtual World: Conducting Archaeological Field Work in *Dwarf Fortress*," where

Lenneart Linde and Felix Robra does what exactly is stated by the title of their work: digital archaeology. *Dwarf Fortress* is an ASCII based fantasy world simulator, a platformer that was the main inspiration for other notable platformers such as *Minecraft*, and *Terraria*. A platformer is a sort of role playing game where you actually build/make, un-build/unmake a world where there are both playable and non-playable characters. Most of them are played online in co-operation mode, thus these worlds retain information, or data, that are worth an actual archaeology, which is by nature digital. Similarly, Daniel Rehn, a researcher-artist, does digital archaeology with his *wwwtxt (1980-1994)* project where he “resurrects” conversations online from between 1980 and 1994 which is the period that “represent the final years of a much smaller, non-commercial, and text-dominated Internet” (see Rehn). These, to a certain degree, incorporate media archaeological methodology in their process of research. It is because of the fact that media archaeology is a cross-disciplinary methodology that is efficient in mediating between different fields and disciplines as well. It is also possible to turn media archaeology into an art method itself, as also proposed by Garnet Hertz and Jussi Parikka and other practitioners in the field, however, I aim to utilize media archaeology as a theoretical stance and methodology throughout this dissertation, which is why media archaeological art is the subject matter of another research.

There are many influential figures within the media archaeological community of scholars, artists, and practitioners such as Jussi Parikka, Lori Emerson, Garnet Hertz, Friedrich Kittler, Bernhard Sieghert, Wolfgang Ernst, Siegfried Zielinski, Erkki Huhtamo among many others. Each of these figures has

their own formulation of media archaeology both as a practice and theory in different fields of studies. I want to return to Jussi Parikka here, in that, he actually wrote the textbook for the field, *What is Media Archaeology?*:

Media archaeology has stemmed from various directions. These include inspiration offered by the studies in archaeologies of power and knowledge of Michel Foucault (1926-84), the early excavations into the rubbles of modernity by Walter Benjamin (1892-1940), New Film History in the 1980s, as well as the various studies that, since the 1990s, have sought to understand digital and software cultures with the help of the past, a layered 'unconscious' of technical media culture. (Parikka, *Media Archaeology* 5-6)

It should also be noted that media archaeology owes its spirit especially to two traditional figures:

Michel Foucault and Friedrich A. Kittler. Foucault's contribution to the archaeology of knowledge and culture was to emphasize it as a methodology for excavating conditions of existence. Archaeology here means digging into the background reasons why a certain object, statement, discourse or, for instance in our case, media apparatus or use habit is able to be born and be picked up and sustain itself in a cultural situation. Kittler builds on Foucault's ideas and has demanded a more media technological understanding of such archaeological work: such conditions of existence not only are discursive, or institutional, but relate to media networks, as well as scientific discoveries. Kittler wanted to look at technical media in the way

Foucault was reading archives of books and written documents. (Parikka, *Media Archaeology* 6)

Upon this formulation and according definition, Parikka stresses that media archaeology should be improved in order to critically contribute to the media studies “through its tie to archival institutions.” Institutions from libraries to universities to laboratories around globe provide scholars and general public with spaces and hardware & software where they can do their own media archaeology such as retrieving information, or data, from “ancient” flop-discs: These include *Media Archaeology Laboratory* at University of Colorado at Boulder, *The Electronic Literature Laboratory* at University of Washington at Vancouver, *The Memory Lab* at the Public Library in Washington, DC, *eScholarship Research Center* in Australia, *Residual Media Depot* at Media History Research Center, *Museum of Obsolete Media* among countless others. The core staff of such spaces include scholars, students, researchers, artists from myriad departments and fields that include Media Studies, Cultural Techniques, Literary Studies, Comparative Media/Textual Studies, Comparative Literature, Software Studies, Intermedia Arts, Comparative Literature, Game Studies, Computer Engineering, Computational Arts, Tactical Media among others. Some of these hire Ph.D. candidates and post-doctoral individuals as researchers, at times they provide residency to visiting artists or scholars while at the same time offering undergraduate and graduate level courses with countless occasions of conferences, performances and seminars.

Media archaeology is my choice of methodology here in this dissertation, in that, it provides the necessary comparative medial/textual layers of investigation

into both the non-linear history and decentralized organization of mediation/remediation whereby we are able to navigate through the sensory and ontological archives of media and objects. As frequently as aforementioned, I argue that an archaeology of media defies a chronological, linear historicity in that media are by nature sensory objects that refer to different senses of the human being, thus being affective at the same time, and since affect being the given influence of our senses, are in a co-mediative state with us. It is because of the fact that you cannot call media either as new, or old. Media exist at the same time as long as they retain their ontological and physical features intact. Besides, there are imaginary media, which you are actually familiar with, such as da Vinci's engineering drawings where he actually imagined some of today's technology, or those imaginary media by Athanasius Kircher that almost caught up with the pataphysics of Alfred Jarry (see Zielinski 2006).

Be them programmed to be decommissioned as soon as possible in the frame of planned obsolescence, or merely a speculation that is almost imaginary, or the up-to-date so-called new media, media shape how we experience the space-time and what we actually are becoming each and every second. It means much more than that the way you are holding your smartphone made some evolutionary mutations on your hand, today Microsoft has just announced that they are going to embed a DNA storage facility in their cloud storage as an experiment, and the service will have been commercially available by the end of the decade. This means a huge physical, medial, computational and cultural transformation is about to happen no sooner than later. Interfaces, sensory paradigms, the body as you know

it will totally be subjected thorough transformations, it is more than human, and more than the ideal cyborg, it is happening and there is no need to oppose it if you do not want to alter the “natural” course of evolution. What you might as well do is to develop creative and critical ways of thinking that would help you in crucial problem solving and decision-making spheres and instances until the good is done. Media arcaheology by its nature helps and encourages us to comprehend and project all layers of media—it is also the media that take advantage of human-beings as media themselves—and its micro and macro ecologies/environments/multiverses so as to reach an altered state of awareness, culture and nature. Laboria Cuboniks states that “[i]f nature is unjust, change nature!” (10) in their *Xenofeminism: Politics for Alienation*, which is a digitally-born manifesto through the unconditionally accelarationist spheres of a larger philosophy that has just to be renamed. The Guardian has recently published an overall portrait of the Accelerationist philosophies as the movement that rightheously predicted the future we live as the present. There is a technological acceleration, and it is an assemblage of all sorts of media, for it is that which interacts, and intermediates. The luddites who were against the industrial revolution in a sense were right in their causes, and when Thomas Pynchon asked in New York Times wheter it was OK to be a luddite, or not in 1984, luddites were still present around, as they are now. However, ludditism has turned into a total negation of anything that is a technological progress. Humanbeings are not aware that they have been already co-working with media of any kind from the electric circuits through AI that regulates their communication today to their active role in feeding information in cyberspace that will be nourished

and improved by emergent artificial super intelligence technologies and media, and today, in my view, it is not OK to be a luddite that cannot mediate. Once having come to terms with the technological acceleration and the media thereof, people will have been true luddites that do not shatter technical or digital objects, but those who make use of them for the betterment of all. Just look into the way John Cage re-mediated and co-mediated the media he worked with all throughout his life during the 20th century. He was a true luddite in that he made use of any media available and necessary, as a result of which he changed the music, and visual culture for ever. He received technological innovation as a means to a more pluralistic mediation as positively as it got, and actually shattered the unmediated conservatism in the cultural and scholarly institutions alike. His method was more media archaeology than the general avantgardism.

Media archaeology is a positive means, a critical mediation on media studies and beyond, through which we can manage to come to terms with the media that shape all, and by means of which we might transcend the blockading sense of void in front of that which is called *big data* once we have come to use our own DNA junk as storage and reach a related information by parsing and sequencing information from the big data. By applying media archaeology to my research and discourse herein, I will be offering insights into the practicalities of media laboratories as archives for the works of digital and electronic media, which are both media and digital objects *in situ*.

## 1.5. Mediocene

In recent years, the Anthropocene, which is the epoch through which the humans have impacted the geology and ecosystem(s) of the planet Earth on a massive scale, has been the key frame through which myriad interdisciplinary research is led, critical theory produced and disseminated especially in the Anglo and North American academic circles. There are numerous resources on the issue that are well documented. *The Anthropocene Project* by Haus der Kulturen der Welt is a thorough guide for those who are interested in.

Nowadays, there is a widespread consensus on labelling it as The Anthropocene (Crutzen and Stoermer 17), the unofficial yet highly acclaimed name for the geological time in which human activity has been re-shaping the entire geological system on a planetary scale, and even beyond; Cthulhucene, or Capitolecene as put forth by Donna Haraway (2014) in a conference talk titled “Anthropocene, Capitolecene, Cthulhucene: Staying with Trouble” during which Haraway opposes the idea of terming the epoch through which we are witnessing not only the visible ecological changes but also a more immediate geological one at the threshold of the Sixth Mass Extinction, adding that the term anthropocene is too human-centered, and instead we should think of the concept of Cthulhu and that of the capital and call it as such, for it is beyond the scale of human comprehension—to which figures such as Timothy Morton opposes stating that “Cthulhu is a being that doesn’t link shit in its tentacles. Cthulhu means shit doesn’t matter at all” (Morton, “Sorry Donna” para. 1). In a more infrastructural frame, Dan Mellamphy and Nandita Biswas Mellamphy opt for the term Electrocene in their

article “Welcome to the Electrocene, An Algorithmic Agartha” that appeared on *Culture Machine*. They state, by referring primarily to the politico-science-fiction of Saint-Yves, that “[...] human surrenders its political agency to superhuman—overhuman, übermenschlich—computation, correlation, and algorithmic governance” (Mellamphy and Mellamphy 3). A novel definition has recently been surfacing to the ground as well: Mediocene is the title of a conference that is going to be held between May, 31 through June 2 by Internationales Kolleg für Kulturtechnikforschung Medienphilosophy at Weimar. On the conference website, it is stated that:

The concept of the Mediocene, which this conference seeks to introduce and elaborate on, sees media and medial processes as epoch-making. As a determining force, they leave their permanent imprint on the world, affecting animate and inanimate nature alike — human existence, technology, society, and the arts as well as the shape, organization and history of the global habitat itself. (*mediozän.org*, para. 1)

I myself initially used to term the current epoch as the Remixocene—which I theorized collaboratively with my both life and artistic partner Hâle Turhan (see Turhan and Turhan 2016)—where culture is to be reclaimed for overall open-access to knowledge, and sharability thereof, by tactically “preserving, migrating and curating” information and knowledge in a more than data sense in an age in which we have started to perform *data behavioralism* as also stated by Yuk Hui in a video-interview on his *The Archivist Manifesto*.

Henceforth, considering a non-linear applicability of knowledge on a spatio-temporal scale, the historicity which this dissertation is moving through is based on the idea of Mediocene.

The main foci of this dissertation comprise of digital and electronic works of literature—which include the literary hybrids from simple hypertextual works through synaesthetical works that employ any media necessary such as Eric Loyer's *Chroma* to nano-narratives as in Christian Bök's *The Xenotext Experiment*—and accordingly media laboratories that function as archives where such works are stored, preserved and maintained in accordance with the technics of time. Incorporating media laboratories in the preservation of above mentioned literary works does necessarily call for the application of the media archaeological methodologies herein.

As it can be deduced from the adjective anthropocene, this epoch of the anthropocene sees human-beings as geological and environmental factors that have changed their home planet and its near outer surroundings for ever. It is for sure that this has had a profoundly irrevocable impact on the ecology of the world that the bells have already been tolling for the humans and other non-human life on the planet Earth. However, I object to this adjective, this nomenclature of the epoch in which we are present, in that, it is totally human-centered, and I do not think that being aware of our current conditions in terms of survival means that we can project on that plane of existence by merely humanitarian concerns. It concerns all animate and inanimate life on Earth. That is why others such as Donna Haraway tried to call it Cthulhucene. However, it is the human-beings who are afraid of the

incomprehensible characteristics of Cthulhu, and it is easy to label any unknown phenomena, or being/becoming as a monster of which Cthulhu is the ultimate embodiment thereof. Thus, I favor the Mediocene.

Mediocene is a very novel concept, and formulations thereof are under debate and construction as of now. This is entirely in accordance with my thesis that works of digital and electronic literature are both digital objects, and individual media, and the preservation thereof requires media laboratories, or similar venues, where the present preservation practices should be maintained through a future trajectory that perceives these works, and the archival processes thereof, as (re)mediation hubs that not only preserve the original work, but also technically and digitally nourish it for the evolution of the archive and its applicability with more complex mediations that would benefit not only interests of human being but others as well, which include non-humans, and in-humans such as animals, bacterium, insects, artificial intelligence and any alien presence.

## 2. MEDIA LABORATORIES: GLOBAL MODELS

The moment you talk about the media laboratory, it is almost inevitable that you need to account for a precise definition thereof, in that, there is a *de facto* consensus among even the media scholars that a laboratory is where you make science, and anyway, the question asking what it could be that has got to do with media in a laboratory arises most of the time. That is the critical threshold where you need to make sure that it is not a metaphorical laboratory, and it is much more different than a mere cultural analytical research hub that statistically parses relevant information on the social platforming side of the rubic cube.

It is usually an institution such as The Media Lab at MIT once we have thought of a media laboratory, and given the advanced technology and media being both used and invented in this one, it is easy to perceive media laboratories as places for the futuristic ends. However, that is not usually the case: You do not need to work on self-assembling materials or affective computing in order to conceive, or work in, a media laboratory. In the about section of the website of Media Archaeology Laboratory, it is stated that:

Nearly all digital media labs are conceived of as a place for experimental research using the most up-to-date, cutting-edge tools available. By contrast, the MAL – which very well might be the largest of its kind in the world – is a place for cross-disciplinary experimental research and teaching using still functioning media from the past. The MAL is propelled equally by the need to both preserve and maintain access to historically important media of all kinds – from magic lanterns, projectors, typewriters to personal

computers from the 1970s through the 1990s – as well as early works of digital literature/art which were created on the hardware/software housed in the lab. Just in terms of our collection of digital devices, we currently have 35 portables/laptops, 73 desktop computers, 22 handheld devices, 8 other computing devices, and 10 game consoles. (para. 1-2)

It is a research and knowledge venue where people from different backgrounds converge, and work towards a certain end. In the case of MAL, it is the still functioning past media, their preservation and maintenance through which the emerging and existent media in the related field could also be critically analysed and co-mediated. This laboratory is led by Professor Lori Emerson who has a background in English. The laboratory is a joint venture by the College of Media, Information, and Communication and the Department of English at University of Colorado at Boulder. Emerson, in an interview, mentions that:

I was recently reading about a famous conversation that took place between Foucault and Noam Chomsky that made it clear Foucault was interested in finding ways to denaturalize political discourse. That's no small thing. It's no small thing to denaturalize the tools that we use every single day. So, helping the average person to see how much their access to information is determined by mechanisms that they have no control over and that shape their access to knowledge and creation is profound. (Kirby 3223)

That concern to help the average person to comprehend the quantity and quality of the information is determined by mechanisms over which they have

almost no control, and accordingly, that it is important to introduce them to the material and infrastructural layers of these media, is, from my vantage point, the ultimate cause of existence of such laboratories, so that, people will be able to figure out how they mediate, and are mediated, which in turn will provide them with the necessary craftsmanship that they will also be in need of after the absolute non-human turn. Jussi Parikka in a blogpost on the concept of Mediocene writes that:

The proliferation of laboratories outside the strict confines of the science lab seems to have taken place with the entry of a range labs of different kinds: design labs, maker labs, hack labs, media archaeology labs, studio-labs, digital humanities labs, humanities, critical humanities labs, media labs and critical media labs – and then, fashion labs, brew labs, coffee labs, gadget labs, creativity labs, the list goes on. The usual thought would be that this is part of the metaphoric inflation of the meaning, site, scientificity of the laboratory that brands a particular attitude to postmodern culture. Of course, as Henning Schmidgen echoing the likes of Peter Galison and others points out, “the laboratory is undergoing a process of dissolution and dispersal,” with the massive distributed networks that constitute the laboratory now (think of the Human Genome project, think of CERN) but this dissolution and dispersal happens on other levels too, as the examples pertaining to humanities and media labs demonstrate. There’s almost nothing that could not be a lab. But perhaps the lab is itself symptom more than the answer, and as such, a trigger to consider issues of the mediocene in art and technology; issues such as scales of data, infrastructure and different

methodologies. It becomes itself a rather fluidly moving term not merely designating a particular specialist place but also a particular project about the lab imaginary. Here, the notion of the project is crucial due to its future-oriented sense. (“Mediocene”, para. 4)

I am going on to amalgamate these two commentaries on media laboratories as my understanding of an executable digital and electronic literature laboratory that can be implemented in the Turkish context, regardless of the spatiality of the venue, in that, it even might solely exist on the cyberspace with physical instances of extension in institutional quarters as well as a part of already existing laboratories at universities, or libraries thereof. Emerson’s insight that humanbeings should be taught how to interact, or co-mediate with media to overcome existential limitations such ones as posed by the politicization of infrastructure of knowledge, and Parikka’s according commentary that a media laboratory is not metaphorical but literal with a motivation towards future convivia between human beings and others should be thought in parallel as to the conception and definition of a media laboratory that I will be intriguing into in this dissertation in the upcoming chapters on the Turkish context thereof.

However, prior to proposing an archival site of knowledge through media laboratories as in the case of works of digital and electronic literature and its applicability, I need to provide currently functional examples to approach the greater conceptualization and formalization of similar knowledge hubs in the local. To this end, I will be investigating the frameworks of two media laboratories that mainly focus on the works of digital and electronic literature in their profession of

related archival processualization and techniques. These media laboratories are, firstly the Media Archaeology Laboratory at University of Colorado at Boulder, and secondly, The Electronic Literature Laboratory at University of Washington at Vancouver. I would have preferred to pluralize the context in terms of geographical variations by including different types of laboratories, or similar ones, that are situated physically in different regions of this global world, however, these two provide the basic critical stance thanks to their primary interest in the subject matter of this dissertation as well, regardless of the fact that they both exist, and have found their physical extensions, on the same continent. As far as I am concerned, some techno-ubiquities do not know any geological constraints thanks to cybernetics and cyberspace along with the scientification of aestheticization and aestheticization of the digital as I have exemplified in the sub-chapter on the digital objects. The socio-political limitations and nature-cultures that regulate the mundane everyday life of these laboratories, and their staff, might well be discrepant when contemplated on an socio-economic stance. However, in the new syntax, as provided by the digital aesthetics, and the mediocene, it would be to the benefit of a probable future media laboratory that could be implemented in my home country to approach the idea of media laboratory as an a-temporal, ubiquitous organization that is so modular that it is both mobile and stationed at the same time, which provides it with the feasibility that a media laboratory could well be pitched wherever necessary, thanks to the quantum-logistical instances of cyberspace, and high-speed mobility in physicality in our technologically accelerating era. A media laboratory should be able to act as if it was a wet-ware for it is also digitally bound and networked with

all the media needed as far as they are granted the right amount of financial means, such as money, which is being transformed thanks to crypto-currencies and blockchain technologies, which are by themselves subject-objects of other types of laboratories which can mediatedly collaborate with any media library that solely focuses on, let's say, the digital literature.

### **2.1. Media Archaeology Laboratory (MAL)**

In my point of view, Media Archaeology Laboratory, or MAL, is a unique embodiment of media archaeology as both a practice and methodology, and the concept of laboratory as a maker/unmaker space. The reason why I have chosen to focus on MAL rather than its European equivalents such as the Media Archaeological Fundus, established by Wolfgang Ernst at Humboldt-Universität zu Berlin is summarized by Lori Emerson, the director of the MAL at CU-Boulder:

All three labs, including the MAL [along with Media Archaeological Fundus and the Signal Lab in Berlin], are driven not by a nostalgic impulse or a desire to act as mini museums. Instead, we have all appropriated the science-based infrastructure of the lab for (anti) humanistic ends as we perform hands-on experiments with functioning media from the 19th and 20th centuries as a way to discover what Ernst has called the “time criticality” of each device. (“Sister Labs” para. 2)

Basically, these media laboratories share a common end, that is, they perform, and encourage others to do so, experiences and experiments at the same with a focus on the time criticality, planned obsolescence, infrastructure and critical contexts of the media they are holding in their collection. However, they act rather with different

impetus as well. As quoted by Lori Emerson in the same blogpost, Stefan Höltgen, the director of Media Archaeological Fundus, and both the director and founder of the Signal Lab, states that, for instance, Fundus is designed to be an actual fund as in a theater where students takes items from shelves to use them in their research, or projects, and therefore all of the items in the collection of the laboratory are stacked on shelves around central study spaces where people, according to their needs in the first place, take and study a certain object from the very collection that include myriad types of hardware and software from different temporal concentrations throughout the so-called media history. It is also stated that what differentiates MAL from its “sister” laboratories is that MAL also focuses on the preservation and maintenance aspects, and the space is organized accordingly, where computational artefacts, or other media that, as of today, include as listed on their website:

[...] magic lanterns, projectors, typewriters to personal computers from the 1970s through the 1990s – as well as early works of digital literature/art which were created on the hardware/software housed in the lab. Just in terms of our collection of digital devices, we currently have 35 portables/laptops, 73 desktop computers, 22 handheld devices, 8 other computing devices, and 10 game consoles. (para. 2)

In MAL, the space is designed in such a manner that these artefacts are not stacked on shelves, rather lined up on the surrounding desks, which might render them stand as artisanal artefacts thus conceptualizing the laboratory itself as a museum of technological media. However, the very idea of a media (archaeology)

laboratory in the first place is to provide the necessary media regardless of its time critical historicity for those researchers who need them for myriad purposes ranging from hands-on experience of the individual parts of the media in question, or preserve and have an experience of the archived artefact, or the digital object, in its original mode of conception and realization. If the poem you coded was first realized on an Apple II computer, then emulation is not always the answer, so you might get a hand on the original hardware and software rather than mimicking it in a contemporary media into which the poem was not intended in the first place. Namely, it means that media laboratories are not only places where technologically advanced software and hardware are used to invent new technologies merely, and moreover, they can be places where the so-called past/old/obsolete/zombie media can be studied in a remedial venue such the lab itself along with the most advanced types of technological media where theorists and artists might develop their hardware skills at the same with others who would prefer to improve their digital-aesthetics and creativity through preserved works of digital literature and other artistic fields.

Media Archaeology Laboratory welcomes both qualitative and quantitative aspects that I am looking for in a media laboratory: Their inventory includes both software and hardware that are donated to the laboratory, they vow to preserve them as long as the durability of a given medium permits. They maintain hardware along with software and through this instance, they provide an archival space for both digital objects such as digitally-born works of literature, and the electronic literature elements that incorporate both the analogue and the digital in the creation process.

They maintain digital literature—which they prefer to call electronic literature—examples from various artists. One of them is a the No. 18 of a limited number of 25 copies of a conceptual software/game poetry by the scholar-artist Ian Bogost who is also known for his contribution to Comparative Literature, Game Studies and Object-Oriented Philosophy. It is titled *A Slow Year*, and was written for Atari 2600 cartridge and the related console, and released as a conceptual work of digital literature that was intended to be experienced on an obsolete game console, which is in fact a critically tactical act of artistry in that it problematizes the time criticality, zombification, and awkwardry in the industrial design clusters of media production that function on mainly the idea of planned obsolescence. This original copy of the work, along with an accompanying print book titled *Book: A Slow Year Game Poems*, and the game console needed to execute the work will be maintained as long as necessary for the reader/audience, artist/author-poet, and scholarly and artistic researchers from any field of science. The original work is now loaned to the MAL until it will be sealed and preserved in the Library of Congress.

Here we see a perfect synarchy among different fields of scholarly science and research and arts. Lori Emerson, who is also a faculty at Ph.D. in Intermedia Arts, Writing and Performance at CU-Boulder, is leading the laboratory with researchers at graduate level. Furthermore, in this laboratory she offers classes for both undergraduate and graduate students in which they are taught on the laboratories, media archaeology, and related practicalities by which humanities and other sciences (should) converge to proceed in a clear direction in this accelerating vistae of ours in the Mediocene. Besides these, MAL has a reading room, a

hardware maintenance room other than the central study environment where you can interact with media in their inventory. Here, English undergraduates learn how to be able to maintain, preserve, archive and work with the media to which they are strangers. Computational artists lead their practice-led research through these media. Media studies and literature departments form a rhizomatic body and do not treat either humans as the center of the world we live in, or discard each other as far-fetched fields of scholarly sciences. In a world where CERN offers residencies to artists, literary departments such as comparative literature also need to remediate themselves to the everyday needs and wants of both the academics and researchers.

MAL is a neat example of the novel spaces for knowledge preservation, archival and production hubs of the present and immediate future where everything is seen as more-than-human as is approached by the Environmental Humanities. It fits to the ideal media laboratory that help us document, preserve, archive and maintain works of electronic and digital literature. MAL exists along with other laboratories at CU-Boulder such as Mark Amerika's *TECHNE: Practice Based Research in the Digital Arts and Humanities*. These laboratories act on a collective basis as well. It means that laboratories can exist side by side by mediating each other, and the idea of a modular laboratory which can be a part of any other party, laboratory or any institutions all around the world on a temporal and spatial scale according to the needs of all is in fact a possibility. I will be focusing on this idea of a modular media laboratory in the forthcoming chapters.

Speaking of the convivium of different laboratories, *The Electronic Literature Laboratory* presents deeper insights because of its relation to its

symbiotic space MOVE Lab at the same institution. Both of these laboratories are headed by Dene Grigar, the current president of the Electronic Literature Organization. In the next sub-chapter, I will be investigating the ELL in terms of inspiration for a local media laboratory.

## **2.2. The Electronic Literature Laboratory (ELL)**

The Electronic Literature Laboratory, or ELL, is a laboratory that is primarily concerned with the preservation of works of digital and electronic works of literature. It is located at Washington State University, Vancouver, and the program director is Dene Grigar who is also the current president of the Electronic Literature Organization. The complete title of the laboratory is The Electronic Literature Laboratory: For Advanced Inquiry into Born-Digital Literature.

As the reader might notice, both digital and electronic are referred in the title of the laboratory. It is mainly due to the discrepancies and myriad debates on the definitions of both electronic and digital literature. However, this does not entail a problematic on anybody's part, in that, definitions are flexible in this age of novel digital syntaxes, and technological acceleration. One of the reasons why the digital and electronic stand side-by-side, or at times used interchangeably is that we are yet to define what this digital and electronic narrative devices in actual are.

In the words of Dene Grigar herself, the laboratory is well equipped and supported by the university administration. They as of today have each and every model of Apple computers from the time beginning, for instance. The laboratory itself, as in the example of MAL, is home to post-doctoral students, and is a teaching space where undergraduate students at university master their knowledge in the

software and hardware through the so-called history of computer and computing. The director, Dene Grigar, is also the director of the The Creative Media and Digital Culture Program, which is home to both the MOVE Lab and its partner The Electronic Literature Laboratory.

At MOVE Lab, as Grigar points out in an interview, scholars and students create mostly sensory literature works that are designed in virtual reality environments. Works that are created in this laboratory is also going to be preserved along with other collections from different sources, maintained, optimized, migrated/transferred in need, and emulated in different computational environments as well. ELL is also working especially on the hardware side, and the material infrastructure of both the software and hardware. Dene Grigar, in an interview, states that:

So the MOVE lab first and it really did spur the idea, “Hey were making this stuff and its incomplete” and so the example of that was when I was doing *When Ghosts will Die* with Steve Gibson. It’s a great piece, it’s an awarding winning piece—we have a nice video documentation of the piece, but the piece itself is gone. It was built on Macromedia Director, and then “8” came out; 2 wiped out Reason 1—all technologies orphan previous technologies. Reason 1 was totally wiped out by Reason 2. There was no back up compatibility whatsoever. We knew that but we really didn’t want to do any updating but you can’t update after a while because the computer gets old. We’re talking years past, right? Macromedia gets knocked out and the rest in general, they’re just gone. Nobody uses Macromedia Director

anymore. So you're making these things, as you're making them, you're thinking this is great, it's going to be a great piece, win an award and then four years later it's gone, and all you have left of it is the documentation. Thank god we documented it well. (Ruehlen para. 4)

It means that, any organizational body, or an artist/author should also invest their knowledge of the infrastructural and material aspects of the media through and within which they are producing their works. However, it is not always possible to be able to understand and work accordingly with these technicalities. The original media in which they were conceived should also be user-friendly in the end. Herein, Grigar gives the example of Apple, whose IOS and its related store have resulted in an app-based cultural revolution both as to the media and content. There are app-based born-digital works of literature either as synaesthetically and multimedially interactive hypertextual works, or as those which are purposely created for VR sets. Once the IOS software is updated, apps also almost all the time need updates, and these updates might result in rendering inoperable digital objects such as examples of digital literature. What's more, Apple does not make its final source code available within the frame of the app, which makes it harder for those who want to either keep a non-decommissioned software-based version of a work of digital literature as in its originality, or those laboratorists such as Emerson and Grigar meet great problems in preserving and documenting such works in the archival process at their laboratories.

The ELL is also making its space up nowadays, which is in a smaller space than MAL though. The book *Traversals: The Use of Preservation for Early*

*Electronic Literature* that documents the *Patfinders* project and the traversals process as developed by Dene Grigar herself and Stuart Moulthrop at ELL as applied to four works: Judy Malloy's *Uncle Roger*, John McDaid's *Uncle Buddy's Phantom Funhouse*, Shelly Jackson's *Patchwork Girl*, Bill Bly's *We Descend*. In the book the duo state that:

Every act of imagination is fragile, especially those that challenge the convenient closure of techno-social systems. This truth is about to come home again. As of this writing, only a few months remain before the introduction of a new generation of Web browser in which support for page elements in the Shockwave Flash format (SWF) will no longer come standard. This change may not seem artistically urgent—SWF has largely been used for banner advertising, casual games, and the like—but the technology has in fact been the basis for revealing works of aesthetic exploration, such as Sharon Daniel and Erik Loyer's *Public Secrets* (2008), a multiply-mediated essay on women under mass incarceration; Isaías Herrero's *La casa sota el temps* (2007), an exploration of time, exigency, and virtuality; and numerous exploits by Jason Nelson interrogating common assumptions about information systems and interfaces. While these works will not be instantly and irrevocably lost—they should remain accessible by specially modified browsers or reader software—they will begin a slow slide toward oblivion. (4)

Obsolescence is the incarnation of the entropy on Earth especially for the media in general. ELL, in this context, works towards the optimum preservation of the

hardware and software environments for the work of digital literature, them digital objects, for a cultural and artistic end. They quote Lori Emerson in the same book accordingly: [we believe early born-digital work is worth saving when it] “self-consciously uses its own text, distributed across different media, to comment on these media and on the nature of our interactions with the text as it is mediated by these particular reading/writing technologies” (qtd. in Grigar and Moulthrop 4). Both of MAL and ELL in this direction also aim to investigate and inter-develop mediation skills of both the obsolete media along with emergent technologies and human-beings in particular as well.

ELL fits best as a possible model for an archival project that documents, collects, preserves and maintains works of digital and electronic literature in collaboration with a viable media laboratory in the field of digital/computational humanities and arts in the Turkish context for the aforementioned reasons. However, without the support of librarianship, it is not always best to act such thorough projects which in fact aim to canonize a certain syntax of almost in its only coming-of-age period in the history of Earth and technology. An archival site that needs elementary hardware and software, which can be enlarged by the purchase of obsolete, or zombie, media either through donation, or funds needs a room of its own, a hub, a home. Thus, the required negotiations can be held among the university administration, necessary graduate schools and undergraduate programs in order to establish a collective space, which either can be a part of an already existing structure such as a media, or fab lab, or be the part of university library with a quarter space of its own. If there are any existing game laboratories

at the institutions, it can also partner up with these and formulate a way of physical spatial establishment for itself somehow. That's how ELL was also conceived, as a lab without a space of its own finally embarking on a previously-engaged then-open space and kind of achieve an autonomous laboratory status. Besides, as in the case of MAL, ELL is also a part of an academic program, not offering graduate courses though, that employs post-graduate researchers as well. Furthermore, they document and publish the technical processes they develop accordingly. It is a multi-medial, non-linear practice of media archaeology as a context in the archive studies. That is why, ELL is better to investigate as a model of a possible similar space in the local context of Turkish academia. It is because they are still in progress to reclaim a neat and larger space as MAL has at its own academic environment.

In the following chapter, where I debate around the issues that arise in the establishment paradigms of a similar laboratory in Turkey as in the context of digital and electronic works of literature by native artists/authors, I will be taking ELL as the role model for an applicable digital and electronic literature archive at a media laboratory in local.

### 3. THE TURKISH CONTEXT: A PROPOSAL

Dene Grigar writes on a blogpost on the website of the *Pathfinders* project, the documentation of which is available in the book format, that:

You're watching a video of Amaranth Borsuk demonstrating *Whispering Galleries*, a work derived from a diary dating to the 1850s. The work itself is an interactive narrative that allows Borsuk to erase words from the screen by gesturing over a Leap Motion device. Doing so reveals words that comprise a poem. To change the diary's pages, she gestures a swipe over the device. What you many may not notice right away is that the computer's camera is capturing her image and incorporating it into the interface of the work, in essence, resulting in her becoming part of the work as she experiences it.

So my questions to you are: How does one preserve a work like *Whispering Galleries* for posterity? How do we preserve any creative work of art that requires us to interact with it? That involves a media rich sensory experience, involving movement, sound, and gesture that cannot be captured in print? That has been published on and for digital technologies that are no longer available—I mean, how many peripherals like joysticks, game controllers, power gloves have been abandoned because they no longer work for the systems we now use? Leap Motion may very well be another. These are some of the questions that have shaped my research into preservation of electronic literature for the last eight years and that form the topic of my talk today. (“Visceral Media” para. 1-2)

This is a good example problematization of a given type of media (environment) in regard to the archival possibility thereof. It also reminds us of the fact that these collections, or archives, of digital and electronic literature such as those at ELL, and MLA, do not merely “photocopy” a work such as a novel that was conceived in and for the print literature/culture onto a digital interface, as in the scanned, or pre-mediately produced to conform to print cultural needs—which I term as xeroxography in terms of remediation and physical reproducibility—which also means that when we speak of digital literature, or electronic literature, even cyber literature, we do not refer whatsoever to publishing formats such as e-book, or digital platforms such as an online literature magazine. I need to clarify this distinction in that a thorough online search for the terms *elektronik edebiyat* (electronic literature), *dijital edebiyat* (dijital literature), *hipermetin* (hypertext), all the results on actual digital and electronic literature are near nothing except for a couple of dissertations on hypertext in translation and visual culture studies along with several papers that focus on the Turkish game history which is closely related to issue in that the first digital-born work of narrative was realized as a narrative-driven logic/puzzle game for Commodore 64 computers, which as a work of art remediates Turkish folkloric tale tradition by borrowing a character thereof, *Keloğlan*, the Bald Guy.

In this chapter, I will be firstly elaborating on the literary-artistic scene through individual examples that are either digital/electronic work, or hybrid words that take advantage of multimedial and networked environments as much as thoroughly because of the scarcity of sources both in print and online; secondly, I

will be making a brief overview of the emergence of media or similar laboratories along with several artist collective repositories in terms of their accessibility, organizational structure and their utilization of spatiality in different professional, or causal, environments in mundane everyday lives of ours; thirdly, upon these case studies and commentaries, I will be proposing a modular model archive that can be conceived within a media laboratory and that can be affiliated with other institutions either in real life physicality, or cyberspatial architecture of the network. I will simultaneously be stating a schema for that end as well.

### **3.1. The Local Scene: The Obsolete Fate of *Keloğlan*, and Speculations on *Deniz Yılmaz***

In the aftermath of the recent revival of (new) retro wave and pixel art aesthetics in the contemporary gaming scene and studies, more and more games are being released on a daily basis through various vendors online, or independently, that are text/story driven and dependent on the quality of the narrative. These include games such as *Papers, Please* that attracted so many a positive critique not only through game studies but also by literary circles as well. Such games also employ a cinematographic portrayal of every day life in a way that is hypersititionally realistic, thus having the capability of commenting on, or debating sociological, economical and cultural affairs on either the contemporary temporality or a historical perspective. These type of narrative-driven games are not new. They have a long history that can be tied back to the *Oregon Trail*, a game that was initially conceived as a media tool to teach children the life in the 19th century through the Oregon Trail from the perspective of a pioneer's. The game

was developed by Paul Dillenberger, Bill Heinemann, and Don Rawitsch in 1971, and, it was produced by the Minnesota Educational Computing Consortium in 1971. Various versions of the game is archived, and ready to play, or stream on the software collection library of the Internet Archive online and free of charge. It is also possible to collect and preserve the original media that are needed to run and play the game as well, through either a series of donation, or institutional purchase. Today, anyone who has an access on relatively a neat bandwidth to the internet, or a local/mesh-network, can easily play, or stream such games and more others in the collection of non-profit archival institutions such as *the Internet Archive* who also invites the general public archive anything digitally for the future cultural use. However, should I want to play and investigate the media archaeological materiality of the first Turkish computer game *Keloğlan*, I need to pull the bull by the horn painstakingly. For the computer Commodore 64, and its related playable cartridges are not produced anymore, and almost already decommissioned on a massive scale because of the chemical components of the hardware, and the interface on which the software is translated, it is too small a chance for me to find these either on online shopping sites, or in flea markets that are refined in antique objects. I was not aware of the game prior to a conversation with my current thesis supervisor on the history of computer games in Turkey. Having heard of the game, upon my arrival at home, I started to dig for the game, the digital object itself, in the file format that would befit the available open source Commodore 64 emulators that you need to run the game on a Windows 10 operating system.

At first, I found the converted file for the game to run on earlier, and now decommissioned Windows operating systems in the collection by a collective emulating project called the GameBase. I had to download a huge chunk of other retro game examples to run on an emulator, however, the file was rendered corrupt. Then, I found a link that someone has tipped in under the comment section of an online blogspot that wrote about early Turkish computer game history. That link took me to a forum called *Commodore.gen.tr*, for which I had to wait the approval from the administration to become a member. Then, I had to introduce myself under the related section on the forum, upon which I was able to download the .prg file which contained the game itself.

However, remedial excavation did not end there. Having secured the game file on my cloud storage, I proceeded to find a viable retro computer emulation program that would smoothly run on Windows 10. If I were using Linux as before, I'd first have to emulate Windows OS through a software application called Wine, then I would be emulating Commodore 64 on an emulation of Windows on Linux, which I also tried, but ended in fruitless glitches of the game that looped like a GIF forever. Upon inquiry, I came to understand that the .prg file was rendered on a Window 7 computer, so I looked for relatively an older emulation program, and was able to play the game thoroughly thanks to Per Håkan Sundell and his emulation program from 1997 whose latest update was in 2015. It took me almost a day and a half to access and play the first computer game in the Turkish history. From my vantage point, such an irritating situation where it is almost rendered impossible to reach a cultural, literary digital object, a natural object now, is due to

the unmediated thinking that is yet to comprehend both the significance and fragility of the objects/artefacts from the earlier history of computers and computing. In these case, both state organizations such as the Ministry of Culture and Tourism and universities are responsible. Private institutions such as art galleries, special archives, or the like can only be lured into an archival innovation practice by the stimuli by the former. This case of *Kelođlan* is also a mirror that vividly informs the situation that even in this epoch of transformation from the print culture oriented knowledge production and preservation into a hypermedial one, our scientific and scholarly institutions are not able to discern the importance of literary works such as computer games in the contemporary culture on a societal level. Furthermore, more and more events or conferences on the “evil” of the new media, the internet, and computer games are held at these scholarly spaces, which comprehend technological innovation and acceleration as something that should be discarded—not as a frame through which we can come to terms with both ourselves and the currently mediated future of all including the non-human.

Were I to be a faculty at any institution, I would propose to work with such foundations as *the Internet Archive* to archive, at least, digitally with a side-project that focuses on multimedia in Turkish literary studies, for instance. That way, anyone interested, or even not interested, or never heard of it, would be able to access and play/read *Kelođlan* easily on a screen interface for which the game was originally meant even though as a mere emulation. That aforementioned archive would at the same time start to crowdsource knowledge and material in order to find the original copies of both the game cartridge and computer for future uses in

building, for example, a Turkish Narrative Media Laboratory. The fate of *Keloğlan* is up to the scholar's appreciation and mediation with the existing digital objects and their preservation in the age of early digital humanities. Because the planned obsolescence of digital objects today highly concern the curators, collectors, theorists and producer of cultural knowledge.

*Keloğlan* was released by Byte Computer, who were actually vendors who provided computers, technical materials and sold "cracked" games on cartridges, cassettes and floppies. It can be categorized as a logical/puzzle game which perfectly befits the interactive fiction framework whose theorization is well-formulated in Nick Montfort's article "Toward a Theory of Interactive Fiction." It was in 1989 when the game first came out, and we are still able to run it even on an emulation which does not render its original craftsmanship that was aimed for Commodore 64 computers. As it is discussed on *amstradcpc.com* by the user Alcofribas, Byte computer also conceptualized another version of the game for Spectrum computers, however, that case went vaporwave.

Even if there is currently no media laboratory that would host the original or replicas of such kind of works either digitally, or along with the hardware, in my opinion, students' game studies clubs, or simply gaming clubs, at universities might collaborate with literary and computer oriented departments to facilitate a game lab where both a history of gaming in Turkey can be documented, and a sub-archival branch, or a simultaneous documentational practice be applied to pool an archive of digital-born games and works of digital literature at the same time prior to

emerging as a standalone media laboratory that focuses on digital literature or narratives.

However, not every work of digital, or electric, literature is only meant to exist in the digital. There are multi-sensory, visceral media, or media-oriented art works, or literary works, that exist both in the analogue and the digital at the same degree of importance. Şair, the Poet for Turkish, *Deniz Yılmaz* is a neat example of this category. *Keloğlan*, I say, is a digital work of literature in that it was in the first place conceived and released for a digital experience through computers. Accordingly, *Deniz Yılmaz* is a hybrid work of both digital and electronic literature in that it makes use of, according to the ELO definition of the term, existing computational media to realize itself. It is a work, according to the artist behind it, Bager Akbay, that incorporates 6 to 7 software and a mechanical arm and a hand that utilizes a hand-writing process with an actual pen. Bager Akbay, in an interview for a national newspaper states that Deniz Yılmaz is meant to be a non-human who is after his citizenship, and according rights (see Yetişkin 2015). He is in search of a personality, which would be known by authorities if the ethical formalizations of mechanomic, humanoid, or android beings as persons have been met in the contemporary world. Deniz Yılmaz is fed by a corpus of poetry in Turkish as trained by a natural language acquisition process through knowledge parsing by neural networks and the artificial intelligence. It imitates his maker's handwriting which was fed into the responsible program, and writes poetry with which he aims to be published in the *Posta* daily newspaper's "Poets from Homeland" column. It is because that Akbay is not rich enough to buy, or make a body for Yılmaz, we have

only a visual representation of Yılmaz in terms of anthropomorphic concerns, a photograph which is the rendition of an average that was compiled with 60 different homeland poets' facial images. This piece of contemporary art is thus also a digital work of literature, that is because of the fact that it composes poetry through parsing the meaning and syntax of the words in Turkish language, and wants to publish it. It is also an electronic work of literature that needs electronic component, and hardware which would make it viable in realization, where in actual the interface becomes the media. It also hearken backs to the print literature by trying to access national news media. Yılmaz also published a book of poetry in 2016, *Diğerleri Gibi* (Like Others). It uses traditional forms of literary distribution as well, while at the same time being represented by an artspace, BLOK Art Space where it makes use of the physical spatiality of the museum/gallery elements as well.

It is apparent that Deniz Yılmaz is rather a work of art that questions the ethicalities surrounding personhood, as in a person/citizen, non-human person/alien where a socio-cultural critique is reached. It mainly remediates the digital and electronic whilst utilizing digital syntax and objects such as a language's parsed lexicon to artistic ends, which also make it a bit born-digital. Today, regardless of its Bodies without Organs existence, Deniz Yılmaz is officially being represented by the art world. Think for a moment that it has already past fifty years, and you remember the name of Deniz Yılmaz: Where would he have ended up? In the permanent collection of then open museum of early digital and electronic art works, or among a collector's dusty hoard? As we are only able to access *Keloğlan* thanks to some stubborn nerds of early computer culture, we might in the future have

problems in accessing, or preserving, more massive sized, or hardware-dependent works such as *Deniz Yılmaz*. Only if do we understand that we need a library, an archive of digital and electronic works of literature along with other artistic works that deal with narrative both in macro- and micro-scale, as in distant reading vs. close reading. Thus, what I perceive of an archive of digital and electronic literature should also assume a physical space for itself within, or as, a media laboratory, and the steps ahead accordingly indicate that it is a gradual process that is distributed over time even though technological acceleration is always at work.

### **3.2 . Proposal for An Archive of Works of Digital and Electronic Literature in the Turkish Context**

In ten years from now, I think that *Keloğlan* would claim its cult status in the history of gaming in Turkey, and *Deniz Yılmaz* would be considered as an early electronic literature automaton. Accordingly, general public and scholarly researchers will want to observe and experience these works as easily as it gets. We could, through a retrofuturist trajectory, model this future in relative comparison to our present advances in life, and pretend that there will be library-like multi-media archives, to which the current libraries are in fact transforming presently, in buildings that we would visit to compare *Keloğlan* with *Deniz Yılmaz* for a research investigation in the history of early computational arts in Turkey. However, the question is whether there will be any archive, a central one, where either augmented reality replicas, or the originals of these work along with their hardware

infrastructure will be available in these libraries. It is because of the time criticality of the media. You cannot preserve a game cassette, or even CD-ROM over a certain period of time.

There are not only two works of digital and electronic art in Turkey. There is a significant number of generative and computational artists such as Burak Arıkan and Refik Anadol who are interested in the machine-readability art practice that makes use of archives as the Refik Anadol Studio's project *Archive Dreaming* that uses a repository of Ottoman Bank's Cultural Archive. According to *Creators* website, "it is a 6 meters wide circular installation that employs machine learning algorithms to search and sort relations among 1,700,000 documents," a visceral media installation that both needs software, machine intelligence, and an according syntax to interact and literally dream when in sleep mode. This is a multi-medial work, not only because of the various media employed in the installation, but also thanks to its mediatory functioning of machine intelligence, and visual design. Will a mere additivist, easily augmented environment of the future archives, and laboratories, or library be satisfying to the avid researcher, and the reader/audience-participant? Today it is possible to 3D-process and preserve entire cities such as in the case of the *Material Speculation: ISIS (2015-2016)* project by Moreshin Allahyari in which she reconstructed:

"[...] 12 selected (original) artifacts (statues from the Roman period city of Hatra and Assyrian artifacts from Nineveh) that were destroyed by ISIS in 2015. "Material Speculation: ISIS" creates a practical and political possibility for artifact archival, while also proposing 3D printing technology

as a tool both for resistance and documentation. It intends to use 3D printing as a process for repairing history and memory. (Project Website)

The concept of media laboratory is already known to the Turkish academy and their business partners in the free market. There are several media laboratories such as the New Media Lab and the Fab Lab at KHAS, C-Lab & DECOL Collective and Academy at Bilgi University, the Media Lab at BOUN, The Game Lab at Bahçeşehir University, Big Data Analysis Lab at TOBB ETU, SimLab at Koç University among others. There is currently opening a Game Laboratory at İstanbul Bilgi University as well. Although different in size and specialization, so far none of these offered any archival project that focus on literature media so far. Their research areas include myriad disciplines and techniques that range from socio-cultural phenomena to game studies. They hold talks and conferences, and release reports of research on an irregular basis. As much as I am concerned, no research or project on the electronic and digital literature has been conducted so far. In fact, within the scope of the academy, as aforementioned, there is few scholarly works on the issue. If there is any alt-lit movement that has taken up the DIY spirit of any media available today, in the case of Turkey, either they are going very low profile somewhere among the threads of related subReddits and 4Chan channels, or they keep it quiet and debate around this issue of digital and electronic literature only among friends in real life.

As far as I am concerned through my research basis, there are several layers of artists who produce literary hybrids, or advanced media narratives in the context of Turkey. First, we need to understand that there are media artists who participate

both homeland and abroad exhibitions. For example, Erdal İnci who utilizes GIF medium as a looping narrative device in his visual loop or GIF storytelling, is such an artist thanks to the media archaeologically inclined network of artists, curators and theorists that dwell in Istanbul at the same time, one of whom include Jussi Parikka himself. Parikka's presence in İstanbul has helped digital media art to proliferate. Now and then, there is a conference, or a talk, or an exhibition taking place in the local scene, which attract considerable attention as well in an epoch where both the workspace and maker lab frames are being implemented in the country as well where works at hypermedial scales are produced. Secondly, besides this artistic clusters, there are multi-media artists that focus on visual poetry, asemic language, and concrete poetry which has a core base. These figures such as Hale Turhan, Serkan Işın, Ayşegül Tözeren among many others produce digital-born instances of visual poetry, or concrete poetry at times with an asemic non-signification process that are still images, videos, loops, GIFs, audio-video collages. These works are usually preserved in the personal collection, or archives of the artists upon there a cloud storage unit. Thirdly, there are computational artists such as Memo Akten, or Refik Anadol who takes advantage of more massive projects. An ideal archive for the preservation of digital and electronic literature in Turkey should approach all of these types of story-telling as literary works in that in this Mediocene, the technological advances show that we will be living in a future where we store and preserve our archives in DNA molecules as Microsoft has recently announced that they are going to test DNA storage as a part of their cloud storage. From this vantage point, such an archive, or a media lab should already have been

implemented in order to keep up with the technological advances in digital and biological engineering side of the issue. However late we are though, since it is not too late, we should also keep in mind that in Turkey, when we talk about electronic literature, or digital literature, people understand it as only a e-book format, or online publishing methods. That is to say, we are going to need to build this archive from scratch to rags in a disciplined frame.

In order that we manage to build an archive of digital and electronic literature, we need to organize a developmental schema that details the actions to pursue in a clear tone. As I have discussed, there are only a few works of different media that can be considered as works of digital and electronic literature in the Turkish scene.

Although local computer games such as *Kelođlan* among a dozen others are still available, and they face total obsolescence because of the lack of a proper software archive in Turkey. We may add other games such as *Umut Tarlaları* (Fields of Hope) which was the first farming simulation game in the history of computer games, in that, they are dependent on a narrative in role playing. Other than game-based works, there are experimental media artists who produce digital-born visual poetry, asemic poetry, GIF narratives. In this context, loops or GIF has an important place in the development of different narrative standard all over the internet. People now annotate their narrative with visual imagery that can incorporate both text and the visual and use these GIFs as digital objects that are actual literary devices. Such artists archive their work either personally, or in the archives of a gallery, or institution. Socialities in which these artists enact their lives

are differential, and they belong to different group of friends, as nodes distributed on a network. Interest in such digital and electronic storytelling, or narrative, and the related media thereof, is usually rendered visible on social media platforms either through the comment section of Instagram, or Twitter threads that welcome the like-minded. Computer and software aficionados usually establish a cabinet of curiosity for themselves and friends alike. They buy obsolete, or past media devices and software through usually online bidding/shopping sites such as eBay. It is also known that in flea markets such as the one in Dolapdere, it is highly possible to encounter such gadgets. Furthermore, there are artists such as Refik Anadol who partners or collaborates with research teams from such tech-giants as Google. Their works that range from machine intelligence manipulations to big data renderings need advanced technology. Eventually, all of these mean that there is no such an established culture of digital and electronic literature in Turkey. However, media art works that include big data experiments, code poetry, projection mapping among others are visibly being exhibited occasionally in cultural hubs such as İstanbul. Most of these exhibitions are carried out by private galleries. Besides these, an applicable archival infrastructure and material is not available currently in the existing media or other laboratories in that it is not found to be anywhere. There is also the distributed, or scattered nature of media arts/literary works in the scene because of the network dynamics among the artist/authors. Also, there is a widespread misconception that electronic literature means electronic book format, as in e-book, and any literary work that takes place on a digital publishing platform such a weblog is digital literature. It is mainly because there is not enough stress on

the digital and electronic works of art in the humanities departments throughout the Turkish academy. Otherwise, there would have been at least a dozen of articles, or theses that deal with the issue.

One of the depressing concerns on the establishment process of an archive project is usually that the times are changing fast, the technological acceleration is swifter than the typhoon, and we will always lack a crucial feature that needs to be in the system from the very start, that is, we always feel late in front of the technological accelerationism. However, on this issue, Nick Land (2017) states such precise views:

Time-pressure, by its very nature, is difficult to think about. Typically, while the opportunity for deliberation is not necessarily presumed, it is at least – with overwhelming likelihood – mistaken for an historical constant, rather than a variable. If there was ever time to think, we think, there still is and will always be. The definite probability that the allotment of time to decision-making is undergoing systematic compression remains a neglected consideration, even among those paying explicit and exceptional attention to the increasing rapidity of change. (para. 2)

Hence, we are never late. In my opinion, and observance, in order that we build an archive of digital and electronic literature that could make use of the opportunities present at media laboratories, we should first form a coalition group that would include members from different positions and institutions such as undergraduate students in a game club, graduate students who conduct their research in digital storytelling, the independent coder/maker who wants to explore the potentialities

of the interfaces the works are experienced among many others. This coalition group should first form an online platform through any media suitable. They can either use apps such as Slack, Riot.fm, Telegram for idea-mapping and knowledge and experience exchange, or they would register a domain where they would be entering entries on the experiences of during the first steps to the establishment of the archive. This coalition group should, at their own home address, compile a dictionary of digital and electronic literature and media arts and contemporary archival techniques so as to spread the idea of these literary arts as actual literature among students, scholars and general public alike.

This same group should also document existing works that are considered to be works of digital and electronic work of art in an inventory that include the metadata of the work in detail. A coder in the group might come up with a program, or a patch for an existing program, that would parse the whereabouts of these works at the same time. Once the inventory is done, and enough critical reflection is reached in terms of applicability, this group should organize a conference on the works of digital and electronic literature that has “archive” as its theme. In this conference, there should be an archive developer workshop where determined individuals meet and develop archival project ideas for these spectra of literary works. In this conference, encouraged participants also present scholarly research or papers on the issue if there are any. Within the scope of this conference, game studios might also do poster presentations to attract interested parties in game development. Proceedings of the conference should be released on an open access option both as a kind of book, and all the media footage of the conference should

be made available through the most used social media platforms such as YouTube, or Vimeo. The PR side of the conference is not an issue of this dissertation.

A core project group that met at the workshop at the conference should start to investigate on the methods through which existing examples of works of digital and electronic literature can be collected, and write a project proposal for different funds globally. This group should eventually establish a digital archive of works of digital and electronic literature in the Turkish scene through the collected works and documentation. The idea of the software library such as that of the Internet Archive can be considered here. There are more than one possibilities in establishing this archive such as demanding an archival quota from one of the university libraries, however, the fact is that these university libraries are now globally transforming themselves into a hybrid of a gallery, library and media laboratory. Besides, in the long run, a media library would need its own space.

This digital archive would be a first step that can be carried out graduate students alike with the core project group that started it. This archive by its nature should work with all of the willing cultural, academic institutions that include the media laboratories in Turkey.

Therefore, it would also be a modular laboratory, although being digital, which can be handled by different organizations according to their capabilities and research projects. But, we need to remember that the digital preservation of these artefacts will not mean anything in near future other than a footage documentation. It is because archives are going molecular. We have talked of such poetry, nano-

writing projects as Christian Bök's *The Xenotext Project* which produces its own poetry by bacterial interaction at the DNA-sequencing level, or of archival projects such as Microsoft's current attempts at introducing DNA storage in the market. Thus, this preliminary digital archive project only the first step for the future preservation and maintenance of these literary cultural works. Therefore, I argue that this digital archival project should also issue on a regular basis a peer-reviewed journal of its own as in an open access platform, which is the spreading mode of journal publishing in the world today that discard money in the exchange of knowledge. In this journal, themes and research published should be speculative and applicable enough at the same time to develop and improve the existing archive in all directions then.

These archive and its affiliated members should also keep organizing talks and conferences, and participate in other related scholarly environments on a regular basis.

As the third step, after at least two years of research and practice, the archive should submit to a fund that support such projects and initiatives, through which it will be able to establish itself as an extra-academic institutions, as a standalone archive, which should also be able to settle down in a maker space like environment where different scientific and technical media can be maintained as well. Otherwise, as a part of a media laboratory, or a university in this case, this archive will be bound to hierarchical organization of the bureaucracy, and many of the subtle projects might be rendered invalid.

This media archaeological, maker space-like laboratory then would be able to work independently with galleries, libraries, institutions and other archives in tandem with their needs in this case. And, this archive of ours is a place for speculative thinking that both preserve different media in its collection while at the same time provide space and materials for future archival processes that would refer both to the human and nonhuman parties included.

Through my observations upon other media laboratories and archives around the world, such a well-equipped archive and its home, a media laboratory, can be founded in 3 to 5 years if the necessary income is provided on the basis of funding and donation through official channels.

Institutions and administrations will eventually in short time understand that it is the Mediocene that we are existing in, and if we need to preserve the cultural heritage of ours, they need to be reminded of the fact that it is not enough for print archives to be digitalized, our culture is now being produced, and remediated with our arts, and we need to predict the ways in which we can preserve and maintain media ecologies that evolves so fast. I also strongly believe that in 5 years from now on, digital humanities will be applicable to the Turkish scene because of the global demand in the understanding, philosophy and theory of technical media and their material infrastructure in the production of knowledge and cultural artefacts such as digital objects.

## CONCLUSION

This dissertation and its thesis are a product of a long-term problematic, I myself, as a research-based multi-media artists, have been encountering for over a long period of time. I always encounter obstacles, or have to take detours, in finding an example of local, Turkish, work of art that can be deemed as a work of digital and electronic literature. Even though, there are works available, and well documented at some pages, or niches in the internet throughout mostly gated-communities, once you want to observe, or experience the work, either you have to do a digital archaeology, or need to go to the space where the work is exhibited. Moreover, apart from the experience of these works, what is more at stake is that these works, if not preserved properly and well awaits material oblivion where their so-called aura and meaning of existence vaporizes over time as well. In this age of constant technological acceleration, we have to come to live in an epoch formulated as Mediocene, and in this we are remediating ourselves along with other media and non-human elements that include future sentient artificial intelligence. It is because we have already been working with neural works and AI in our mundae everyday existence in areas that range from social networking to banking transactions. Lastly, there is no existing archive for such works, and they are practically inaccessible unless you meet someone who holds them in their collection.

Since documentation is key to mediation and the archival, and now that the archives are also operating on hypermedial scales depending on different technologies from simple servers to DNA molecules now, if there is ever going to be an archive of this sort, anyone involved in the process should be able to a member

of a well-organized collective. Besides, these people should be informed by the current practices in the latest technological advances in archival studies and technical media along with the technicalities and infrastructure of the works that they are collecting, preserving and maintaining for the posterity.

To this end, in the Introduction chapter, I provided a thorough context in which I employ a media archaeological methodology in discussing the material infrastructure of the subject matters of the dissertation, and to provide a open and modular frame of a future archive that is not far-fetched from reality by pointing out to the fact that such an archive should always be ready to any physical, computational, or spatial transformations in terms of long run applicability and progress. I treated works of digital and electronic literature as digital objects that exists through a new sense of syntax that is almost totally digital-born. I also documented the contextual environment from which the research question of this dissertation arised. In Chapter 2, I focused on two laboratories that are mainly working on digital, or electronic literature and preservation thereof. In comparing Media Archaeology Laboratory to The Electronic Literature Laboratory, I argued that ELL fits better in our condition in that it is still an evolving laboratory that lacks some features its sister lab MAL retains in terms of techno-spatial scales. In Chapter 3, I evaluated the current situation of scholarly studies, and artistic creations in regards to works of digital and electronic literature in the local scene, that are too scarce, along with computer games that befits the definitions of either digital, or electronic literature. I showcased *Keloğlan*, and *[The Pitiful Story of] Deniz Yılmaz* as examples of digital/electronic literature in investigating into the

inaccessibility problematic because of a lack of a proper archive. Besides, I commented on the Turkish media art scene, other subgenres that utilize digital storytelling, or digital media, in order to establish a narrative that renders these literary works. In this chapter, I also provide an insight into the outcomes of unmediated thinking in the epoch of Mediocene, and its implication in the academy and scholarly fields. In this chapter, I also speculated into the possibility of the establishment of an digital archive of works of digital and electronic literature, that, by a proper organization and collective action, in 3 to 5 years would culminate in establishing its own independent, standalone space that would combine the idea of maker space with that of a media archaeology. It is because, the existent local media archaeology labs right now, will not be needed other than in matters of collaboration and consultancy because of the ambiguity of their scope and non-navigability of their process documentation as a media laboratory. Usually, laboratories around the world document each and every process as available open access file format on their repositories. Here, I argued that a coalition group with members of needed technical backgrounds would form the first digital archive, upon which a core project group that meets in a workshop at a conference on the digital and electronic works of literature with the archive theme, would proceed to transform this merely and seemingly abstract archive in the virtual into a spatio-temporal body, as in a maker space, or a media lab where the knowledge on the subject matter will be produced not only considering the current archival processes but such speculative ones as DNA storage, so that this archive would become of an institution that documents, and preserves the digital and electronic collections and heritage. By doing this,

these members would also mediate the current media studies, and literary departments such as critical theory, or comparative studies, all of which are dependent on each other for various scholarly and artistic reasons as already expressed. Then, comparative literature would finally come to terms with the mediated thinking, by rescuing itself from under the dominion of cultural studies, and traditional humanities that cannot think of a literature graduate doing a postdoctoral study at a neurobiology laboratory, would meet the culture-liberating, revolutionary practices of the digital humanities that aim to provide open access and charge nothing for the scholarly research and knowledge production.

This dissertation of mine is but a speculative yet constructive critique of the unmediated thinking through which the need for such an archival project arises. It is rooted in comparative literature in that comparative literature was actually conceived and gradually developed as a science of media, that are the natural and technical objects with which we exercise reading/writing. It is in fact a field comparative textual and media studies was born out of, especially in the case of Turkey, where media studies department are usually general mass media, or communication oriented. Taking Goethe's world literature further, an archive of this quality and quantity in Turkey would help scholars implement a universal archive of literature that is beyond a human centered catastrophe, that is, it is possible to mediate knowledge for once and all kind of beings for a galactic convivium. I hope that, in different fields of study, research on literary digital objects, and their archival application is encouraged hereby.

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