DIGITAL HUMANITIES: A PARADIGM FOR THE 21ST CENTURY

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Abstract
Our life is becoming increasingly digital and digitized, and the recent shift to an online environment is a major leap. While this rapid advancement in technology has made itself a prominent feature in such fields as medicine, marketing, communications and even education, many assume that the humanities have become a field for dinosaurs. The assumption is that the humanities focus their research output on writing and are firmly founded in a culture of books – a form of records that seem unchangeable in nature, dogmatic in intellect, and fossil-like in their searchability. The world of the digital, on the other hand, is a fluid continuum with incredible potential for creativity, dissemination, interaction, retrieval, analysis and scholarship. This review article, therefore, sets out to outline the history and rise of digital humanities (DH), explore the parameters definitive of DH, and review highlights of DH scholarship conducted currently, with the aim to open new horizons in the Arab World.

Keywords
Digital Humanities, DH projects, digital methods

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1. INTRODUCTION

Life in the twenty-first century is becoming increasingly digital and digitized, and the recent shift to an online environment is a major leap. While this rapid advancement in technology has made itself a prominent feature in such fields as medicine, marketing, communications and even education, many assume that the humanities have become a field for ‘dinosaurs’—obsolete. The assumption is that the humanities focus their research output on writing and are firmly founded in a culture of books—a form of records which seem unchangeable in nature, dogmatic in intellect, and fossil-like in their searchability. The world of the digital, on the other hand, is a fluid continuum of “creation, enrichment, editing, retrieval, analysis and presentation” (Berry & Fagerjord, 2017, p. 104) of information, which calls for an entirely new outlook. It is these transformations that have given rise to what is establishing itself as “Digital Humanities” (DH)—an emerging domain of scholarship with immense potential and possibilities. This review article, therefore, sets out to explore the parameters definitive of DH with the aim to open up new horizons for research and scholarship in the Arab World.

Digital Humanities is not merely the use of computerized/digital technology in the statistical analysis of data, even though this is one of the foundations for DH. Rather, where “electronic publishing has made open access and open review possible, it has also inspired authors to rethink what it is they publish. Digital scholarship is more than methods of data collection and analysis” (Berry & Fagerjord, p. 119).

2. HISTORY

The keyword in this context is “to rethink.” DH is an overall digitization of the research process as a whole, the earliest forms of which came in 1948, when Roberto Busa elicited the help of IBM to create the first computational textual index of the works of St. Thomas Aquinas. Heralded as “the Jesuit who ‘invented’ hypertext” (The Jesuit Who Invented the Hypertext, 2011), it is Father Busa, the avid researcher of the humanities, who revolutionized both scholarship and the digitization of texts. This first wave of DH lasted until the turn of the millennium, to be followed by the second wave (2002-2009), when scholarship shifted from the mere use of computing tools to what evolved into DH through a new focus on “born digital” data. One interesting example here would be Wikipedia, the “online free-content encyclopedia project helping to create a world in which everyone can freely share in the sum of all knowledge.” With the third wave (since 2009), DH has witnessed a critical turn (Berry & Fagerjord, p. 35)—the establishment of theoretical and methodological frameworks for the field, as well as a more in-depth interpretative dimension which makes DH projects more conscious of cultural and political aspects.

Berry and Fagerjord outline a second categorization of the historical development of DH, a historical account which focuses on the methodological aspects, in which the first wave covers the late 1990s and early 2000s. The decade coincides with the spread of personal computers and the global access to the internet. This wave “tended to focus on large-scale digitization projects and the establishment of technological infra-structure” (p. 35). The second wave in this account—often referred to as ‘DH 2.0’, is distinguished by a qualitative evolution of the field, becoming more “generative, creating environments and tools for producing, curating and interacting with knowledge that is “born digital” and lives in various digital contexts” (p. 35). The third wave is of a critical/theoretical stance, “in which scholars turn to the computer to understand its role as a human system of communication and a cornerstone of our current computational culture” (p. 55). It is this synthesized/synthesizing dimension that impels scholars and researchers in the humanities to reach beyond the boundaries of the printed word into the new dialogues opening up by the transformations offered by DH (for further detailed accounts on the history and development of DH, see for example: (Terras, Nyhan, & Vanhoutte, 2013); (Svensson & Goldberg, 2015)).

3. DEFINITIONS

The definition of DH, as a term and as a field, remains debatable. It ranges from reductive statements such as “the use of computational tools in humanities research” to Dan Cohen’s more procedural statement (2011) that it is “the use of digital media and technology to advance the full range of thought and practice in the humanities, from the creation of scholarly resources, to research on those resources, to the communication of results to colleagues and students.”
To answer the question “What is digital humanities?”, Burdick et al. (2016) offer in their report entitled Digital_Humanities an extensive exploration of the field, its paradigms, methodologies and trajectories. The authors give an interesting outline of the emergence of the humanities, maintaining that “text-based disciplines and studies (classics, literature, philosophy, the history of ideas), make up, from the very start, the core of both the humanities and of the Great Books curricula instituted in the 1920s and 1930s.” (p. 7). This raises issues of text and textuality as debated from structuralism, through post-structuralism to deconstruction. It is, therefore, very interesting to note, as Burdick et al argue, that “[d]igital work challenges many of these separations, promoting dialogue not only across established disciplinary lines but also across the pure/applied, qualitative/quantitative, and theoretical/practical divides.” (p. 7) However, this new merge between the digital and humanities in a virtual environment, which may provide new scopes of scholarship and endless potential to researchers, should not remain limited to a mere implementation of new digital tools. Any definition of DH, in this sense, should take into account a critical/theoretical dimension, without which the interpretative powers of DH scholarship fail to achieve their full potential.

These definitions are further expanded to include scope and methodologies, such as Jeffrey Schnapp’s definition of DH as the “production of knowledge that involved, for instance, collaboration” (2014) and more recently the definition quoted by Hendrick Heuer (2017) arguing that DH “opens up new research methods and it creates a new environment in which we can try out new things.” In other words, DH opens up the field to research projects that have vast scopes, that need collaborative and at times interdisciplinary teams of researchers, that produce a plethora of data and unexplored knowledge, and that can be processed and analyzed in creative and unprecedented ways. Thus, DH empowers researchers to explore new trajectories in the humanities that require new sets of research questions and innovative methodologies.

4. DESIGN

The most prominent concern for the digital humanists is that of design, an integral part of scholarship. With the shift from standardized paper-based conventions for conducting research to a rather vibrant, rich and complex digital medium, each research question becomes also a question of design. The textuality of the humanities research culture needs to be reconsidered. The digital medium changes the perception, production, circulation, reception and consumption of scholarship. A research “paper” may need to be designed with hyperlinks that network the work with other available resources—a traditional literature review may, thus, not only expand, but become part of the interpretative process in unprecedented ways. It is not only scope that needs to be considered in the design; indeed, the projects of DH have escaped the limitations of linearity. In the words of Stuart Dunn (2020), “[t]he digital is a prism through which we see and experience the human record past and present, not a window”. (para. 9)

The preoccupation with design is also relevant to the output phase. Questions of graphic design for a research project to be published online are as relevant as the design(s) pertaining to data visualization, which can be both part of the analysis and of the presentation. This requires, then, a whole reconceptualization of knowledge, of how it is produced, presented and disseminated—all in a digital form through a virtual environment. DH requires “new ways of thinking about culture and knowledge, and, in the light of this, the humanities are actively augmenting and rethinking their existing methods and practices” (Berry & Fagerjord, 2017, p. 1). Compared with the more traditional structures of humanities research, DH projects require an interdisciplinary research apparatus, at the heart of which are what has come to be termed “digital methods.” These are “methods that deal with data that are ‘born digital’—that is, texts and works that are created to be read online, or data registered while people do their activities in digital media” (Berry & Fagerjord, p. 22).

5. METHODS & METHODOLOGIES

Research methods of DH, then, incorporate such essential digital activities as data and/or text mining, data cleaning, text markup, metadata analysis, and visual text analysis among others. Where traditionally research design would focus on quantitative or qualitative research—with occasional combinations of both in mixed designs—researchers in DH now also speak of digital designs/methods.
This results from the evolution of a digital tool from merely being “used” to becoming methodological (Dunn, 2016). Work and projects produced using these methods are diverse and inspiring, some of which will be shown in the review below.

6. RESEARCH PARADIGMS

Work in the field of DH can be roughly categorized into three paradigms. Research that is to a great extent a continuation of more traditional scholarship that focuses on the examination and/or evaluation of the implementation of DH tools and methods, and is performed within the more standard frameworks of humanities research. The second paradigm is scholarship that seems to attempt to establish the methodological, critical and theoretical parameters of the field. In contrast, the third paradigm is the implementation of digital methods to create research projects in the full sense of DH scholarship. The next part of this review article seeks to offer some exemplary highlights.

6.1 Digitized Scholarship

In its description, The Digital Scholarship in the Humanities Journal, published by Oxford Academic (www.academic.oup.com/dsh/pages/About), states that its content includes “[l]ong and short papers [that] report on theoretical, methodological, experimental, and applied research and include results of research projects, descriptions and evaluations of tools, techniques, and methodologies, and reports of work in progress.”

Some of the most recent work published with the journal covers papers and reports on such diverse topics as historical cartography; computer-assisted translation; corpus linguistic approaches to the analysis of literary texts; language change to detect dementia in writers; gender ideology in humorous social media memes among others. The following review demonstrates some examples of the research that continues to anchor itself in more traditional research standards and approaches, while offering insights into the digitization of the humanities.

In “Digital Methods in Cartographic Source Editing,” Tomasz Panecki (2020) argues that the rapid increase in the interest and use of online maps necessitates an evaluation and a classification of “current solutions and applications used in cartographic source editing.” In addition, Panecki finds that it is essential to “identify functionality and components of the so-called model edition of a historic map.” (para. 1)

Exploring “Different Processes for Translating Expressive Versus Informative Texts?” (as the title indicates) Jianwei Zheng and Wenjun Fan (Zheng & Fan, 2020) conduct a “computer-assisted study of professionals’ English-Chinese translation.” (para. 1) As the researchers indicate in their title, the study wavers largely to a paper structured in the traditional sense, where the digital/computer-assisted aspect remains a methodological tool.

Similarly, Anna Čermáková and Michaela Mohlberg (Čermáková & Mohlberg, 2020) adopt corpus linguistic approaches in their methodology to study “Gender Inequality and Female Body Language in Children’s Literature.” The study works with two corpora of 19th-century and contemporary children’s literature, concluding with the discrepant representation of female and male characters.

Focusing on Arabic, Yasser Sabtan (Sabtan, 2020) delves into the depths of digital approaches intended to solve part-of-speech tagging issues in unvocalized (i.e. undiacritized) texts. Sabtan proposes a hybrid approach that brings together rule-based and data-driven techniques, and through this introduces a relatively reliable tagger that may require lesser manual effort. Papers like this seem valuable foundations for DH projects of greater scope (see 6.3).

Enriching historical research, Borek, Zwiazek, Slomski, Gochna, Myrda and Slorí (Borek, et al., 2019) offer in “Technical and Methodological Foundations of Digital Indexing of Medieval and Early Modern Court Books” a new method for the digital indexing of such historical documents. In their article, they propose the use of relational databases identifying the various elements comprising court books. The structure and functionality of the databases and their specific elements are based upon the theoretical foundations that inform historical research.
6.2 Theorizing the field

The theorization of any discipline usually comes in book form, and DH is no exception. There are already a number of interesting attempts at rooting the field in solid foundations, and identifying its critical/theoretical requirements and methodological guidelines to enhance its interpretative powers. In the case of a young and vibrant field like DH, there will also be attempts through conferences, round-table discussions, workshops, online courses, YouTube lectures/videos and other venues to establish these defining and definitive aspects.

“Reflections on the Development of Digital Humanities” is a lecture by Tito Orlandi (Orlandi, 2020) delivered at the Utrech Conference of ADHO, 2018, and subsequently published in Digital Scholarship in the Humanities. Orlandi states that his main purpose is the “listing and briefly commenting what I have learned to be the essential theories which form our discipline.” (para. 1)

Other attempts can be observed in the article by Taylor Arnold and Lauren Tilton (Arnold & Tilton, 2019) who seek to “establish a methodological and theoretical framework for the study of large collections of visual materials,” which they label “distant viewing.” (para. 1) They stress the fact that this framework is intended to make explicit “the interpretive nature of extracting semantic metadata from images.” (para. 1)

6.3 DH Research Projects

It is this category of scholarship that distinguishes digital humanities most prominently. The vibrancy of ideas and creativity generated by the potential of digital techniques, tools and technologies, as well as the new scope and horizons of explorations in the humanities, allow for unprecedented scholarship—whether in production, presentation or circulation/access. As established above, work in DH projects is not only different in what is researched and how it is carried out, but even more in how the outcomes are presented/visualized/narrated. Due to limitations of space, this review will focus only on a number of representative examples. Each project description will include both screenshots and the url for further exploration online.

6.3.1 Digital Giza

*Digital Giza* is the Giza Plateau Project at Harvard University (2017-). The description of the project maintains that “[t]he Giza Project gives you access to the largest collection of information, media, and research materials ever assembled about the Pyramids and related sites on Egypt’s Giza Plateau.” The project is an international collaboration of researchers, historians and Egyptologists. The website also brings together the archival holdings of no less than 12 partner institutions/museums. In addition to textual material, the project offers videos, a digital library with downloadable resources, and interactive 3D reconstructions of the archeological elements of the Giza Plateau.

![Fig.1: A 3D representation of the Sphinx on Digital Giza.](image-url)
The project also introduces the “brains” behind the interactive website, specifying that the database for the resources is called “the Giza Consolidated Archaeological Reference Database (GizaCARD) to organize the 150,000 files and records that constitute the project” (see Figure 2).

![The Brains of Digital Giza](image1)

**Fig. 2: “The Brains of Digital Giza”**

For certain, this is a totally different form of scholarship from ‘simply’ a book. In addition, it allows the public to become involved in the project – not only as readers, but also as viewers, as explorers, as historians.

### 6.3.2 The Charles Dickens Page

In an attempt to visually represent the entire *oeuvre* of Charles Dickens, as well as his time and his London, David A. Perdue designed *The Charles Dickens Page* (Perdue, 1997-2020).

![The Charles Dickens Page](image2)

**Fig. 3: The Charles Dickens Page**
The page is a rich resource, introducing the visitor to all aspects of Charles Dickens. It allows the viewer, for example, to travel back in time to visit Dickens’ London. By clicking on “Dickens’ London” in the left hand-side menu, a description of diverse aspects of the city can be explored, in addition to a changing photo that depicts a London street then, blending into a street-view of the same street today.

![Image of Dickens’ London](https://example.com/dickens-london)

**Fig.4: “Charles Dickens’ London”**

Merging literature with history, the project also offers maps of the most prominent places that posed as settings in Dickens’ work.

![Image of Maps](https://example.com/maps)

**Fig.5: “Exploring the World of Charles Dickens with Maps”**

There is a vast amount of scholarship that goes into a DH project of such scope. In addition to these fascinating online examples, many projects can be accessed through institutions and universities, some of which include the European Association for Digital Humanities (https://eadh.org/projects); The NYU Digital Collections and Digital Humanities Projects (https://guides.nyu.edu/c.php?g=276589&p=1848819) which focuses in particular on English and
American literatures; *The Digital Humanities Projects at Berkeley* ([https://digitalhumanities.berkeley.edu/projects](https://digitalhumanities.berkeley.edu/projects)), and *The Digital Humanities Projects at Stanford* ([https://digitalhumanities.stanford.edu/projects](https://digitalhumanities.stanford.edu/projects)), to mention but a few.

### 6.3.3 Mouse and Manuscript

On 7th January 2021, “Library of Arabic Literature” tweeted announcing a groundbreaking DH project aiming to allow the public, scholars and interested readers to learn about and to read Arabic manuscripts. A team of scholars created a set of lessons entitled “Mouse and Manuscript” (since 2020), bringing the scrolls of ancient times to the screen in a fascinating merging of humanist scholarship and a digital environment.

**Fig. 6:** “Homepage of Mouse & Manuscript”

Based on the fully digitized manuscripts at the University of Leiden libraries, the project has already posted 53 lessons that cover a wide range of topics, including codicology, Arabic before print, Arabic script, paleography and many more.

**Fig. 7:** “Lessons on Mouse & Manuscript”
7. DH FOR THE ARAB WORLD

It is essential to turn to DH in the Arab World. The field is ripe and the region is a mine of possible projects awaiting to be excavated and brought online. In the place of “future studies,” this review proposes a few ideas that may become viable for DH projects, and that may act as a catalyst for the generation of lively and interactive scholarship. In addition to the projects proposed below, I would strongly recommend that such projects as “Mouse & Manuscript” (see 6.3.3 above) be made available in their mother-tongue – Arabic – as well.

7.1 Palestinian Oral History

It is certain that one of the most disadvantaged histories and cultures in the world is that of the Palestinian people. Historians, linguists, critics, geographers and other scholars can come together to create a project that revives the oral history of Palestine while recording the life-stories of people in the diaspora.

7.2 Arab Scholarship

There are many great Arab scholars who have contributed to diverse fields of knowledge, science and philosophy across history. Creating interactive collections of their works, with interpretations and commentaries, seems an essential project towards the preservation of Arab scholarship.

7.3 Andalusia Revisited

Andalusia is, today, considered a Spanish/European touristic attraction. It would seem essential to create a project that tells the story of Andalusia to the world through Eastern eyes. Cartography, literature, language, history and other forms of scholarship would come together to recreate a time and culture that has fallen into oblivion.

There is no doubt that the humanities as a field of study and such projects can become a powerful tool for both the enhancement of Arab culture and language, providing them with greater presence and visibility in the virtual world.

8. CONCLUSION

Where humanities scholarship focuses mainly on the textual, digital humanities make use of the visual. As such, new research skills can be acquired and implemented, new literacies are needed, and new ways to represent/visualize/narrate the outcomes become essential. DH is the future, and where the humanities help us make sense of the world we live in, DH are indispensable to our critical understanding of our relation to and role in the digital world. DH, thus, can guarantee our sustained survival in and active contribution to an ever-increasingly digital reality.

REFERENCES