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Opportunities and Challenges of DH in American Studies

> As a profession, we are just learning how to live with computers, just beginning to integrate these machines effectively into writing- and reading-intensive courses, just starting to consider the implications of the multilayered literacy associated with computers.
>
> Cynthia Selfe,
> "Computers in English Departments:
> The Rhetoric of Technopower"

This special issue of *Polish Journal of American Studies* follows in the footsteps of recent special issues of *American Quarterly* (2018) and *Amerikastudien* (2019), both of which were dedicated exclusively to the exploration of the crossroads between American Studies and Digital Humanities (DH). In particular, the voluminous size of *American Quarterly,* which includes as many as thirty four articles, testifies to the need to provide publication platforms for essays reporting on various DH projects carried out on both sides of the Atlantic and beyond. The decisions of editorial boards to feature collections of essays on American Studies and DH is symbolic of the growing relevance of this area of study. This relevance is likewise reflected in the programs of academic conferences. Multiple computational panels have become the staple of the annual MLA convention since the 1990s, and a steady run of European conferences on American Studies clearly follows this path. The conferences of European Association of American Studies in Belfast (2016) and in London (2018), as well as the conferences of German Association of American Studies in Berlin (2018) and of Polish Association of American Studies in Łódź (2018), all featured DH-oriented panels. The annual Digital Humanities conference organized in 2016 by the Philological Faculty at the Jagiellonian University in Kraków played host to 900 participants, of whom two hundred were from the US. DH has become a permanent, inalienable element of American Studies.

All of the essays featured in these journals, as well as the papers delivered at these conferences professed themselves to be DH-oriented. The term "Digital Humanities" in itself is nebulous. It emerged in the early 2000s as an umbrella concept encompassing a wide array of initiatives employing the computing potential of various technologies, and their use in a wide spectrum of research fields not associated with sciences, but with arts and humanities. Yet, whoever poses the question about the definition of the term steps onto a slippery slope. The editors of the second volume of *Debates in the Digital Humanities* (2016), Lauren F. Klein and Matthew K. Gold, acknowledge the evasive character of the term used to define the field, because of overwhelmingly wide array of its applications: [along] "with the digital archives, quantitative analyses, and tool-building projects that once characterized the field, DH now encompasses a wide range of methods and practices: visualizations of large image

sets, 3D modelling of historical artefacts, 'born digital' dissertations, hashtag activism and the analysis thereof, alternate reality games, mobile makerspaces, and more. In what has been called 'big tent' DH, it can at times be difficult to determine with any specificity what, precisely, digital humanities work entails."

Understandably, nowadays, all academics in humanities rely on digital technologies, whether in the form of open access journals, online image databases or linguistic corpora – or simply, they remain responsive to emails and share content through social media, be it *Facebook* or *Twitter*. Yet, DH goes beyond mere scouting for data, and the practice of social connectivity and activism. As a network of diverse research methods, DH offers computing resources that allow us to undertake academic projects whose completion would hardly be feasible without the aid of technology. The last five decades have been marked by a tremendous technological leap in terms of the potential offered by the hardware, and this exponential growth has been accompanied by the development of networks and infrastructure which have enabled a series of projects whose completion would take decades without computers. Text processing is an excellent example of this matter. In our life, we are able to read ca. 13,000 books – the number of books literary historians can effectively study in their lifetime to discuss the evolution of literary processes is disappointingly small compared to the plethora of texts that are available for analysis. DH methods of inquiry may help to overcome these limitations, not by conducting the reading for the researcher, but by suggesting directions of research and by establishing connections between groups of texts one did not think about due to the sheer, overwhelming size of the corpus. In this sense, DH can open up new horizons of research and contribute to the emergence of fresh perspectives, one would not be able to pursue, let alone come up with, if it were not for the aid of technologies. Students and researchers alike rely on this novel infrastructure and experience the impact of the digital transformation of the quotidian world of academia.

The Proliferation of Projects

From the outset, American studies departments have been particularly welcoming to DH-based research initiatives. In particular, text-based data processing has a relatively long tradition whose foundations were laid by early-generation hardware from the 1970s – in this sense, analytical results of DH-based research have been palpable in stylistics, linguistics and history studies for a long time. Since Frederick Mosteller and David Wallace released their breakthrough study of the authorship of the *Federalist Papers* (1964), the contribution of Digital Humanities into various branches of American studies has been increasingly visible. The expansion of infrastructure at various academic centers determines how DH researchers conduct their research – namely, the prevalent role of grant-based projects in the field. As a discipline of study, DH seems to advance through projects which on the one had make use of the state-of-the-art computational tools, and, on the other hand, stimulate the development of novel versions of these tools. In DH, theory informs practice and practice informs theory. The 1990s saw the advent of projects like *Women Writers Project*, which sought to render pre-Victorian female authors more accessible by amassing a large collection of rare texts, the *Walt Whitman Archive*, which endowed hypertext editions of Whitman's texts

with collections of photos and audio recordings, *The Rossetti Archive* focused on the poetry, illustrations, letters, and manuscripts of English Pre-Raphaelite poet, painter, designer, and translator, Dante Gabriel Rossetti or – more recently – *Photogrammar,* an extensive web-based platform for organizing, searching, and visualizing a large corpus of 170,000 photographs from 1935 to 1945.

In Poland there have been a number of DH-oriented projects connected with American Studies, most of which have been financed by the Polish National Science Center. In the Institute of English Studies at the Jagiellonian Unievrsity "The Language of Eighteenth-Century American Colonial Sermons. A Rhetorical and Stylometric Analysis" (2015-2018) OPUS project was realized in cooperation with the Jonathan Edwards Center at Yale University to study large corpora of texts from colonial period with the help of stylometry. At the American Studies Center at the University of Warszawa another OPUS project is being carried out, "Digital Weather: Speculative Video Games and Climate" (2020-2022) to determine the representation of climate change in video games. Also, members of the Computational Stylistic Group at the Institute of Polish Studies at the Polish Academy of Sciences contribute to the "Network-Analysis and Spatial Stylometry in American Studies (NASSA)" project (2019-2021), set up by the DH lab at the Universität Potsdam, Hasso Plattner Institute and SUB-Göttingen. In that project, a corpus of almost two thousand dramatic texts from the US is being investigated to extract a wide array of social and geo-political historical data.

The extensive development of digital infrastructure encouraged by research grants is also reflected in the fact that DH, more than any other field in the humanities, emboldens cooperative and collaborative efforts in the academia. The focus on research projects, framed in a more general, umbrella infrastructure, fosters the creation of research teams and hubs, which, by their very nature, invite scholars from different disciplines to contribute in the production of outcomes. In this sense, DH stimulates a paradigm shift, and a drift towards interdisciplinary research carried out under the auspices of a network of academic institutions. In non-DH research, rarely does one come across articles written by multiple authors – at the crossroads of digital field and traditional humanistic approaches, it is not uncommon for essays submitted to journals to have between three and seven authors. So, as such, DH offers a different approach to the scholarly endeavour in so far as it harbours networks of researchers who by the very nature of the method engage in exchange of ideas and collaboration. As one can read at the ThatCamp ("The Humanities and Technology Camp") website, "DH values collaboration, plurality, investigation of human culture, and the disruption of and reflection on traditional practices and is concerned with not just the use of digital technology for humanities projects but how the use of digital technology for humanities projects changes the user's experience."

False Promises and Challenges

The exploration of all the opportunities offered by DH ought to be accompanied by a reflection on its limitations. In his essay from *The New Republic,* Adam Kirsch warns about the "false promise" of DH and the hyperbolic "spirit of salesmanship" used to promote both digital methods of enquiry and the findings they yield. The rhetoric

employed by some advocates of DH foretells an immediate revolution in thinking and a fundamental change of paradigm, something which Kirsch finds dubious, to say the least. As he explains, "[it] makes no sense to accelerate the work of thinking by delegating it to a computer when it is precisely the experience of thought that constitutes the substance a humanistic education. The humanities cannot take place in seconds." In consequence, in dealing with DH, healthy scepticism is mandatory: "[the] best thing that the humanities could do at this moment, then, is not to embrace the momentum of the digital, the tech tsunami, but to resist it and to critique it. This is not Luddism; it is intellectual responsibility."

The first challenge of DH is connected with the paradigm shift, and the unrelenting drive towards research that is so strongly data-based. In his influential study *Macroanalysis. Digital Methods and Literary History* (2013), Matthew L. Jockers asserts that the modern literary scholars can no longer be content with "anecdotal" evidence to support their theories, and that they need to extend the scope of their search, including a plethora of texts not included in the canon. Jockers encourages academics use DH to break away from the habit of subjectivity. Accompanying this assertion is the claim that this scaling up and resulting investigation of thousands of texts may give unforeseen insights into how literary trends change over time, across periods, and within demographic groups. This drive to move from the microscale to the macroscale has encountered resistance. In *Digital Humanities: Knowledge and Critique in a Digital Age*, David M. Berry and Anders Fagerjord argue that DH-based research instead of following the drive to amass larger and larger corpora should "focus on the need to think critically about the implications of computational imaginaries, and raise some questions in this regard. This is also to foreground the importance of the politics and norms that are embedded in digital technology, algorithms and software. We need to explore how to negotiate between close and distant readings of texts and how micro-analysis and macro-analysis can be usefully reconciled in humanist work" (2017: 135).

Likewise, as with many other fields in the humanities, DH is encouraged to put more emphasis on diversity, inclusiveness as well as accessibility of infrastructure. In particular, in the academic reality so preoccupied with the expansion of infrastructure, this last element is of relevance. The dissimilarities in terms of technological potential of various academic centers engaged in DH-related research and differing access to databases and networks of corpora may considerably hinder the development of project at universities which are not endowed with competitive funding and lack access to the state-of-the-art hardware. This may create considerable disproportions between various research hubs, and, in consequence, run the risk of thwarting the attempts of less privileged institutions and groups of researchers to contribute to the field. More than ever, international and inter-institutional bridge building ought to remain a vital element accompanying DH-oriented undertaking.

Seven Takes on DH & American Studies

The essays collected in this special issue of PJAS testify to the methodological diversity of Digital Humanities, incorporating approaches like the authorship attribution, geomapping, DH-aided archeology and digital hermeneutics. The opening

article takes on the strongest theoretical perspective. A group of authors, Lauren Tilton, Emeline Blevins, Luke Malcynsky, and Hanglin Zhou, examines the role of metadata in DH. Their study demonstrates how the "data about data" may be applied in the wide spectrum of current directions and methods present in various research DH projects in American studies, also in the context of political changes and transformations.

The second article is also collaborative. Eight authors, Colin Wilder, Sam T. McDorman, Jun Zhou, Adam King, Yuhang Lu, Karen Y. Smith, Song Wang, and W. Matthew J. Simmons demonstrate how DH-based technologies may be used for archaeological research. The authors represent various academic centers, but research team from the University of South Carolina, presents the preliminary findings of Snowvision, a digital archaeology project in which computer vision is applied to reconstruct southeastern Native American paddle designs from the Swift Creek period, ca. 100-850 CE.

Robert Boss's essay takes the readers to the colonial period, reporting on his project *Visual Edwards*. Boss seeks to augment the existing interpretations of the works of Jonathan Edwards, an eighteenth-century colonial religious thinker and influential preacher. Edwards's corpus is a particularly opulent one, encompassing twenty six volumes of treatises, sermons and letters, and, as such, it poses a hermeneutic challenge for anyone with the ambition of reading and studying it in detail. In *Visual Edwards*, Boss seeks to address this dilemma, supplementing traditional readings of Edwards's texts with a method based on Processing and Python programming languages producing a network of intertextual markers, which are then presented in the form of three-dimensional visualizations.

In the next article, Steffen Wöll uses various parts of Richard Henry Dana's eighteenth-century travelogue *Two Years Before the Mast*. Dana, an American lawyer from Massachusetts, described the hardships of a strenuous life at sea in the memoir, unaware of the fact that his book would become an unofficial guide for emigrants traversing the unmapped far western territories during the Mexican-American War. Wöll studies the representations of these journeys and uses DH methods to provide visualizations of how spatial imagination is represented in *Two Years Before the Mast*.

The fifth essay, Dennis Mischke uses a combination of text analysis tools and geographic information systems (GIS) to study the a 17th century captive narrative by Mary Rowlandson. The text reports on Rowlandson's confinement and travels through colonial New England. Mischke's study allows to better understand how the historical space is created through the narrative, and how the movement through that space becomes emblematic of the conflicts of King Philip's War.

Whit Frazier Peterson seeks to use computational methods of authorship attribution to determine who wrote *Men, Marriage and Me*, a 1930 memoir ostensibly the work of Peggy Hopkins Joyce, an American actress and celebrity. Peterson employs stylometry, a method which juxtaposes various "authorial fingerprints" by calculating the frequencies of the most common words, to determine if *Men, Marriage and Me* might have been ghost-written by Wallace Thurman, an African American author of the Harlem Renaissance.

Finally, in her article, Anna Bendrat aims to draws on the theories of cognitive processing to discuss the narration of Hanya Yanagihara's recent novel *A Little Life*

(2015). Bendrat uses R-environment software and computational analysis to explore the differences between various narrative voices of the book on the level of *texture*, and to discuss the reader's intermental relationship with the various impersonalizations of the main character.

DH in the Times of COVID

There is yet another context that ought to be taken into account for this issue of the *Polish Journal of American Studies*. I am writing this Introduction in the midst of the global COVID-19 pandemic, when the methods, aims and functioning of academia are being put to the test. All over the world, conferences are being cancelled and moved to online platforms, regular class teaching is suspended and substituted with online sessions, and the academic database infrastructure that was often viewed as secondary backup turns out to be a critical asset for the continuation of global research projects. The COVID-19 pandemic is forcing us to rethink both the safety and the logistics of research. Despite the limitations of online sessions, particularly the lack of in-person contact and potential for serendipitous encounters between panels, online academic conferences will be the norm for the foreseeable future. During this period, the use of new technologies offered by DH may play a key role in a wide array of ways. The existing infrastructure may help in bringing together teachers and students and allowing them to share ideas, overcoming the limitations imposed by social distancing. The visualizations generated in a number of research projects may serve as excellent teaching tools at a time when face to face contact with students has to be replaced by remote education and when teachers are struggling to enhance their online lessons with engaging teaching materials. Finally, the general level of digital literacy stimulated by the growth of DH is helpful for the continuation of academic activities all over the world, particularly at universities which are struggling with the limitations of lockdowns.

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