



Sustainable Digital Humanities in Practice: A Study on Johanna Drucker's Critical Framework

Dr. K. T. Vandana, Associate Professor of English, Government College, Munnar, Kerala, India.

 <https://orcid.org/0009-0006-1695-7140>

Research Article

Abstract

Digital Humanities (DH) enabled the merging of digital technology with different disciplines of humanities and has opened new paths in research, analysis and cultural heritage conservancy. The concept is growing widely for the last forty years and has brought a tremendous change in the preservation of our cultural heritage domain. The intersection helped in digitizing archives and provided wider access for a larger audience in the beginning. Now the evolution is advancing with the integration of technologies like AI, Machine Learning and Big Data Analytics, there by paving platform for increased collaboration and fostering partnership between scholars, technologists and public. Johanna Drucker, a leading figure in the discipline of Digital Humanities, in her article 'Sustainability and Complexity: Knowledge and authority in Digital Humanities' argues that sustainability in DH should not be understood as a mere technical or operational concern but as an epistemological and ethical issue. This paper is an attempt to study about sustainability in the discipline of Digital Humanities through the case studies of Johanna Drucker.

Keywords: Cultural heritage Conservancy, Digitizing Archives, Sustainability. .

Introduction

Digital Humanities is an interdisciplinary field that integrates digital technology with different disciplines of humanities such as literature, history, philosophy and many more. The process involves analyzing, interpreting and understanding human culture using digital tools. DH integrates creation of digital archives, data bases and corpora. This is a quickly developing field that provides humanities scholars to explore deep in to complex research questions and present their findings in innovative ways. It paved new paths for research, teaching and publication. With the support of DH, printed knowledge is no longer the primary method for dissemination. The intersection helped in digitizing archives and provided access for wide range of audience in the beginning. With the evolution of new integration methods and wide range of digital tools and techniques now a days, the field of DH enables wider range of activities from text analysis and data visualization to geospatial analysis and digital text encoding. Though the expansion of DH has contributed a lot in various fields in humanities, its long-term viability is always a question. In her article 'Sustainability and Complexity: Knowledge and authority in Digital Humanities' published in 2021, Johanna Drucker highlights the argument that sustainability in Digital Humanities should not be understood as a mere technical or operational concept but as an epistemological and ethical issue. This paper is an analysis on the arguments raised by Drucker regarding Sustainability in the discipline of Digital Humanities. Johanna Drucker is widely recognized as an author and a book artist. Also, she is a well-known visual theorist and a cultural critic. Currently, she holds the distinct position of the first Martin and Bernard Breslauer Professor of Bibliographical Studies in the Information Studies Department at University of



California, Los Angeles (UCLA). Her work addresses themes such as book history, graphic design history and visual epistemology. Drucker's themes also include artists' book, digital humanities and contemporary art and culture. She has books such as *The Digital Humanities Course Book: An Introduction to Digital Methods for Research and Scholarship* (2021), *Visualisation and Interpretation: Humanistic Approaches to Display*, *Graphesis: Visual Forms of Knowledge Production* (2014), *Digital Humanities* (2012) to her credit in the discipline of Digital Humanities.

Review of Literature

Long term sustainability of resources in Digital Humanities is always a question. Gasparini and Gheldof in their article explain the challenges associated with sustainability in Digital Humanities, 'Understanding Sustainability in Digital Humanities is complex. Researchers, Students, IT and university staff, and the public are the stakeholders, as well as the IT infrastructure, including the software, the project with data, and how it is organized. One way to approach all complex connections and dependencies is to adopt a holistic approach rather than focusing on each separate part' (Gasparini and Gheldof 268). Dr. Joanna Tucker explains the issues in digital sustainability in her article, 'The question of sustainability is not an especially new one in Digital Humanities (DH). It does, however, seem to be all the more pressing now. It should be recognized that this is largely due to the success of so many DH projects and DH research generally, especially in widening out to non-DH specialists who have found that digital resources are now embedded in how we research, how we teach, how we access materials, and even how we expect to view and interact with our sources. It might be assumed that 2020's sudden 'online pivot' as a result of Covid-19 restrictions has accelerated this, embedding our reliance on working and communicating' (Tucker 94). Csernoch, et.al in their research paper expresses the need to fill in the gaps between digital sustainability and digital humanities. They opine, 'Our primary concerns – filling a gap in digital sustainability and digital humanities – are to contribute critical perspectives and practices by the analysis of office data management (office computing), the efficiency of office employees and their employers, the source and consequences of wasted human resources, and finally the educational issues connected with these problems. Analyses from the previous studies revealed that low efficiency of data handling is almost never recognized and continues without revealing its nature and the negative financial effects caused' (Csernoch, et.al 30551-30552). Christine Henseler in her recent interview with Johanna Drucker, shares the insights of Drucker, regarding the designing of effective humanities communication. She writes on Drucker's innovative thoughts on present education and DH, 'To expand students, understanding of the value of the humanities, Drucker maintains, educators must acknowledge and build upon students' inherent desire to tell stories they can identify with and to understand how knowledge, history and culture shape those narratives. This approach transcends disciplinary boundaries, holding particular relevance for students in fields such as engineering and computer science, who, Drucker explains, can be engaged in digital humanities projects that combine imagination and world building' (Johanna Drucker on Identification, Imagination, and Problem-solving to Communicate the Humanities – Center for Humanities Communication (CHC)). Damon Strange, et.al explains how digital humanities sustainability was made possible in Oxford. They suggest, 'A solution was in the form of the Digital Humanities Sustainability (DHS) project, which sought a way to utilize the collective knowledge of many projects and collaborators and attempt a way to standardize the non-standard' (Strange, et.al 355).

Theoretical Background

Johanna Drucker's influential article "Sustainability and Complexity: Knowledge and authority in Digital Humanities" will be the theoretical base of this article.



Sustainability as a Multi-Layered Concept

The development of Digital Humanities over the past two decades has contributed a lot in restructuring the scholarship, pedagogy, archival practices and research infrastructure internationally. The viability of sustainability of digital humanities is always a question in a rapidly changing digital world. Johanna Drucker explores two major concepts *Sustainability* and *Complexity* and how these concepts affect the field of digital humanities. Johanna Drucker defines a sustainable system as ‘one that replenishes its resources at the same rate as it consumes them’ (Drucker ii 86). She argues that DH cannot be understood only in terms of tech infrastructure or digital utilities; it also requires a deep understanding of how knowledge is produced, preserved and circulated in a constantly changing digital environment. Drucker states Sustainability as a complexity. She defines complexity as ‘nonlinear, probabilistic, and nondeterministic, and its outcome cannot be determined in advance’. (Drucker ii 86). Johanna Drucker emphasizes that sustainability in Digital Humanities is a complex one as it depends on worldwide technological shifts, institutional policies, cultural values and academic traditions. Drucker makes this statement with the case study of her two projects.

1) Artists Book Online

This was one of first project of Drucker launched between 2004-2008 with the help of her colleagues with technological expertise at her home institution University of Virginia. Later she found the project as unsustainable due to these challenges:

- a. Dependence on University of Virginia’s technical infrastructure
- b. Incompatibility when the project is moved to UCLA
- c. Obsolesce of plug-in functionality
- d. Unclear institutional agreements
- e. Reluctance from the part of user community
- f. Lack of interest on the part of creator

2) History of the Book Online

This book was originally built in Drupal. The project became unsustainable due to:

- a. Drupal’s upgrades made the project obsolete
- b. Complex interfaces required too much maintenance

Drucker and her team migrated the content of *History of the Book Online* to HTML/CSS which she addresses as ‘Poor Media’- using the simplest media that lasted long. Drucker gives a detailed explanation for using simplest markup language. Drucker highlights in her article that, ‘The advantage of HTML is that it does not become obsolete, and it is legible after a few lessons. It can be corrected, fixed, and upgrades through CSS manipulation without much specialized skill. The Drupal experience reinforced the principle that you should never wed intellectual content to a platform structure as getting it out is a time-consuming tedious process. Design decisions should be thought through in short-and long-term time frames and expectations of scale. We did not need Drupal for project, but learning it was useful exercise. Knowledge about content management system is sustainable-it can be used across platforms-even if the platforms become obsolete’ (Drucker ii 89). From the experience of these two projects, Drucker comes in to a conclusion that, ‘From these two examples, Artists Books Online and History of the Book Online, what became clear is that at the project level, sustainability is complicated by the need to assess the long-term viability of platforms but also to work effectively with in institutions conditions. None of these are stable. The window of project sustainability will vary considerably depending on these many factors’ (Drucker ii 89).

Pedagogical Sustainability

Johanna Drucker shares her experience of sustainability in pedagogy and challenges in



sustaining course materials with the example of her online course book *DH101- Introduction to Digital Humanities*. The course book contained modules that offered an introduction to core areas of Digital Humanities, including digitization practices, interface and navigational design, structured Data, metadata management, analytical methods, data visualization, mapping technologies, three-dimensional modelling, intellectual property concern across varied communities, and sustainability. Each unit presented lessons that engaged with core critical debates and was supplemented with suggested reading as well as practicums with different DH tools. The course book is funded by UCLA with the aim of doing well to the public and it is still available freely online. The book was initially built in WordPress but soon it faced sustainability challenges due to frequent updates, plug-in failures and exercises given in the course book were outdated. The PDF version of the book stayed useful on the other hand the website became obsolete with the rapid change in the technology. In Drucker's own words, 'The PDF version of the Course book remains useful for its organization, structure, ethical and critical frameworks, and basic introduction to Digital Humanities. But to update and keep the project current proved unsustainable without someone taking ownership'. (Drucker ii 89)

Institutional and Infrastructural barriers to Sustainability

Drucker points out the drawbacks she learnt from the side of institutions regarding sustainability. They are:

- a. **Standardization requirements that flatten intellectual nuance**
- b. **Digital projects are not indexed in online catalogues**
- c. **Technological and intellectual lifecycles that reduce longevity of projects**

Ethical and Ecological Dimensions of Sustainability

One of the greatest highlights of Drucker's article is the ethical and ecological dimensions of sustainability in Digital Humanities. She brings out the fact that the devices, servers and infrastructures depend upon exploitative global supply chains. Chips and circuits are made with rare-earth elements such as gold, silver, palladium and cobalt 'are often mined with a blind eye to human rights abuse, in unregulated and dangerous conditions' (Drucker ii 91). Exploitation of man power may be happening in form of exposure to toxic elements, unsafe work environment, Child labour and unfair wages. Yet, these elements are inevitable parts of servers and storage components of DH projects. Every Digital archive, tools or visualization depends on various global industrial processes that cause environmental pollution and creates toxic waste and ecological damage. Drucker points out those DH scholars must recognize their ethical responsibilities and understand sustainability as a moral concern, not as a technical one.

Sustainability as an Epistemological Issue

Johanna Drucker argues sustainability as a complex conceptual construct that cannot be encapsulated in 'mechanistic, deterministic, and models' (Drucker ii 91). She says that sustainability is also about how knowledge is represented, structured and thoroughly interpreted in digital environments. She uses the popular *Renear-McGann debate* to bring out the tension between computational methods and humanistic methods. Allen Renear, by drawing computational logics, argued that literature texts can be represented as hierarchical, ordered, unambiguous structures using models like XML. The computational methods prefer data that are clean, structured and determinant that can be fit in to rigid systems. On the other hand, Jerome McGann argued that literary texts are integrally ambiguous, interpretive and layered. When they are put in rigid structures essential aspects of meaning will be lost. Thus, sustainability becomes an epistemological issue:

- i. **If the Digital Humanities build tools to over simplify knowledge, those tools won't be useful for real scholarship.**



- ii. **If a project is built in a rigid way that cannot adapt to new interpretive theories, it will become unsustainable.**
- iii. **If data structures cannot accommodate ambiguity, researcher and scholars will abandon eventually when theoretical paradigms evolve.**

Sustainability is connected to both technological longevity and ability to adapt intellectually. A truly sustainable project must be able to evolve with newly originating theories, new interpretive approaches, and new scholarly conversations.

Sustainability through Hermeneutic Approaches

Twenty years before Johanna Drucker suggested 'hermeneutics, nonmechanical approaches', for addressing the challenges regarding the designing of computational systems based on humanistic methods in DH. Johanna Drucker cited her own three experimental projects Temporal Modeling, Ivanhoe Game and 3DH as examples of systems built on humanistic principles rather than on computational methods.

Temporal Modeling

This project shows that time can be understood in many different ways. Instead of placing events in a strict, straight timeline, it allows for personal and subjective experiences of time. It also understands that narratives, memories, and historical interpretation do not always fit into one fixed sequential frame work.

Ivanhoe Game

Ivanhoe functions as a role oriented interpretive game in which participants assume distinct characters and analyze text from those adopted viewpoints. The format privileges creativity and subjectivity, allowing players to rewrite and reinterpret the narrative in different ways. Consequently, the act becomes transparent, collaborative and open to continuous negotiation.

3DH

The project tries to build visual and spatial models that show how interpretations and arguments develop, instead of displaying fixed or final data. It understands meaning as something that is always changing, layered and open to many possibilities. To quote her words, 'Each of these projects worked to incorporate humanistic methods through recognition of the situated, partial, historically and culturally inflected position of observer-dependent knowledge' (Drucker ii 93). To put it in to a single line Digital tools built in Digital Humanities should understand the complexity and multiple meanings of humanities. Forcing everything into simple, rigid computer structures is impossible in humanities. Hermeneutics complexity becomes a frame work for designing tools that:

- a. **Allow multiple interpretations to coexist**
- b. **Foreground subjectivity rather than hide it**
- c. **Make ambiguity visible rather than eliminate it**
- d. **Encourage critical reflection instead of automated output**
- e. **Sustain relevance as a theoretical paradigm to evolve**

A DH project built on these principles is more likely to survive intellectually because it accommodates change, debate and reinterpretation. It sustains not just data but the interpretive processes that define humanities.

Conclusion

Drucker's critical framework on sustainability in the discipline of Digital Humanities goes far beyond computational methods. She urges DH to reassess its underlying principles by emphasizing ethical responsibility, epistemological flexibility, and hermeneutic complexity. She emphasizes that sustainability in DH can be achieved through the perception of global ecological



impact, rejection of rigid computational models and creation of digital tools that can reflect the hermeneutical richness of the humanities. If the ethical, intellectual and creative dimensions are given due consideration, Digital Humanities can preserve digital objects and sustain the essence of humanistic scholarship.

References

- [1] Asundi, et al. "Digital Humanities: Concepts, Tools and Applications." *DESIDOC Journal of Library & Information Technology*, vol. 43, no. 4, July 2023, pp. 276–81. <https://doi.org/10.14429/djlit.43.4.19207>
- [2] Csernoch, Mária, et al. "Human-Centered Digital Sustainability: Handling Enumerated Lists in Digital Texts." *IEEE Access*, vol. 12, Jan. 2024, pp. 30544–61. <https://doi.org/10.1109/access.2024.3369587>
- [3] Drucker, Johanna. "Sustainability and complexity: Knowledge and authority in the digital humanities." *Digital Scholarship in the Humanities*, vol. 36, no. 2, 2021, pp. ii86–94. <https://doi.org/10.1093/llc/fqab025>
- [4] Gasparini, Andrea Alessandro, and Tom Gheldof. "Perspectives on Sustainable Dislocated Digital Research Resources". *Digital Humanities in the Nordic and Baltic Countries Publications*, vol. 5, no. 1, Oct. 2023, pp. 263-7, <https://doi.org/10.5617/dhnbpub.10672>
- [5] Johanna Drucker on Identification, Imagination, and Problem-solving to Communicate the Humanities – Center for Humanities Communication (CHC). 18 June 2025, center-humanities-communication.org/humcomm-talk-blog/johanna-drucker-on-identification-imagination-and-problem-solving-to-communicate-the-humanities
- [6] McKenna, Fattori, et al. "Heritage Futures: Digital Cultural Heritage as a Site of Imagination, Innovation and Opportunity." *BC Final Reports*, 18 Mar. 2025, <https://doi.org/10.57884/h3dv-7q98>
- [7] Priyakant, Ved. "Digital Humanities and the Study of Literature." *International Journal of Social Impact*, vol. 10, no. 1, Mar. 2025, <https://doi.org/10.25215/2455/100119>
- [8] Sharma, Ranjana. "Digital Humanities and Historical Research: New Frontiers and Methodologies." *International Journal of Novel Research and Development*, vol. 9, no. 9, Sept. 2024, pp. b567–78. <https://doi.org/10.1729/Journal.41531>
- [9] Strange, Damon, et al. "Equality, findability, sustainability: the challenges and rewards of open digital humanities data." *International Journal of Performance Arts and Digital Media*, vol. 19, no. 3, pp. 348–68. <https://doi.org/10.1080/14794713.2023.2206286>
- [10] Sula, Chris Alen, and Heather V Hill. "The Early History of Digital Humanities: An Analysis of Computers and Humanities (1966-2004) and Literary and Linguistic Computing (1986-2004)." *Digital Scholarship in the Humanities*, vol. 34, no. Supplement 1, Dec. 2019, pp. 190–206. <https://doi.org/10.1093/llc/fqz072>
- [11] Tucker, Joanna. "Facing the challenge of digital sustainability as humanities researchers." *Journal of the British Academy*, vol.10, 2022, pp.93-120. <https://doi.org/10.5871/jba/010.093>

Author (s) Acknowledgement / Funding: Nil

Author (s) Contribution Statement: I / We have employed ethical writing methods to write this article.

Author (s) Declaration: I/We declare that there is no competing interest in the content and authorship of this scholarly work.



The content of the article is licensed under Creative Commons Attribution 4.0



International License.

OPEN ACCESS 

Article History

Received: December 04, 2025 **Accepted:** December 28, 2025 **Published:** December 31, 2025

Copyright: © 2024 To author(s). This is an open-access article distributed under CC BY 4.0 Creative Commons Attribution License, which permits all unrestricted use, distribution, and reproduction in any medium by giving proper attribution to the original author and source.

Data Availability Statement: The study utilizes primary and secondary sources of data and can be available from the author if requested.

Citation: Dr. K. T. Vandana. "Sustainable Digital Humanities in Practice: A Study on Johanna Drucker's Critical Framework." *Literary Musings*, Volume 3, Issue 2, December 2025, pp. 34-40.
