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Title	International Symposium on the Future of Digital Editing and Publishing: Programme and book of abstracts
Publication date	2024-06-01
Original Citation	O'Sullivan, J. (ed.), International Symposium on the Future of Digital Editing & Publishing, University College Cork, June 2024.
Type of publication	Conference item
Download date	2026-10-13 22:49:30
Item downloaded from	https://hdl.handle.net/10468/15969

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University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

International Symposium on the Future of Digital Editing & Publishing

PROGRAMME & BOOK OF ABSTRACTS

University College Cork, June 6th & 7th, 2024

Generously supported by

IRISH RESEARCH COUNCIL
An Chomhairle um Thaighde in Éirinn

UKRI Arts and Humanities Research Council

Grant numbers IRC/W001489/1 and AH/W001489/1

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Schedule Overview

Thursday, June 6th

1.00 p.m. – 2.00 p.m.	Welcome remarks, accompanied by a light lunch The Council Room, North Wing, University College Cork
2.00 p.m. – 3.30 p.m.	**Session 1** **The Council Room, North Wing** *Chaired by Pedro Nilsson-Fernàndez (University College Cork)* Find–Map–Research: The catalogue of digital scholarly editions *Jana Klinger & Patrick Sahle (Wuppertal University)* The Perspective of Smallness in the Global Landscape of Digital Scholarly Publishing: The case of the RCH Digital Library *Athena Bozika (National and Kapodistrian University of Athens)* Preliminary results on the international project "Nouvelles réflexions sur les éditions critiques en contexte numérique" *Michael Sinatra, Joyce Boro, Emmanuel Château-Dutier, Dominic Forest, Marcello Vitali-Rosati (Université de Montréal)*
3.30 p.m. – 4.00 p.m.	Break
4.00 p.m. – 5.30 p.m.	**Session 2** **The Council Room, North Wing** *Chaired by Máirín MacCarron (University College Cork)* Creation of Digital Scholarly Editions as Pedagogical Capstones: reflections on an undergraduate dissertations module *James Cummings (Newcastle University)* From Elements to Styles: Pedagogical Strategies for Digital Editing and Publication *Sarah Connell (Northeastern University)* Working alongside AI to produce a teaching edition of Chaucer's Pardoner's Prologue and Tale: A case study on the role of the editor and student alongside machine translation *Sophie Whittle (University of Sheffield)*

5.30 p.m. – 6.00 p.m.	Break

6.00 p.m. – 7.00 p.m.	**Keynote lecture** **The Council Room, North Wing** *Chaired by Michael Pidd (University of Sheffield)* Digital scholarly editing with and without collaboration *Gabriel Egan (De Montfort University)* In order to create a complete-works scholarly edition of an author one must have an opinion on just which surviving writings were written by that author. The New Oxford Shakespeare complete-works project has concluded that only 27 surviving plays are by Shakespeare alone and that a further 16 plays contain Shakespeare's writing alongside that of one or more other writers. The project itself is a collaboration by a team of editors, each of whom edits one or more whole plays, whether it is by Shakespeare alone, or—as we think is the case with 'Sir Thomas More'—as many as eight writers. This talk will consider the implications for scholarly digital editing of collaboration as practised by the original authors and by the modern editors. GABRIEL EGAN is one of the four General Editors of the 'New Oxford Shakespeare' complete-works edition, to be completed in 2025; the others are Gary Taylor, John Jowett, and Terri Bourus. He co-edits the scholarly journal 'Theatre Notebook'. He teaches students the arts of letter-press printing and computational analysis of texts. He advocates for Open Access, Open Source, and Open Data principles and the liberating consequences of everyone learning computer programming.
7.00 p.m. – 8.00 p.m.	Reception Staff Common Room, North Wing

Friday, June 7th

10.00 a.m. – 12.00 p.m.	**Session 3** **The Council Room, North Wing** *Chaired by James O'Sullivan (University College Cork)* The quest for the "hundred year" Digital Scholarly Edition *Roberto Rosselli Del Turco (Università di Torino)* Moving towards digital editions of medieval Irish narrative texts with Acallam na Senórach 'The Colloquy of the Ancients' *Nina Cnockaert-Guillou (Dublin Institute for Advanced Studies)* Reimagining the Single-author Online Resource: Digital Voltaire and Questions of Content and Access *Gillian Pink & Nicholas Cronk (University of Oxford)* The use of AI in Higher Education: Digital Scholarly Editions and Pedagogical Agency *Bridgette Wessels (University of Glasgow)*
12.00 p.m. – 1.30 p.m.	Lunch
1.30 p.m. – 3.00 p.m.	**Session 4** **The Council Room, North Wing** *Chaired by Órla Murphy (University College Cork)* In Which the Author Discusses the Digital Documentary Editions Mission of the Primary Source Cooperative, with a Screed on the Economics of Academic Publishing *Ondine Le Blanc (Massachusetts Historical Society)* A Demonstration of the University of Virginia Digital Publishing Cooperative: Publication Platform for Digital Editions *Erica Cavanaugh (University of Virginia)* Cooperative Publishing as a Potential Future for Small-scale Digital Editions *Serenity Sutherland (SUNY Oswego)*
3.00 p.m. – 3.30 p.m.	Break

3.30 p.m. – 5.30 p.m.	**Session 5** **The Council Room** *Chaired by Órla Murphy (University College Cork)* Multimodal modeling of born-digital artifacts: The digital estate of Walter Kempowski *Vanessa Klomfaß, Julia Nantke, Qianqi Huang & Frank Steinicke (University of Hamburg)* Exploring the Digital Expansion of Teachers College Record Since 2020 *Shrien Alshabasy & George Nantwi (Columbia University)* Relevance and Authority: Holding Space for the Public Digital Humanities *Patrick Lewis (Filson Historical Society)* Reinventing the Scholarly Monograph in Digital Age *Gabor Toth (University of Luxembourg)*
6.00 p.m. – 8.00 p.m.	Closing Reception, accompanied by **poetry reading by Annemarie Ní Churreáin** Staff Common Room, North Wing *Introduction by Éibhear Walshe, Director of Creative Writing at University College Cork* ANNEMARIE NÍ CHURREÁIN is a poet from Ireland's Donegal Gaeltacht. Her books include Bloodroot (Doire Press, 2017), Town (The Salvage Press, 2018) and The Poison Glen (The Gallery Press, 2021). She is a recipient of the Irish Arts Council's Next Generation Artist Award and a co-recipient of The Markievicz Award. Ní Churreáin has held literary fellowships in the U.S. and throughout Europe. She was the 2022-23 Decades of Centenaries Artist in Residence at Donegal County Archives. Ní Churreáin is the Poetry Editor at The Stinging Fly Magazine.

Thursday, June 6th

The Council Room, North Wing, University College Cork https://maps.app.goo.gl/iUcxFDuMQPi1pyi17

1.00 p.m. – 2.00pm	**Welcome remarks** Accompanied by a light lunch

2.00 p.m. – 3.30pm	**Session 1** Chaired by Pedro Nilsson-Fernàndez (University College Cork)

Find–Map–Research: The catalogue of digital scholarly editions

Jana Klinger (Wuppertal University)
Patrick Sahle (Wuppertal University)

When discussing digital scholarly editions, researching the field, and creating new editions, we first need to know which ones are already out there. What do they look like? What methodology do they apply? And what is the current best practice? As there are editions in several academic disciplines, for many genres, and in various places, they are often difficult to find. Let alone the gaining of a general picture that should be as complete as possible. A helpful starting point for orientation would be a register of digital scholarly editions. Luckily, there are two of them already. One catalogue by Greta Franzini, started in 2012,[1] and one led by Patrick Sahle with early installations going back as far as 1997.[2] In our presentation, we will talk about the current installation of the latter, its content, and the possibilities and visions of its usage.

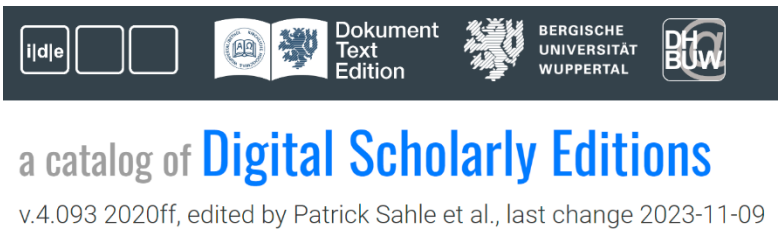

Figure 1. Header of the current catalogue at digitale-edition.de as of 2023-11-26

The current version of the catalogue, which we call v.4, has been financially supported since 2019 through the graduate school on scholarly editing "Document –Text – Edition" at the University of Wuppertal, covering the cataloguing work of Jana Klinger (2019–2023) and Lennart Rouxel (2023–...), as well as the technical support of Stephan Makowski. Through this, we could continue the previous work and set up a more sustainable workflow and a new

technical solution for its presentation. The encoding of catalogue entries now complies with the TEI standard.[3] They are maintained in a GitLab repository[4] and, from there, fuel the publication platform, a TEI publisher instance.[5]

The catalogue aims at completeness, which will always remain an unattainable goal. Of course, we will never know about every digital scholarly edition. We are happy to receive hints on new editions from members of the scientific community, our top informant being Prof. Dr Georg Vogeler from Graz, to whose suggestions we owe about 70% of editions recorded in the catalogue over the last years. In addition, we cross-check with the Franzini catalogue and try to keep an eye on the ongoing developments ourselves. Nevertheless, an attendance bias is inevitable. Sadly, it is more likely for editions from traditional genres and Western countries to come across our sight than for editions from other parts of the world or dealing with less typical types of documents. With our presentation, we hope to raise awareness of the catalogue and encourage active contributions from within the field.

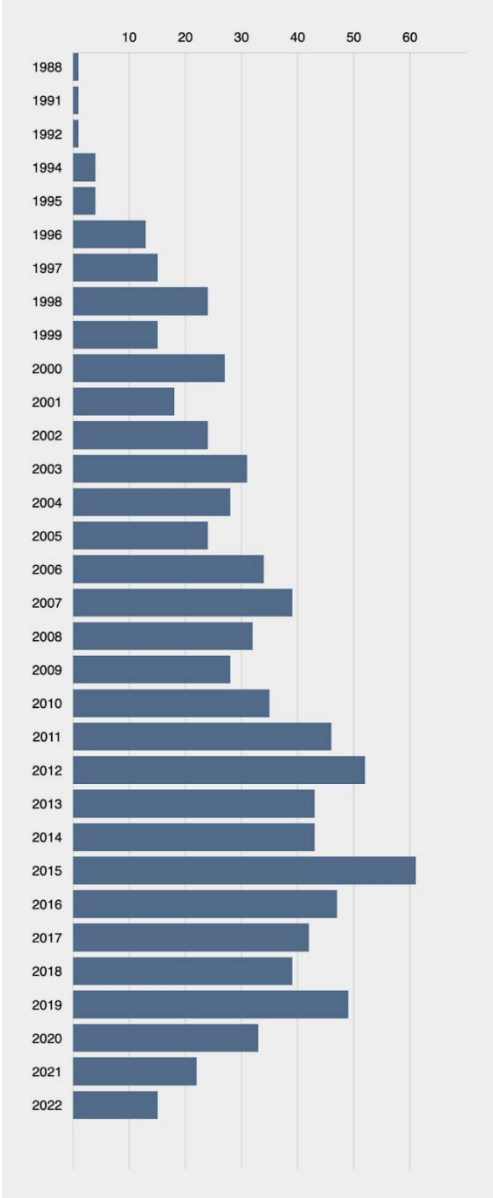

Figure 2. Publication dates of the catalogued editions. Relaunch years are counted as additional publication dates

The catalogue has three main goals: to allow for quick orientation in the field of digital scholarly editing by finding inspiring examples, to document the interdisciplinary state of the art in editing, and to research the historical development of the methodology and techniques applied. It is not easy to pursue all goals with equal emphasis. An additional challenge in curating a consistent database is the collaborative work of different people over a long period of time. Therefore, for the catalogue to serve its goals and the workflow to run smoothly, it is crucial to clearly define what a digital scholarly edition is and which things we do not include.

"Scholarly editing is the critical representation of historical documents" is the admittedly rather general definition Patrick Sahle devised 25 years ago and which has ever since worked as a dependable guide when deciding which resources to add to the catalogue.[6] Only about 50 per cent of resources recommended to or found by us, clearly do or do not belong in the catalogue. In the rest of the cases, we have to check the core requirements mandated by the above-mentioned definition before deciding whether we add a resource to the catalogue: Are the documents or texts fully

represented – and not just described? Is there a critical engagement with the subject, including an editorial statement? What is the self-description and self-understanding of the project?

We take this process of deciding which resources to add to the catalogue seriously, weighing up the aspiration of cataloguing "everything" and the need to keep the database consistent. Some resources call themselves 'editions' but do not fit our definition. Others call themselves 'archives' but still comply with our expectations of a scholarly edition. An important distinction is this: We catalogue editions, not editorial projects – there must already be 'substantial content', the edition must be 'usable' or 'reviewable', more than just a promise or a prototype. We also do not catalogue digital libraries (usually lacking critical engagement in detail), digital archives, or text collections (corpora) – as these are different from digital editions to a degree that would justify accounting for them in a separate catalogue.

At the time of writing this proposal, the catalogue contained 836 editions, which have first been published between 1988 and 2023. This dataset covers ten different 'edenda' (document genres), six disciplines, six historical eras, and texts in 32 languages. All category systems must be disputable but are hard to change when consistency over 25 years is necessary. For us, the established categories have worked and proven applicable even with the change of contributors.

Our records are rather minimalistic: categories allow for basic filtering according to certain interests (see fig. 3); we provide the URL and try to construct a 'bibliographical description' with title, people involved, institution, place, and year of an edition. In the beginning, we tried to give a short analytic statement but soon abandoned this practice in favour of the quotation of a self-descriptive text snippet taken from the edition itself. From time to time, we check whether the editions are still maintained and amend entries when editions have died or have been relocated or relaunched. But out of principle, we never delete an entry or change it substantially - as the catalogue should allow for the historiography of the field of scholarly editing. The catalogue can be filtered using the above-mentioned categories, by the year of publication or relaunch, and by the fact of them being associated with a review article.[7] A full-text search is also available. Every record has date stamps for its creation and modifications and a stable identifier to permit referencing or linkage. Downloading the whole dataset is possible via the GitLab repository.[8]

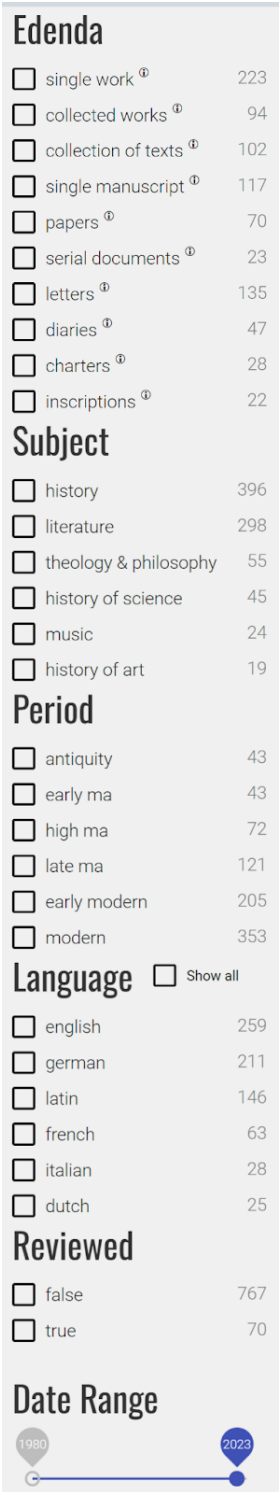

Figure 3. Faceted browsing in the catalogue

While the root purpose of the catalogue is browsing it to get an overview of the best practices in the field of digital scholarly editing, the downloadable TEI dataset allows for some analytical perspectives, too. Obviously, the distribution of years of publication (see fig. 2) or the respective distribution of document types, historical epochs and languages and the correlation between different categories can be derived/extracted/computed from the data. Also, the persistence of editions can be analysed rather "easily" using the catalogue data. When we noticed the disappearance of a publication, we substituted the URL with a link to archive.org. This group is kept updated by checking the availability of links pointing to the editions in a fairly automated process. A hermeneutic research approach could take a closer look at the about 50 editions in the catalogue that, at one point or other, have been relaunched and explore how these relaunches

came about and which challenges the editors had to master to keep their editions up-to-date and reachable.

Although the category system is comparatively shallow,[9] the data has proven to be a valuable starting point when researching digital scholarly editions of a given field, their historical and methodological development, and current best practices. For example, a challenge every team faces when preparing a digital scholarly edition is the question of citation recommendation: Should one be added to the edition? Should it be placed in the editorial statement or on the individual pages? How detailed should it be? Should it contain persistent identifiers? Roman Bleier examined these questions by checking the citation recommendations of 670 editions included in our catalogue at the time.[10] His work is a perfect example of how the data collected in the catalogue can serve the purpose of systematically investigating specific research questions from the field of digital scholarly editing.

Other research questions in the field that can be addressed using the catalogue data include, but are not limited to, some of the following: Which features of digital scholarly editions are accepted as "standard" by the scientific community, and since when? A concrete example of this could be the inclusion of facsimiles in digital scholarly editions. Facsimiles are not included in printed editions, nevertheless, in digital editions, they seem to be a pretty standard component. Has it always been this way? When looking at the editions listed in the catalogue in the chronological order of their first publication, how can the development of this feature be retraced? As always, once one question is answered, others follow: How were/are facsimiles typically incorporated technically? How does the degree of inclusion into the edition vary over time (displaying the images alone vs. linking areas with parts of the edited text)?

With our contribution, we would like to present the catalogue of digital scholarly editions as a database and starting point for research. We hope to contribute to the international and interdisciplinary dialogue on the state of the art in editing and critical perspectives on digital editions.

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[1] For the catalogue data, see: Franzini, Greta: Catalogue of Digital Editions. 2012–, https://zenodo.org/badge/latestdoi/42574907. For the web application as a whole, see: Franzini, Greta; Andorfer, Peter; Zaytseva, Ksenia: Catalogue of Digital Editions: The Web Application. 2016–, https://doi.org/10.5281/zenodo.1250796. The Web application can be reached here: https://dig-ed-cat.acdh.oeaw.ac.at/.

[2] For the current version, see: Sahle, Patrick; Vogeler, Georg; Klinger, Jana; Makowski, Stephan; Sutor, Nadine; Rouxel, Lennart: A Catalog of Digital Scholarly Editions. v.4, 2020–. https://www.digitale-edition.de/. The former version v.3 is still available as well, although since 2020 no new data is added anymore: Sahle, Patrick: A Catalog of Digital Scholarly Editions. v.3, 2008–2020. http://v3.digitale-edition.de/.

[3] Cf. Text Encoding Initiative: TEI P5 Guidelines. 2007–. https://tei-c.org/Guidelines/P5/.

[4] Cf. the repository "sde-catalog" at https://git.uni-wuppertal.de/dhsfu/sde-catalog.

[5] Cf. tei Publisher – The Instant Publishing Toolbox, e-editiones, https://teipublisher.com/

[6] For an extended discussion of the definition see Sahle, Patrick: What is a scholarly digital edition (SDE)? In: Digital Scholarly Editing. Theory, Practice and Future Perspectives. Ed. by Matthew Driscoll and Elena Pierazzo. Cambridge: Open Book Publishers, 2016, p. 19-39. DOI 10.11647/OBP.0095.02

[7] In-depth reviews of digital scholarly editions can, for example, be found in the review journal RIDE (Review Journal for Digital Editions). It also offers a list of suggested editions for review that is derived from the catalogue. Cf. https://www.i-d-e.de/publikationen/ride/.

[8] The direct download link is https://git.uni-wuppertal.de/dhsfu/sde-catalog/-/blob/master/catalog_TEI.xml.

[9] In comparison to the depth of information included in Greta Franzini's catalogue visualised through her "chart selector" at https://dig-ed-cat.acdh.oeaw.ac.at/charts/chartselector/.

[10] Cf. Bleier, Roman: How to cite this digital edition?, in: digital humanities quarterly 15.3 (2021), http://www.digitalhumanities.org/dhq/vol/15/3/000561/000561.html.

The Perspective of Smallness in the Global Landscape of Digital Scholarly Publishing: The case of the RCH Digital Library

Athena Bozika (National and Kapodistrian University of Athens)

Since the 1990s and the beginning of worldwide diffusion of internet use, there have been major efforts to establish the digital academic publishing sector, with open scholarly communication being, until this day, one of the main objectives of international governing bodies such as the European Union. Despite scholarly publishing being the most successful sector of the publishing industry in terms of adaptation to digital environments, this transition remains a protracted and challenging process, marked by various obstacles (Thompson 2005: 330-376). As we go through the third decade of the twenty-first century, nearing four decades into widespread digital reading and research practices, it is crucial to construct a concise history of digital publications; we propose that a historical perspective on today's state of the field would be essential for guiding its future trajectories. This paper constitutes a central component of a larger effort to map the current digital publishing landscape, by delving into alternative, small-scale paradigms, which could offer distinctive perspectives on the ways ideas move, regarding issues to be tackled, as well as strategies and priorities in digital publishing. Thus, we could extract valuable insights and contribute to the ongoing discourse forming the trajectory of future developments in this dynamic sector.

Here, the focus is a specific small-scale project centred around a minority language. More specifically, I examine a case study, the *RCH Digital Library* project, implemented by the Research Centre for the Humanities (RCH) in Athens, a small non-profit organisation whose main goal is to support early-career academics. Since 2018 the Centre has been implementing this publishing project, aiming to provide open-access, original research. Drawing from my experience editorially coordinating this project, I try to present and analyse some structural characteristics that derive from its "smallness", developing an example that could be juxtaposed with what could be considered the macro-historical level of digital publishing in Europe.
I borrow the concept of "smallness" from the field of international history, particularly from the problematic of "small states" and the political and methodological dynamics arising from it, in that it produces specific results when attributed as an identifying feature (Kruizinga 2002: 6-7). The concept here acts as a methodological marker in analysing the field of digital publishing, within the framework of destabilisation of the prevailing narrative regarding the origins and dissemination of digital technology. This narrative could be encapsulated in the notion that all technological innovation emanates from specific "centres," namely western countries such as the USA and the UK, and subsequently diffuses to the "rest of the world". In this process, diffusion is usually assumed to be unilateral and uniform in all parts of the world, with certain "receptor" countries, positioned as peripheries to these technological "centres," tending to experience delays in adopting and assimilating such technologies, due to their perceived insufficient development (Harding 2011). This narrative has been established as dominant in the history of technology and shapes our perceived points of reference in addressing challenges within digital scholarly publishing. I propose that utilising "smallness" in this context has the potential to alter the direction of this narrative and allow actors perceived as "receptors" some agency in forming the social uses and overall social shaping of technology.

Reviewing the current state of the publishing sector in Greece one finds a general reluctance toward digital transformation, either in terms of the "hidden revolution" as described by J. B. Thompson (2005:405-437) (i.e. the integration of digital tools in the publishing workflow), or the production of digital published material (Karakatsouli 2018: 2). However, there are some important exceptions. The first one is the *ePublishing*[1] project of the public digital content aggregator, National Documentation Centre (NDC). NDC is also a member of larger European coalitions like *OPERAS*, *DIAMAS* and *Triple*, oriented toward forming a network,

aiming to develop and apply EU's Open Scholarly Communication policies. The second example is the National Technical University of Athens's digital university textbook project *Kallipos*[2] seeking to tackle the problem of high state cost in university textbooks. These two cases display pivotal steps toward establishing a digital academic publishing sector in Greece, articulating an agenda for Open Access while addressing issues of discoverability of academic material for research and education. Nonetheless, neither has yet attempted to explore the implications arising from the transformation of traditional formats as they move into the digital realm. Books, journals, proceedings, and university textbooks are generally made available in PDF (or more rarely EPUB) documents, which directly mimic the format of the printed book, while the particularities of the books' design when set within a space of digital affordances do not appear to be a priority.

Similarly, the focus and objective in the case of the *RCH Digital Library*[3] project is the open dissemination of original research carried out by outstanding early-career academics in Greece in the fields of the Humanities and Social Sciences. However, alongside the publishing project per se, which consists of an extensively examined and standardized workflow, a careful evaluation of manuscripts and a rigorous and analytical editorial process, it has produced an originally designed reading platform. Thus, it publishes as well as presents books, both online (in HTML format) and in downloadable, ready-to-print PDF format. A distinguishing characteristic of this project is its identity as a digital *library* of born-digital original texts; it thus aspires to also serve the social function of a library by "bringing together", caring to foster a dialogue between researchers, and constituting a space for the formation of various research networks. Secondly, what also differentiates this project is its focus on the Humanities and Social Sciences and its aim to promote the public discourse around these fields, which are known to be generally under-funded and relatively under-represented, especially in Greece. Lastly, its most critical quality, which follows from the previous two, is the willingness and the priority given to experimentation; apart from production, it has, since its founding, established a parallel research strand. With a small team, from a variety of backgrounds (including Digital Humanities, Art History, Information Science and the traditional publishing sector) so far this experimentation has been centred around two axes: the digital reading experience and the concept of openness. *RCH Digital Library* is distributed through the NDC's *ePublishing* portal. Nevertheless, the idea for building a separate reading platform – and not just rely on the NDC for the publications' presentation to readers- has been based on the will to experiment with the conventions of the medium, asking the question "how do we read digitally?". Therefore, apart from providing free access to excellent original scholarly content, it also proposes an approach to the digital reading experience. The team set off trying to find the balance between enriching publications with functionalities that digital technology offers, while leveraging the knowledge amassed from the book's past. Naturally it would not suffice to create yet another imitation of the book; but what could be done, paraphrasing Johanna Drucker, would be considering, not how "a [print] book *looks*", but how it "*works*" (Drucker 2013:217). A main conclusion was that the aesthetics of typography, its conventions and formulation of the text did not only pertain to visually pleasing results, but also functional value. The structure of the cultural (and technological) object that is the physical book is interlinked with a "usefulness" (Norman 1988), a set of historical and social habits, that should be considered in the effort of producing an equivalent ease of use to its digital continuation. Taking advantage of the new medium and its immense, under-utilised possibilities, does not mean that we should altogether ignore the social meaning attached to the paradigmatic medium of knowledge organization used for studying, reading, and researching. Consequently, there was much contemplation on ways to enrich publications with hypertext, multimedia, and interactive functionalities, without creating distractions for reading, paying much attention to avoid the "urge to click", as Anne Mangen (2008:413) described it. We achieved that by keeping the design plain, clean, with minimal differentiations on colours and other indicators of additional affordances (e.g. links underlined and in blue text), trusting the reader/user to unfold

her own experience and familiarity with the platform. In addition, special attention was given to typography; fonts selection resulted from extensive research on the Greek typographic past and was shaped into a more minimal approach to traditional serif fonts.

Another arduous discussion emerging frequently throughout the project, involved the "[HTML] or PDF dilemma", to paraphrase Thompson (2005:415-418). Indeed, the coexistence of two different final files, i.e. two different final copies, resulted in almost double the work for proofreading and typesetting, as well as archiving and digital asset management. Even so, the team opted to keep both, and the gain of this double effort was twofold. On one hand the PDF is more widely accepted as a form of digital publication by international academic standards; again, social context directly affects the limits of experimentation. Furthermore, this format also serves the need to download texts locally, allowing the researcher to store the publication on her device and work with it offline.

On the other hand, HTML allows a radical level of openness in access and accessibility. It ensures interoperability across all operating systems and devices, as it is possible to use an online platform on any kind of device, even a public computer, just with an internet connection and a browser, without requiring either a particular device (i.e. an e-reader), high specifications (a very old computer would suffice) or even storage availability. Lastly, by using a semantic language, like HTML5, a foundation is laid for the addition of accessibility functionalities, especially for people with visual disabilities, as the publication is ready for text-to-voice recognition (Seeman 2004). Finally, another important feature, decisive for the project's openness, is its provision of complementing the Greek texts with extended abstracts in English, rendering research open and available to further cultivate discussion not only regionally, but also resulting in the development of communication and collaborations with similar institutions abroad (e.g. Independent Social Research Foundation, *Manifold*, etc.).

Having outlined this project's aims and priorities, I believe the concept of smallness plays a critical heuristic role in conceptualizing how transfers and flows of ideas take place in the digital publishing field. In the case of this specific project, its smallness and independency from any larger-scale coalitions, allowed its team to set its own set of priorities, without being limited by larger bodies' policies, subsequently addressing themes on an academic level, that have not yet been the focus in relevant research in Greece. Evidently, though, smallness has its own shortcomings in terms of limited economic, technological and, of course, human capital, which result in small volume or slow rate of production. However, seeking to counter these limitations steers towards an open dialogue with peers, which results in knowledge exchange. For example, the collaboration with a large organisation, NDC, was formed to ensure the project's distribution and discoverability, as well as its adherence to all the standardized processes of the digital publishing workflow (metadata, DOI etc.), but also to advance its symbolic capital and prestige. The NDC in turn appreciates the experimental character of the smaller project and appears open to the re-examination of digital reading conventions, even if often hampered by bureaucratic obstacles. Overall, the case of *RCH Digital Library* constitutes a prime example of a reference point, concentrating the dynamics of interaction between the small and large scale formulating the diffusion and transfer of ideas in digital scholarly publishing.

The analysis of these complex regional or intra-regional interactions, where differences in priorities and capital configure vague, or more explicit, power structures, but nonetheless encourage the interchange of ideas, offers an alternative way to think about digital technologies and their diffusion. This draws upon the theoretical framework provided by Global History, and in particular the theory of Circulation of Knowledge (Keim 2016), in that it helps examine how various actors across different regions of the world have sought to respond to the question of digital publishing, rather that being limited to the traditional narrative of one-way diffusion from centres to peripheries (in this case, from the EU to a small southern country, Greece). In parallel, this perspective advocates for a shift towards a view that considers digital publishing not only as a set of technological tools and a field of innovative possibilities (which it undoubtedly is), but

also as a part of a historical process. In other words, digital publishing could also be considered as the latest milestone in the long history of academic publications, a continuation of a set of social, economic, and cultural practices pertaining to the task of scholarly communication, which are influenced by a series of contextual (social, cultural, and political) factors and of interactions between the small and the large scale. The small-scale perspective allows us to examine the processes of diffusion, along with the processes of managing and curating such projects, in a way that enables us to clearly distinguish the particularities that they may present being developed in different regions and/or communities.

In a broader view, this approach enables us to move beyond the narrative of the supposed neutrality or universality of (digital) technology. In the era of platform capitalism and artificial intelligence, it becomes evident that although technology is presented with these claims, it is never created for (or addressed to) everyone and is by no means "one-size-fits-all". The "global village" of the internet could be interpreted as a key example of the form of globalisation that Lynn Hunt describes as "top-down": a series of processes that could result in the complete homogenisation of the world in the Western paradigm (Hunt 2015: 60). In contrast the methodology presented here adopts the alternative perspective on globalisation suggested by Hunt; rather than a gradual transformation of the "rest of the world" to fit in the Western paradigm, it explores the dynamics of diffusion as a series of transnational, decentralised histories of different actors, intertwining and interdependent (Hunt 2015: 60). Hence, we are able to inform our ever-changing and still very fluid field toward a more inclusive and diverse approach.

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Preliminary results on the international project "Nouvelles réflexions sur les éditions critiques en contexte numérique"

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Quebec has been a pioneer in North America in the field of digital humanities, with a number of landmark achievements, notably in critical publishing. The many researchers affiliated with this discipline enjoy a first-rate international reputation. It was therefore necessary to bring together their skills within a research team to have a structuring effect and ensure international recognition of Quebec achievements in this emerging and dynamic field of the humanities. We therefore created the *Groupe de recherche sur les éditions critiques en contexte numérique* in the fall of 2014 (and received our first grant from the Quebec government in 2018, and again for another 4-year period in 2022) with the objectives of federating individual expertise within a team that both enhances the value of individual work and forges new collaborations, both for research projects and grant applications and for supervising graduate students and postdoctoral fellows. Our team is also distinguished by its francophone dimension, which makes it unique in Canada in the field of digital humanities. On the one hand, the technical specificity of French in terms of epistemological models, but also the linguistic, disciplinary and intellectual diversity of our members, enable us to offer an alternative to these epistemological models.

Our primary theme is linked to the documentary tradition, which has historically favored stability, insisting on the fixity, permanence and integrity of content, but the Web puts the emphasis back on flow, the dynamics of exchange and the mutability of content. Thus, between the two classic poles of stability and movement, a redistribution is taking place. According to the different phases, documentary processes accelerate. The document used to be a means of distancing an event, for the purposes of proof and memory, made possible in part by the duration of the stages involved in its construction and access. Today, the speed of production, as well as of automated documentary distribution and recommendation, is such that humans often no longer have the time to construct the event as a "document" and can only visualize a partial representation of it. Digital technologies have profoundly altered our research, editing, exchange and publication practices. Media have changed, as have the modalities and meaning of writing, the concept of authorship, forms of reading, access to and dissemination of texts, images, sounds, etc. and more generally, the entire system of knowledge production and transmission.

If literature has always played a key role in the formation of cultural categories, it takes on an even more fundamental role in today's context, which is characterized by a predominance of textual form. It should also be noted that two formerly separate social times now overlap: the time of reading - long and distant from documentary production, a time for mediation and reflection - and that of conversation - immediate, reactive and constrained, a time for exchange and dialogue. These two temporalities overlap and sometimes merge in new research environments, such as the idea of *écrilecture* of the Parisian research group "Dispositif d'information et de communication à l'Ère numérique". In recent years, a number of researchers have examined the characteristics of literature in a digital environment to challenge the idea of a precise definition of format changes between paper and digital. In the French-speaking world, work on digital culture inspired by Milad Doueihi demonstrates that the digital world should not be seen solely as a set of tools, as it has more generally modified our modes of reading, our relationship with memory, our relations with other researchers and our very conception of knowledge.

Indeed, with changes in media, publication methods, visibility mechanisms, information accessibility and content circulation, our entire relationship with knowledge is being called into question. Our primary hypothesis is that it is just as necessary – and even urgent – to lay the foundations for a theory and way of thinking about the digital, as it is to pursue and encourage the implementation of new research tools designed by and for the humanities, in direct relation to questions of publishing, dissemination, encoding, mining, curation, or even the visualization and representation of textual, audio and visual data. Because of the possibilities and constraints presented by modern computers and the World Wide Web, digital critical editions are "learning commons", centers within which active processes of scientific debate and exchange can be rapidly and remotely undertaken, disseminated, recorded, collected, preserved and shared. However, if digital critical editions are to take full advantage of the potential presented by their technological environments (rather than simply imitating print traditions), they need to develop and make visible both their process and their product and offer opportunities for participation and editorial debate to their communities of academic users but also to the general public. Data mining and textual analysis offer exciting opportunities to bring together different sets of data which, when prepared to the highest standards of text coding, can yield new and innovative results that encourage the challenging of preconceptions about the transfer of ideas from one author to another, or from one literary genre to another.

Our presentation will focus on the "Nouvelles réflexions sur les éditions critiques en contexte numérique" project funded by the Canadian Social Sciences and Humanities Research Council in their partnership development program. This project brings together partners, practitioners and theorists from four countries, involved in a number of projects primarily concerned with digital tools and culture, to position itself at the center of reflections on these new forms of research environment. This project builds on the work of the *Groupe de recherche sur les éditions critiques en contexte numérique*. After several years of activity, the group's members decided to maximize its expertise by collaborating closely with four international research centers and 13 American, Canadian, German and French university researchers, for whom the question of critical editions is at the heart of their work, as well as with a publishing house open to experimenting with new forms of scholarly publication. This research program brings together researchers with different methodological and epistemological approaches to a fundamental question. This enables us to analyze the production and dissemination of knowledge and culture in our new digital environment in all its complexity, while avoiding the fragmentation that could characterize the study of a subject as vast as digital technology, which affects all our practices. In this way, we can integrate colleagues from literature, art history, information science and communication who work directly and explicitly with digital media.

This presentation will report on our project's activities over the first two years, which are divided into two interdisciplinary axes that have been flexibly designed to maximize collaboration between researchers and partners and encourage further discussion:

Axis 1: New forms of knowledge emergence (under the direction of Marcello Vitali-Rosati)

This axis looks at how digital technology is emerging as a new support environment that is reconfiguring the way research is produced, shaped and circulated in scientific communities. We will focus on a critical publishing environment and a collaborative corpus-building platform. This axis brings together researchers who are developing a theoretical reflection on digital issues and the cultural changes brought about by technologies. In particular, it will examine the impact of digital technology on conceptual processes. How does it change the way we see, conceive and understand the world? How have digital processes transformed our relationship to historical artifacts? How might we define a phenomenology of the digital?

Axis 2: Validation and legitimization of content (under the direction of Emmanuel Château- Dutier)

This area explores the multiplication of sources and the integration of different types of content into research and critical publishing practices. This broadening of sources has opened up new opportunities for the development of research hypotheses. This axis also explores the practices of dissemination and editorialization that have been radically transformed by the semantic web and the many other upheavals in digital communication regimes, such as the Internet of Things and augmented reality. Reflecting on the ways in which content is editorialized is far from being a purely practical issue: it requires in-depth theoretical work upstream, which must constantly remain in contact with downstream practice.

The "Nouvelles réflexions sur les éditions critiques en contexte numérique" project aims to raise and reflect on these questions by bringing together 21 researchers and 6 partners, who stand out for their original thinking and/or practice of digital publishing in the humanities.

3.30 p.m. – 4.00 p.m.	**Break**

4.00 p.m. – 5.30pm	**Session 2** Chaired by Máirín MacCarron (University College Cork)

Creation of Digital Scholarly Editions as Pedagogical Capstones: reflections on an undergraduate dissertations module

James Cummings (Newcastle University)

For the past three years I have run an undergraduate module entitled 'Dissertation: Digital Edition'. This undergraduate capstone module serves as an alternative form of dissertation that coexists with other options including the standard long form essay dissertation as well as creative writing and other digital alternatives. I co-teach this with another colleague (Dr Aditi Nafde) and a special collections archivist (Dr Melanie Wood). This paper reflects on the pedagogical decisions we have made as a teaching team, presenting a case study on the integration of student-created digital scholarly editions into our undergraduate curriculum at a UK university.

The standard long-form essay dissertation in the School of English at Newcastle University is the traditional final-year capstone module for undergraduate students, which at 10,000 words in length, is more than three times longer than any individual assessment from previous years. Dissertation modules span two semesters, and after some initial training, are mostly taught as one-to-one supervisory sessions. However, in the 'Dissertation: Digital Edition' module, students undergo substantially more front-loaded training in both editorial theory and practice, as well as text encoding. This additional training is needed because students doing the long-form essay are essentially just producing a much longer essay very similar to previous ones they've done, though perhaps with more independent research, whereas 'Dissertation: Digital Edition' students are asked to create a scholarly digital edition based on seventeenth-century materials available in Newcastle University Library's Special Collections. This module includes a

special collaboration with the University Library that enables students to have guided access to archival materials and training in using and understanding these materials which few undergraduate students experience. While all students have access to the library's Special Collections, it is unfortunately uncommon for an undergraduate student to independently engage in research involving archival materials without a module like this prompting them to do so.

The module's learning aims include providing students with: practical experience in utilising archival primary sources, insight into various editorial approaches, the ability to articulate their editorial processes to readers, hands-on skills in transcription, markup, and digital edition publishing. Despite our assurance that prior knowledge of transcription, digital editing, or computers is unnecessary, there remains considerable hesitancy among undergraduate students in Newcastle University's School of English to enrol in this module. Typically, enrolment is driven by students who have already cultivated an interest in publishing, archival topics, or pre-modern texts. Notably, none of the students thus far have had existing familiarity with any markup languages. The case study also examines the reasons behind students' enrolment in this module based on their feedback.

Students are instructed through various methods, primarily taking part in small group teaching sessions that introduce them to diverse approaches to editing. The first section of the module encompasses a four-week series of one-hour seminars delving into the theoretical and practical aspects of editing. Additionally, a workshop in Special Collections provides students with firsthand exposure to the types of materials they can choose to edit. Building on this, students receive a five-week series of three-hour workshops dedicated to training them in digital editing, the use of the Oxygen XML Editor, and the Guidelines of the Text Encoding Initiative (TEI). Throughout the academic year, students also have occasional supervisory meetings, as they would with the standard long-form essay, ensuring their progress remains on track. While these students receive more intense, front-loaded tuition, the majority of work remains guided independent study.

The students' work begins with a formative edition plan spanning approximately 500 words. This plan outlines their chosen text, provides a summary of the proposed work, articulates their editorial approach (including the assumed audience), and is accompanied by a meticulously annotated bibliography. This initial stage gives feedback on their plan at the beginning of the second semester.

The module's assessments are based entirely on two related components: the underlying TEI encoded digital scholarly edition, and an editorial introduction explaining not only the reasons for their chosen editorial approach and essential background, but also specific editorial and encoding decisions they've made to the text. Both components carry equal weight, constituting 50% each of the module grade. The editorial introduction comprises approximately 5,000 words, while the edition itself reflects an equivalent amount of effort. The latter aspect involves a negotiation process with me, balancing considerations such as the length of the transcribed text, addition of editorial notes, and the extent of markup the student incorporates. The texts chosen by students so far have ranged from short polemical pamphlets, to various works of poetry, and portions of plays.

The case study also considers what skills and knowledge are essential for a module like this. Should we focus on training students to edit texts specifically for digital editions, or should we continue with general editorial theory and approaches to textual editing? Additionally, what practical skills are required? In our context, students often lack a clear understanding of both editorial tasks and the basic components of an editorial introduction. To address this, our teaching approach involves providing students with a general background to editorial theory applicable to pre-modern texts. This knowledge serves as a platform, enabling students to decide what their editorial approach will be for their chosen audience.

Overall, TEI pedagogy has been a subject of significant scholarly discussion in Digital Humanities (see, for example, Croxall & Jakacki, Allés-Torrent & Riande, and Apostolo et al.).

We believe that teaching students TEI not only offers a solid heuristic framework for exploring the editorial concerns of textual distinctions, but also equips them with valuable, transferable skills for the future. This case study also questions how and whether to teach TEI to undergraduate students, with various systems available, such as LEAF-Writer, which could shield students from direct exposure to XML markup. Indeed, as I've noted in multiple publications (c.f. Cummings 2018 & 2022), TEI is currently serialised in XML but is not itself XML – the TEI abstract model as described in the TEI Guidelines. However, the pedagogical approach adopted in this module foregrounds TEI encoding in XML specifically for literary studies and the concerns of scholarly digital editing. However, this case study argues there is merit in cultivating an understanding of XML serialisation to enhance clarity regarding the encoded hierarchies.

Mark Kaethler, in reflecting on his own teaching, expressed concerns about approaching TEI assignments within a predominantly literary-focused class, where "even though the assignment was ultimately a considerable success and students felt comfortable with text encoding by the end of the class, I still wondered how to approach the TEI assignment better in a class that remained predominantly literary in focus." (Kaethler, para 5) In 'Dissertation: Digital Edition,' students are not expected to master the entirety of TEI; the focus is solely on imparting aspects relevant to their work in creating digital editions. The intent of teaching TEI is not to treat encoding as an end in itself, indeed, as Julia Flanders (et al.) suggest, "the goal may be to use TEI as a way of framing a conversation about digital editing". (Flanders et al., para 24).

One of the challenges of teaching digital editing modules to undergraduates in a School of English is that their anxiety over the digital aspects "could cause the humanities course not to reach enrollment minimums". (Brookes, 479) Fortunately, my school has shown patience with the module's low enrolment. Anecdotal feedback from students suggests they have concerns that it will require computer skills that they don't have – indeed it does, but they are taught these. In addition, in discussions with the school, I have argued that if a student wanted to do a project-based dissertation (another option available to them) using different media to their peers then we would accommodate that. I also claim, slightly inaccurately, that the preparation for this module remains relatively limited from year to year, so the staff time devoted to its delivery is minimal. Similarly, the collaboration with Special Collections is bi-directionally beneficial, the students get experience of using archival materials and the archivists can point to how their materials are being used. However, assisting in delivering this module creates an extra burden on the library colleagues. In addition to delivering this (non-core) training, the library creates high-resolution images of the texts the students have selected to be included in its IIIF 'Collections Captured' service which takes time for (free-of-charge) imaging and also detailed metadata creation. In future iterations of this module, the teaching team have decided it would benefit students to learn how to create this metadata for the library and thus reduce the image-creation burden.

This paper will reflect on the above issues and make concrete recommendations for creating similar modules.

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From Elements to Styles: Pedagogical Strategies for Digital Editing and Publication

Sarah Connell (Northeastern University)

The Women Writers Project, a long-term research initiative focused on pre-Victorian women's writing, has been teaching text encoding and digital editing for more than three decades. In workshops, classrooms, and the WWP's own encoder training curriculum, the project has developed methods for preparing learners to use the Text Encoding Initiative (TEI) markup language to produce digital models of humanities research materials. This paper will share insights from the WWP's classroom collaborations, outlining practices for teaching digital editing in which students take on the full scope of editorial and publication processes. The paper will also discuss some of the technical supports that the WWP has established to make digital classroom editions possible, outlining current uses of these tools and future directions for their development.

The TEI markup language is a widely used method for introducing students to the practices of digital editing, and ample scholarship has shown the efficacy of TEI as a learning tool in the humanities. For example, a recent panel on "Teaching Encoding In and Out of the Classroom" from the 2023 annual TEI conference shared diverse strategies for teaching markup, while projects like the *Map of Early Modern London* have longstanding initiatives in which students encode texts for inclusion in published collections. As these examples and others have demonstrated, the TEI is almost infinitely flexible in its adaptability for different learning goals and contexts—applications range from exercises in which text encoding is used as a tool for intensive close reading to more extensive projects in which students contribute to long-term projects or build digital editions of their own. This paper will contribute to current discussions on the pedagogies of TEI markup and digital editing by making the case for an approach to classroom encoding that has two distinctive features: students make encoding decisions for the full scope of the editorial and publication processes, and they make those decisions both individually (for their own texts) and collectively (for their digital edition, either across a class or in groups).

While there are some challenges associated with this approach—in particular, the technical demands on students and instructors are significant—there are also significant learning benefits. In particular, when students are asked to make decisions about textual selection, transcription, regularization, annotation, and publication, they gain insight into the layers of mediation that go into all edited texts, becoming more informed readers of both digital and print editions. This paper will offer three case studies to highlight the ways that teaching strategies can

be adapted for different contexts while considering the diverse roles that digital editions can play in scholarly curricula.

The first case study is an assignment developed by the Women Writers Project and taught in several early literature classes at Northeastern University in Boston. In this project, students work both collectively and in groups to edit and publish short texts or selections from archival documents. This assignment is framed as an exercise in digital scholarly editing, with preparatory activities that ask students to compare the editorial apparatuses of several editions of Shakespeare's plays and to trace the interventions that occur between printed sources and modern editions.

Each student encodes their own text from a facsimile that they locate, and each student writes a final reflection on their encoding processes. As groups, students decide on the editorial practices they will adopt for their digital publications and articulate these in an editorial declaration. Through class discussions, students are encouraged to weigh a range of considerations as they prepare their texts, including regularization, representation of the appearance and condition of the source text, annotation, and markup of phenomena from named entities to linguistic and rhetorical features. Using a platform that the WWP has adapted to make publication as lightweight as possible, groups decide how the information modeled in their encoding should appear online, considering which representations will be most useful for their identified audiences.

This combination of group and individual activities gives students a framework for making informed decisions, as well as a much better sense of early print culture; for instance, features like catchwords that may seem idiosyncratic in an individual text become visibly part of an established set of practices when looking across multiple documents. Students are able to make more rigorous editorial decisions because discussion and consensus are required—the necessary negotiations between the group's encoding standards and the particularities of each individual document are a key part of the learning here.

This is an extended assignment, one that places substantial demands on the students and instructors, as students must learn not just editorial principles and the basics of early print culture but also TEI encoding and some essentials of web publication. This kind of project will simply be out of scope for many learning contexts, and so it is worth considering some lighter-weight approaches. The second case study shares a model piloted by the Women Writers Project with Professor Jessica Kane at Albion College as part of the WWP's Teaching Partners program. In this project, students also encode in TEI and make decisions about publication and display for their texts. However, the encoding itself is dramatically simplified and the decision-making processes are focused on group-developed interpretative annotations.

Another major distinction with this project relates to textual selection; rather than choosing their own documents, students work with sections of the same larger text. At the cost of giving students less control over the subjects of their encoding, the project provides students more direct comparisons between each of their selections, an approach that is especially helpful for peer mentoring. Furthermore, this project helps to address a potential limitation in the group anthology approach: when students create classroom editions, they are not also contributing to a larger digital publication. In the partnerships with Professor Kane, the students have produced their own digital editions—displayed according to the decisions that they made—but the WWP is also publishing versions of the same texts in the Women Writers Online collection. This allows the students to retain control of their class editions while contributing to an established digital collection.

The third case study offers the lowest barriers to technical entry by teaching digital editing and publication without the use of TEI. The *Cacodemon Shakespeare* project, led by Professor Erika Boeckler with support from Northeastern's Digital Integration Teaching Initiative, has student pairs edit individual pages from Shakespeare's plays using WordPress. Because WordPress has a gentler learning curve, students can develop digital editions that

showcase more experimental editorial strategies—for instance, students have constructed parallel text versions as a series of instant messages, produced illustrated editions, and engaged in creative deformations of the texts to draw out antiracist or feminist readings. This project also involves students in an ongoing publication endeavor, as each successive cohort adds their own pages to the digital edition. The students may not gain the in-depth knowledge on modeling texts that the TEI provides, but they still have the opportunity to make and implement decisions for a published digital edition.

As this paper will show, pedagogical approaches to digital editing that emphasize both individual choice and collective consensus—and that prioritize giving students a full toolkit for expressing those editorial decisions—may be intensive, but they also help students gain much more informed insights into the mediations of edited texts, essential knowledge for the complex and often-changing engagements with textuality that are so central to academic scholarship today.

Working alongside AI to produce a teaching edition of Chaucer's *Pardoner's Prologue and Tale*: A case study on the role of the editor and student alongside machine translation

Sophie Whittle (Digital Humanities Institute, University of Sheffield)

I. Introduction

One of the primary challenges of recreating Middle English texts for modern audiences is producing an edition that both appreciates the manuscript's culture and origin, and acts as a comprehensible, interactive, and engaging resource. Scholarly editions often involve a labour-intensive process of text creation that requires the editor to think critically at every stage. Yet, few editions have incorporated machines to assist in decision-making. Digital editions such as David Lawton's *The Norton Chaucer* (2019), that enhance the experience for students undertaking research into the Middle Ages, do exist. However, there is further knowledge to be gained about the methodological process of edition-making, involving the use of machine learning—both on the part of the editor and the student.

Since the launch of generative AI chatbots, wariness surrounding plagiarism has increased at universities, with concerns over research integrity and methodological rigour. Yet, the introduction of generative AI to the university has opened up further opportunities for students to critique the production of research. The process of building a teaching edition might simultaneously encourage students to be involved in the adaptation of medieval work for modern audiences, providing a new level on which students can deepen their knowledge of the area. Thus, the two main questions I investigate are: 1) could editorial methods be made quicker and more streamlined by utilising machine-assisted methods, without any loss of quality and authority? And 2) how might a digital edition utilise AI methods to assist the editor in analysing and interpreting medieval data, and produce an output that is suitable for undergraduate students?

In this talk I present results from *C21 Editions,* a project involving the creation of a digital teaching edition prototype of Geoffrey Chaucer's *Pardoner's Prologue and Tale* (PPT) from *The Canterbury Tales*. The project aims to enhance the practice of scholarly digital editing by integrating "curatorial and statistical" methods within Digital Humanities, which are often treated as disparate dimensions (Bode 2019). With insights from university teachers and students at the centre of the edition's production, this talk explores the production of one feature of the digital teaching edition – medieval translation – which utilises state-of-the-art technology alongside the human editor in its creation. By exploring the use of generative AI (e.g. ChatGPT,

Google Bard, Microsoft Bing) and its translation of PPT, I show that machine-assisted editions offer an opportunity for students to deepen their understanding of the language and context of the Middle English period. In addition, I demonstrate that this type of learning allows students to critically analyse AI outputs, mirroring the role of the editor in creating such resources.

II. Generative AI, the university, and ethics

Generative AI models have received a mixed response following their introduction to the public. Since the launch of ChatGPT in late 2022, there has been increased wariness surrounding plagiarism at UK universities, with concerns over research integrity and methodological rigour. However, more scholars are realising the potential to reverse such narratives by asking students to critique ChatGPT outputs. Wierdak and Sheridan (2023) label ChatGPT as "friend not foe"—students are still required to work alongside AI to "meticulously defin[e] their research question, craft precise prompts, critically assess generated content and integrat[e] it with their original thoughts". One student in a user focus group I conducted referred to the use of ChatGPT in the classroom as a type of "learning in reverse engineering"—a way to interrogate, 'mark', and find the faults in what AI creates, despite its current lack of training in their field of study. Thus, an exercise in assessing the machine translation of Chaucer's PPT – given the current lack of rigorous training of ChatGPT on the Middle English language – might instead be welcomed in a university classroom that requires students to produce translations and critical commentaries of specific language choices.

However, some of the ethical concerns surrounding the use of AI by students goes beyond uncertainty over whether students will plagiarise others' work. In an introduction to a new journal, 'Critical AI', Goodlad (2023) discusses the perceived 'intelligence' and ethics of AI. Goodlad recognises that, while there is a low likelihood of AI posing any immediate threats to human life and labour, the existence of automated systems already pose a threat to the wellbeing of individuals, workers, and the environment, via competition, boosterism, and the need for power and control over communities. It is not enough for students to critique the errors that AI makes, but to interrogate the biases and harmful content that AI scrapes from its training data (e.g. see studies by Gehman et al. 2020 and Lin et al. 2021 on the reproduction of toxicities and falsehoods by AI). Some of these racial, gender, and sexuality biases may seep through to our understanding of the medieval period, and it is crucial that students unpick the assumptions that AI may have scraped.

III. Details of methods

There are thus two necessary endeavours for the creation of digital teaching editions in the current age of technology. First, there should be an assessment of whether such technologies can produce a resource for students that is interactive, critical and engaging, while preserving the textual practices of the medieval past. Second, editors should explore whether students are able to continually interrogate and improve the process of creating editions, to make the practice of engaging with medieval texts and history sustainable. In this talk, I analyse the findings of one approach used to build the edition: the use of generative AI (ChatGPT) to produce an accessible and engaging modern English translation of *The Pardoner's Prologue and Tale*, by investigating the AI decision-making process and the level of editorial intervention required. This method of translation also involves the creation of activities with the aim of deepening students' knowledge of medieval English, and the current climate of machine-assisted technology.

Before building the edition, focus groups and interviews were conducted with 13 undergraduate and postgraduate students and six members of staff, at universities in the UK and US. The final features of the edition thus arise from potential users' feedback about what they would like to see in such a resource, either in the classroom or for their independent research.

As part of the process of translating PPT from medieval to modern English, 644 lines of verse were inputted into ChatGPT, folio-by-folio (diplomatic transcriptions of which arise from the Ellesmere Manuscript, as part of 'The Norman Blake Editions of The Canterbury Tales' project, University of Sheffield 2013) via two prompts: one requesting a translation from Middle English (ME) into a modern British English (ModE) translation, and the other requesting a translation with consideration of poetic rhyme and metre. Koehn and Knowles (2017) explored several challenges for neural machine translation (NMT). In particular, they noted the poor performance of NMTs when trained outside of the domain of the language of study (in this case, the source language of Middle English), especially when translating words of low frequency, which resulted from the small vocabularies on which the NMT was trained. The historical semantic and pragmatic changes over the course of the English language may therefore prevent NMTs from selecting the most appropriate word in the present-day, instead looking for literal and/or equivalent translations regardless of changes in meaning over time. NMTs also perform poorly when translating long sentences of 60 tokens or higher. While sentence length may not be an issue when examining Middle English verse, there remains the challenges that accompany verse – rhyme and metre – which cannot always be preserved in modern English translations due to the syntactic, phonological and prosodic changes that occurred over the history of English. Consequently, in this talk I investigate the choices that ChatGPT made when considering these different historical linguistic issues.

The second method shows how activities can be created to foster opportunities for discussion around the opacity of (machine) translation, so students can delve into the etymology of word choices, and critique often error-prone and biased AI outputs. A further issue arises with respect to the invisibility – and possible flexibility – of the translation process. There are many issues translators face when translating a piece, including the issue of non-equivalence—when there are no suitably equivalent words available for the target language. Venuti (2017: 1) refers to the "illusion of transparency" involved in the process of translation; scholars do not tend to exhibit the complex decision-making required, in their pursuit of an arbitrary level of fluency for the reader. Researchers such as Linn (2023) have "decided not to decide"—what is interesting about the medieval period is the possible flexibility that can be adopted when making a text accessible to modern readers, who can make multiple interpretations regarding the meaning of the text. Thus, how can editions possibly make an invisible process more transparent, alongside the use of AI? How might students contribute to the discussion of word and structural choices involved in translation, particularly from older to more recent languages?

IV. The current and next steps for C21 Editions

The two approaches to edition-making I present above are thus complementary. While the first method focuses on the role of the editor alongside AI in producing a readable, accessible translation for students, the second gives students the opportunity to critique and simultaneously feed back insight on the use of specific words and structures, making the process of translation more visible. Overall, both approaches contribute to our understanding of the usefulness of AI as a method to increase knowledge of medieval England, and preserve textual traditions of the past, while showing the level of editorial intervention required alongside AI. These methods also underscore the importance of students remaining critical of AI, its current and future directions, and the biases and falsehoods it produces.

This step in the *C21 Editions* project thus allows editors to understand how much labour machines can absorb in the labour-intensive process of building a teaching edition. There is also a balance to be had between preserving the original structure, verse, and word choices of the Middle English scribe, and the ability for modern readers – especially students – to parse the translation of the tale. On top of this, students can take part in a type of 'reverse engineering' in

the learning process, gaining a more in-depth understanding of the origins of medieval language, as well as the challenges in the current climate of AI.

The next steps for the current project – and for those looking to produce digital scholarly editions – are thus to empower students to feed into the sustainability of text. The next step should find ways of incorporating machine-assisted methods into the classroom beyond constructing prompts to be able to use generative AI in their spare time, but to consider the ethics of such technologies, what they would like to see from future editions (i.e. involving them in future user testing), and creating teaching editions with the potential to evolve, so students can continually contribute their insight.

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VI. Acknowledgements

C21 Editions is funded by UKRI-AHRC and Irish Research Council under the UK-Ireland Collaboration in the Digital Humanities Research Grants (grant numbers AH/W001489/1 & IRC/W001489/1).

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5.30 p.m. – 6.00 p.m. **Break**

6.00 p.m. – 7.00 p.m. **Keynote lecture**
The Council Room, North Wing

Digital scholarly editing with and without collaboration
Gabriel Egan (De Montfort University)

In order to create a complete-works scholarly edition of an author one must have an opinion on just which surviving writings were written by that author. The New Oxford Shakespeare complete-works project has concluded that only 27 surviving plays are by Shakespeare alone and that a further 16 plays contain Shakespeare's writing alongside that of one or more other writers. The project itself is a collaboration by a team of editors, each of whom edits one or more whole plays, whether it is by Shakespeare alone, or—as we think is the case with 'Sir Thomas More'—as many as eight writers. This talk will consider the implications for scholarly digital editing of collaboration as practised by the original authors and by the modern editors.

GABRIEL EGAN is one of the four General Editors of the 'New Oxford Shakespeare' complete-works edition, to be completed in 2025; the others are Gary Taylor, John Jowett, and Terri Bourus. He co-edits the scholarly journal 'Theatre Notebook'. He teaches students the arts of letter-press printing and computational analysis of texts. He advocates for Open Access, Open Source, and Open Data principles and the liberating consequences of everyone learning computer programming.

Chaired by Michael Pidd (University of Sheffield)

7.00 p.m. – 8.00 p.m. **Reception**

Staff Common Room, North Wing
https://maps.app.goo.gl/nx3gbJtFJsYRrLQZ8

Friday, June 7th

The Council Room, North Wing, University College Cork
https://maps.app.goo.gl/iUcxFDuMQPi1pyi17

10.00 a.m. – 12.00pm **Session 3**
Chaired by James O'Sullivan (University College Cork)

The quest for the "hundred year" Digital Scholarly Edition

Roberto Rosselli Del Turco (Università di Torino)

Introduction

In the vast field of Digital Humanities, digital scholarly editing has always played an important role. The first generation of Digital Scholarly Editions (DSEs) demonstrated the potential inherent in the "born digital" format—editions which are not merely conversions of traditional ones, but embracing what Patrick Sahle has called the "digital paradigm" (Sahle 2016). The shift from a physical distribution format (CD- or DVD-ROM) to direct publication on the WWW marked the second DSE generation, significantly enhancing their popularity and addressing many accessibility and longevity issues. Over the past few years, however, while digital editions published by scholars around the world have surged, concerns about their longevity and ways to ensure data preservation have resurfaced. It has already been pointed out in the past that many DSEs relate to manuscripts from medieval times, or even older, which despite possible adverse events have survived to the present day, while some of the digital versions reproducing them, however academically worthwhile, have lasted for only a few years.[1] This is an untenable paradox, especially if we want DSEs to have the same academic standing when compared to traditional editions.

The problem

Currently, not every edition project addresses issues of accessibility and long-term data preservation. Projects that do often have a limited temporal horizon, seldom exceeding ten years. The challenge lies in the rapid evolution of web development technologies, the increasing complexity of DSE features, a tendency towards developing sophisticated editions over using general-purpose software, and a lack of institutional support for DSE publishing and preservation.

1 To cite a case that is quite well-known among scholars of medieval English, the digital edition of the Exeter Book (B.J. Muir, B. J. (2006), *The electronic Exeter anthology of old English poetry: an edition of Exeter Dean and Chapter MS 3501.* Exeter: University of Exeter press) distributed on DVD impressed researchers favorably for many reasons (high-resolution images, effective navigation software, scholarly quality of the edition), but it could only be used for a few years because the software quickly became obsolete and unusable on more modern versions of Windows and MacOS.

Technical complexity at the platform level

Web standards are stable, but technologies revolving around the WWW infrastructure evolve rapidly: a framework for web application development, or even a new dedicated programming language, can be born, know their peak and then rapidly lose popularity in a matter of years. The risk of using innovative technology, or even tools based on languages that have subsequently fallen out of favor, is to see small or large compatibility problems appear as the Web renews itself and support for such technologies wanes.[2]

Technical complexity at the DSE level

DSEs often rely on a client-server architecture requiring constant maintenance, posing sustainability challenges. Moreover, currently digital scholarly editing methodologies are being developed in two different directions: the opening towards the WWW, thanks to LOD access and semantic web, and internal efficiency in the management of textual data, as shown by the latest developments of what has been called the "computational edition". These are all very promising developments, but the new technologies, be they knowledge graphs, ontologies or frameworks for the creation of LOD resources, come with a steep learning curve and technical complexity.

The haute couture *vs* prêt-à-porter *debate*

Elena Pierazzo (Pierazzo 2019) has distinguished between *haute couture* and *prêt-à-porter* editions, that is, digital edition projects that develop customized and often highly sophisticated software (*haute couture*) versus others that rely on general purpose tools, which can be adapted to a project's needs, but only within certain limits (*prêt-à-porter*). *Haute couture* editions may face compatibility and obsolescence problems compared to well-designed generalist tools, but of course we cannot derive an axiomatic conclusion from this.

Lack of institutional support

In many countries, the absence of guaranteed institutional hosting for DSEs remains a significant challenge. This lack of support has severe consequences on multiple levels.

In conclusion, there are several ways in which a DSE may fail to remain accessible and/or fully usable in the medium to long term: it could just vanish from the Internet, for instance in the case the original server has been relocated or removed with a loss of data; part of the functionality, especially if relying on complex software frameworks, might become obsolete or grow compatibility issues over time and stop working; the edition may be relying on external data, such as manuscript images or related texts, which are no longer available on the Web; other external resources, such as LOD or NLP processing tools, may suffer a similar fate.

2 "Even a relatively simple WordPress site requires a backend database (MySQL or whatever), a web server that supports PHP (whose versions age out and become unsupported at a steady rate, just like the db server), various plugins (because site-designers, who give little thought to long-term maintenance, will inevitably pick up and install lots of 'useful' third-party plugins which are typically unvetted, badly-supported and potentially dangerous), and lots of other JavaScript and PHP libraries and tools. Your site will have a different constellation of these dependencies and vulnerabilities than the next one; each project will require continual hands-on expert maintenance, with that burden growing rather than diminishing over time, until at some point it will be impractical to keep it going at all." (a comment by Martin Holmes on the *Humanist* mailing list, 18 September 2021).

The solution

To address these challenges, a balanced approach is necessary. First, we need to ask ourselves what are the research and technical issues to be solved in terms of both the time horizon and the type of technical approach to be taken.

We have suggested that a ten-year period for ensuring accessibility and operation of a DSE is too short to be considered satisfactory, but what timespan could be considered realistic and sufficient for our purposes? 20 years? 50? 100? In my opinion, a precise figure is not necessary; what is critical is to go beyond the near future, that is, the period when the hardware and software requirements for maintaining a DSE online are known.

One recently emerging concept is that of so-called "minimal computing", or the use of basic technologies in such a way as to ensure that a software tool will work even on older machines. Developed within Global Outlook::Digital Humanities (GO::DH), a Special Interest Group (SIG) of the Alliance of Digital Humanities Organizations (ADHO), with the goal of increasing the accessibility of digital humanities even in the face of resource scarcity, this principle can also be applied to the problem of DSE sustainability (see, for example, Holmes and Takeda 2023). A static Web site, based only on standard technologies (HTML, CSS, JavaScript), is eternal in theory, since the W3C consortium guarantees retro-compatibility for future versions of those technologies.

Unfortunately, as noted above, minimal computing seems at odds with the processing requirements and complexities entailed not only by third generation DSEs (which will support extensive LOD connections, ontologies, semantic editions etc.), but also some of the "regular" features of currents editions, e.g. a powerful text search engine or the login-based handling of multiple users. An initiative such as the Project Endings, therefore, is very much welcome to provide tools and guidelines "to create accessible, stable, long-lasting resources in the humanities".

Assuming that the need to develop innovative DSEs will always be present and a good reason to create *haute couture* editions, the need to reduce technical complexity to avoid future incompatibility or obsolescence problems should lead to a preference for the *prêt-à-porter* type. The latter, however, will have to evolve to become both more powerful and capable of handling basic features of digital editions and more flexible and customizable by the scholar.

Distinguishing between edition data and edition instance will also prove useful to ensure edition data preservation: the growing adoption of FAIR principles, coupled with the availability of long-term repository such as Zenodo, will make data safe more or less forever except for possible copyright problems, e.g. manuscript images not being licensed for wider distribution. Static sites are also more likely to function even if preserved in archived form and subsequently retrieved to publish them again on the WWW.

Finally, a stronger support by research institutions and universities is crucial to make all of this possible: not only the sustainable DSE publishing on the Web, but also the accessibility of Web resources (making PIDs really persistent is critical to avoid link rot) in the long run.

Conclusion

In this paper, I will try to answer these questions both from a theoretical point of view and by tapping into a long experience in the preparation of DSEs and in the development of a visualization tool for digital editions (Edition Visualization Technology, see Rosselli Del Turco 2019). Since EVT is based on the client-only architecture, its strengths and limitations are well known to the development team. Addressing the research question involves determining whether it is possible to produce a DSE visualization software tool that is quite powerful in terms of functionality, but at the same time has low maintenance requirements, ensuring compatibility with standards in the long run.

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Moving towards digital editions of medieval Irish narrative texts with *Acallam na Senórach* 'The Colloquy of the Ancients'

Nina Cnockaert-Guillou (Dublin Institute for Advanced Studies)

No digital editions of medieval Irish narrative texts exist yet. Though complex and usually written in a mixture of prose and poetry (prosimetrum), medieval Irish texts are arguably no less complicated than other medieval texts in English, Norse, French or other languages, which have been subjected to digital editorial work in recent years. This paper will use the example of the early thirteenth-century *Acallam na Senórach* 'The Colloquy of the Ancients', a lengthy frame narrative concerned with the legendary hero Finn mac Cumaill (Fionn mac Cumhaill), which is extant in five manuscripts dated to the fifteenth century and later. *AS* could in many ways be compared to the *Canterbury Tales*, which has prompted numerous discussions on editorial practices and whose manuscripts were transcribed and made available online ten years ago in *The Norman Blake Editions of the Canterbury Tales*.[1] By contrast, none of the versions of *AS* have been published *in extenso*, the relationships between the manuscripts remain unclear, and scholars are forced to rely on an outdated and unreliable 1901 edition and a separate, more recent translation which uses a different text than the published edition.[2] *AS* is therefore in desperate need of a modern, comprehensive edition—a digital one. Such work would obviously benefit scholars and students of medieval Irish studies, but also has the potential to make this important and complex narrative available to researchers further afield, as well as to the wider public.

Producing an edition of *AS* is the main objective of the new IRC-funded project "'The Disappearing Text": Memory, Place, and Gaelic Identities: The Case of *Acallam na Senórach* "The Dialogue of the Ancients"' (2023–7), led by Dr Kevin Murray in University College Cork. The project promises to engage with *AS* as a "'disappearing text", an ephemeron which when

subjected to closer editorial scrutiny may dissolve into several related, though individual, narratives', and to 'design bespoke software to deal with these [editorial] complexities'.[3] Such a project is timely and will certainly revolutionise our understanding of *AS*. Consequently, in this paper, I will consider the progress of Digital Humanities and digital editing in the field of medieval Irish studies. Using *Acallam na Senórach* as a case-study, I will then discuss some ways forward for digital scholarly editions of medieval Irish narratives.

Digital resources abound in the field of medieval Irish studies, and include the dictionary of the Irish language,[4] bibliographical databases,[5] a IIIF-enabled repository of Irish manuscripts,[6] databases of digitised versions of printed editions and translations,[7] and various other resources (linguistic, manuscript, text, place-name or bibliography-focussed). However, the rare digital editions of medieval Irish texts currently available focus mainly on glosses and fragmentary material,[8] and medieval Irish narrative texts have thus far not been subjected to digital editorial methods.

The issues surrounding digital tools and resources in our field were the main focus of the 2020–2021 network 'Developing a Digital Framework for the Medieval Gaelic World' (UKRI-AHRC and Irish Research Council). In our report, we noted that the workshops organised 'were praised by participants and attendees alike for creating the space to discuss important issues in the field of medieval Gaelic studies, and starting to propose ways of moving forward'; however, 'it was stressed that these conversations need to continue in order to affect real change and progress'.[9] Since then, a workshop on text markup was organised in September 2023 by the 'Mapping the Medieval Mind' project, which is working on TEI-XML tagging of a medieval Irish corpus of aetiological texts.[10] This latest event gathered many researchers who had also participated the 'Digital Framework' network, and all agreed that a consensus on digital textual markup and editing practices was a serious *desideratum* moving forward.

This paper is therefore a timely contribution towards establishing standard practices for the digital editing of medieval Irish narrative and prosimetric texts. The text used as a case-study, *Acallam na Senórach* (*AS*), is, as mentioned above, in dire need of a modern edition. Furthermore, *AS* contains the same textual difficulties as other medieval Irish narratives, such as its use of prosimetrum, a multitude of characters and places mentioned, intertextual references to other surviving texts as well as the use of pre-existing sources. Thus, *AS* is the perfect text for a digital edition, as tackling such difficulties in this lengthy and complex narrative would ensure that a general, widely applicable policy is created and can be reused for other editions of medieval Irish narratives. While the 'Disappearing Text' project in UCC promises to develop new software, I will focus on how one can use existing, established editorial practices in order to tackle the textual complexity of *AS*. Bearing in mind the concepts of sustainability and interoperability, I will focus on two key aspects in editing *AS*: the manuscript witnesses and layout of the edition, and textual markup.

It was recently observed that 'making available semi-diplomatic editions of the four primary manuscript witnesses [is] the most important first step before the creation of any multi-witness critical edition of *AS* might be attempted'.[11] Such work is comparable to the aforementioned *Norman Blake Editions of the Canterbury Tales*. All versions of *AS* break off unfinished, all manuscripts have lacunae at different stages of the narrative, and some versions place sections of the narrative in a different order. The question of the layout of such an edition of *AS* is therefore essential. The complexity and fluidity of *AS* as a text invites one to use digital editorial approaches, which in turn allow flexibility for the end-user. Though printed transcriptions in different volumes could be compared side by side, this would be costly for the users, and make the edition inaccessible to most students, early-career researchers and independent scholars. I therefore advocate for a digital edition of *AS* with a customisable user interface, allowing for comparisons of the different versions as needed and incorporating IIIF technology to permit comparison with the manuscripts. Linking this new edition to the paper edition and translation of the text will also ensure that these can be compared and that references

to *AS* in existing scholarship can be used with the digital edition. The availability of such an edition online will also benefit researchers in other fields, and may even be used by members of the public.

Producing a digital edition of *AS* would also enable us to deal with many of the complex elements of the text in ways not possible in print by using text markup and search-functions. I will focus on the tagging of personal and placenames with TEI-XML, using my work on the aforementioned 'Mapping the Medieval Mind Project', tagging names in *Dindshenchas Érenn* 'The History of the Notable Places of Ireland', a medieval Irish corpus related to *AS*. Applying this tagging to *AS* would enhance the searchability of the text significantly, and a consensus between both projects would also ensure a high degree of interoperability. By making the markup policies, code and data open-access and free to reuse, this work may then be used by linguists, historians and other researchers for further textual tagging, and ensure the work's longevity. The availability of transcriptions of each manuscript witness would also encourage scholars to use and compare the content of the different witnesses, and nuance their own arguments. This would in turn benefit research on the relationships between the different versions of *AS*.

Consequently, this paper supports the 'Disappearing Text' project in UCC in arguing that *Acallam na Senórach* is the perfect text for the first digital edition of a medieval Irish narrative. The advances in digital scholarship in medieval Irish studies in recent years show that it is now time to turn to complex narrative texts. Though new software may be used to this end, as promised by the 'Disappearing Text' project, I will argue that existing technologies such as TEI-XML may also be relied on for interoperability and sustainability purposes. Producing a digital edition of *AS* using both new and existing digital and editorial practices is an opportunity to make available one of the most important medieval Irish narratives extant and to set general standards of digital editing applicable to a wide range of other texts. This will pave the way for other digital editions of medieval Irish narratives.

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[8] E.g. *Corpus Palaeohibernicum* (Maynooth University), <https://chronhib.maynoothuniversity.ie/chronhibWebsite/home> (accessed 30/11/2023); Hofman, Rijcklof, Pádraic Moran and Bernhard Bauer, *St Gall Priscian Glosses*, version 2.1 (2023), <http://www.stgallpriscian.ie/resource> (accessed 30/11/2023); Bauer, Bernhard, *Early Medieval Glosses And The Question Of Their Genesis: A Case Study On The Vienna Bede* (2023), <https://gams.uni-graz.at/context:glossvibe> (accessed 30/11/2023). The *Early Irish Glossaries Database* makes transcriptions of entire glossary collections available: Russell, Paul, Sharon Arbuthnot and Pádraic Moran, *Early Irish Glossaries Database*, version 3.3 (2023), <https://www.asnc.cam.ac.uk/irishglossaries/> (accessed 30/11/2023).

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[10] This project is based at the University of Cambridge <https://www.leverhulme.ac.uk/research-project-grants/mapping-medieval-mind-ireland's-literary-landscapes-global-space/> (accessed 29/11/2023).
[11] Murray, Kevin, 'Editing *Acallam na Senórach*: a Test Case Based on the *Mucc Shlánga* Episode', in *The Gaelic Finn Tradition II*, ed. Sharon Arbuthnot, Síle Ní Mhurchú and Geraldine Parsons (Dublin, 2022), pp. 24–38 at p. 37.

Reimagining the Single-author Online Resource: Digital Voltaire and Questions of Content and Access

Gillian Pink & Nicholas Cronk (Voltaire Foundation, University of Oxford)

Following on the completion of the *Complete works of Voltaire / Œuvres complètes de Voltaire* (205 vols, Oxford, 1968–2022), the Voltaire Foundation is preparing to transform its monumental flagship printed resource into an online digital one. The ambition is to create the online resource as the definitive source of reference; and to imagine a new form of single-author online resource that will stand as a model of digital scholarly editing and publishing that other editors and teams will choose to emulate in future. The planning process so far has entailed many debates, choices and decisions, which coalesce around two particular areas, firstly regarding the content and shape of the resource, and secondly regarding the business model.

Content and Shape

The core content of *Digital Voltaire*, as based on the print volumes of the *Complete works*, in addition to being voluminous, is complex: each of the estimated 2000 texts by Voltaire (some newly discovered, some attributed) involves a scholarly introduction, with a list of manuscripts and editions from the author's lifetime; Voltaire's own text, which can involve (sometimes lengthy) footnotes and sidenotes; variant readings from the different manuscripts and contemporary editions; and editorial explanatory notes – as well as any relevant appendices. The connections between these elements are numerous and intricate, and it is important in developing the online interface to capture this interplay in a clear and intuitive manner. *Digital Voltaire* will also include correspondence and marginalia, without which one cannot properly understand how Voltaire worked and functioned as a writer. The marginalia run to 10 print volumes and are intricately typeset to show his handwritten jottings in the context of the printed text that inspired them. There are thousands of connections between the marginalia and the published works, and compared to a print edition, an online one ought to be able to allow users to navigate more effectively between the two using hyperlinks. Ideas about digital editing have been explored by others, e.g. Elena Pierazzo, *Digital Scholarly Editing* (2015); Boot, Fischer and Van Hulle (eds), *Advances in Digital Scholarly Editing* (2017); and Joana Caseneuve, *L'Édition critique numérique* (2023). We shall take these and other publications into account as we tackle the challenge of translating the Voltaire content as a whole into the digital medium.

In addition to our archival material, we are constructing a set of resources under the heading of the 'Voltaire Studio'. To date, this includes two databases: one, the 'Voltaire Library', brings together for the first time searchable records of every book and manuscript known to have been in the writer's own library, and also enables the user to navigate the contents of the composite volumes he created. Alongside (and linked to) the Library is the 'Catalogue of Manuscripts Relating to Voltaire', a digital union catalogue that pulls together international holdings of Voltaire manuscripts, collecting records of these manuscripts in the same place for the first time. The result is a fully searchable resource that will significantly impact Voltaire scholarship, generating new discoveries and fresh connections between sources.

It is projected that each constituent part of the Studio will link intelligently to the others, as well as, crucially, to *Digital Voltaire* itself following the launch of the latter. The Library in

particular will prove a useful way of giving readers immediate access to information about Voltaire's source material for his own writings, and will enable readers to navigate between a text by Voltaire, details about his sources, and in many hundreds of cases the marginalia he left in those very books (mentioned above). There are further plans to expand the Studio in other ways, including a biography, a timeline and an iconographical study.

The considerable single-author resource in question, then, will comprise several components: (1) the digitisation (digital reimagining) of an archival paper resource, conceived in such a way as to enable born-digital additions, revisions and updates as needed; (2) the Voltaire Studio, made up of new, born-digital material and research tools. We anticipate that the interconnections between the different parts of the resource will not only make for a stimulating, intuitive reading or working experience, but that they will generate new knowledge. We hope also to extend the community of users by harnessing the rapidly improving potential of machine translation, applying it at least to the editorial apparatus – there are currently no plans to apply this to Voltaire's own text, however.

The programme described above clearly involves considerable investment now and in the future, with plans to add to and refine the resource over the long term. For this reason, questions of sustainability and the business model are central.

Business Model

The Voltaire Foundation has early experience in the area of online scholarly digital publication, as the developer of *Electronic Enlightenment*, a project begun in 2000 and launched in 2009, which brings together a number of high-quality scholarly editions of 18th-century correspondences into a fully searchable database. *Electronic Enlightenment*, which subsequently moved to the Bodleian Libraries, adopted the subscriber model, and is sold and marketed by Oxford University Press, with variable subscription fees depending on the size of the subscribing institution (with individual subscriptions also available). This product has been modestly successful thus far, though inevitably there are institutions that have decided not to subscribe, with the result that some colleagues are unable to make use of the resource as they would wish. The Voltaire Foundation has also co-developed with ARTFL (University of Chicago) its own database *Tout Voltaire*: this makes freely available a fully searchable text of Voltaire's complete writings – and is very popular.

The advantages of Open Access (OA) are self-evident: Peter Baldwin has recently published a robust defence in his *Athena Unbound: Why and How Scholarly Knowledge Should Be Free for All* (2023). But OA can only be understood within a larger financial context. OA may be free to the user, but it is certainly not free to the producer/publisher. Funding bodies of digital resources often insist both on OA and on sustainability – without always fully acknowledging that the two pull in opposite directions. A research institution in a university might have just sufficient resources to create and sustain *Tout Voltaire*, and that is undoubtedly a useful service to provide. But a large and complex data resource will have significant development costs and will need to be not merely maintained, but also enriched, expanded and updated, if it is to satisfy the academic community that it serves. This requires resources. One possible solution would be a capital gift to ensure sustainability; in May 2023, the MIT Press received a $10 million endowment gift precisely to support OA books and journals in science and technology, social sciences, arts and humanities.

In the absence of such an endowment, the distribution of a resource through an academic press remains an obvious route. A press will have the capacity to sell to subscribers; it will also have a marketing department to promote the project. A point not to be forgotten concerns outreach and influence: while OA brings ease of access, it does not in itself create a user base for the digital resource: there still needs to be a sustained programme of 'marketing' and a communications strategy if a resource is to reach its intended users.

The model under consideration for *Digital Voltaire* is a hybrid one that seeks to strike a balance between the benefits of OA and the sustainability of the subscription model. Our proposal is to make some content freely available online, while placing other, more specialised material behind a paywall. Access to the full content of the Voltaire critical edition, that is, the text and its full apparatus of variants, notes, introductions and so forth, will be available only to paying subscribers.

In OA there would be: (1) the full and definitive text of Voltaire, but a plain text, shorn of its scholarly apparatus; and (2) the whole of the Voltaire Studio, as described above. For the benefit of digital humanities researchers, we would also by agreement make available all the raw data.

This is obviously a compromise designed to achieve the best of both worlds; in practice, we might want to be flexible about how much of the content should be behind the paywall. It could be, for example, that particular parts of the edition could be taken outside the paywall occasionally on a discretionary basis. There is also the possibility of making the full resource freely available in certain parts of the world, Francophone Africa for example, where university libraries do not have the financial resources to subscribe.

The ambition is for *Digital Voltaire* to be innovative, both in its structure and its business model. It will necessarily be a flexible and evolving resource that can respond to changing publishing and scholarly environments. Above all, it will be a resource that (1) can bring existing research together, (2) can generate new research, and (3), in a virtuous circle, can publish and incorporate the new research that it engenders.

Developing a coherent resource for Chaucer Studies in the Digital Age: The Use of AI, Domain Experts and Digital Scholarly Editions in Higher Education

Bridgette Wessels (University of Glasgow)

AI is increasingly part of the Higher Education (HE) environment, but little is known about how it may or may not be used in learning and teaching. Students, as independent learners, engage with a range of sources, data, digital tools and platforms in developing their knowledge. These resources are designed and developed specifically for HE, for example, *The Canterbury Tales* project, as well as MOOCS. AI, however, has not been developed specifically for learning at HE level. The issue is whether AI can support learning, and given any benefits and limitations, whether it can be developed for HE. To address this issue, this paper discusses the use of Generative AI (ChatGPT), neural language processing (Amazon Polly), and Digital Scholarly Editions (DSEs) in Chaucer studies. The discussion is based on the 'C21 Editions' project, which undertook qualitative co-creative research with US and UK students, lecturers, domain experts and developers, using a social theory of learning, see: https://www.c21editions.org/ .

Context

The use of digital technologies in Higher Education Institutions (HEI) is well established (Avram and Hysa, 2022). Universities were part of the early development of the Internet and the WWW, embedding Tim Berner-Lee's WWW into digital communities of various sorts. The research communities within universities have always been innovative in this space. This has been seen across many fields and disciplines in the sciences, social sciences and humanities. One field amongst these is Digital Humanities. In the UK, this field was developed by researchers at the University of Sheffield, Kings College London and the University of Glasgow 30 years ago (Pidd, 2023). The field has developed in terms of research but also in terms of developing learner-centred digital tools. These go beyond the development of MOOCS to various research-

informed learning and teaching platforms, such as the *Beyond the Multiplex* open access site that includes open access data, open tools and discussions of findings (https://www.beyondthemultiplex.org/). This site is being used by teachers and students in developing knowledge (for other examples, see https://www.sheffield.ac.uk/dhi).

In terms of digital development, HEIs are now turning their attention to the use of AI in learning and teaching. There is, however, little known about how to use the various types of AI in learning and teaching and there is little empirical research in the area. The main concern to date has been in monitoring how students use it, in particular Generative AI. Although there is recognition that AI, including Generative AI, may have benefits, the concern is whether or not the use of technology constitutes a form of 'cheating'. This not only undermines the integrity of university standards and qualifications, but it also affects the development of students as critical, active and independent learners (Zhou and Schofield, 2024). Although there are concerns, Zhou and Schofield (2024) argue that there is a role for AI, including generative AI, as a stakeholder in learning. Their opinion piece argues for a social constructivist and social learning approach to AI that can help identify how AI can be used to facilitate and enhance the learning process.

There is, however, little empirical knowledge about how AI can be used in HE. This paper draws on empirical research in the *C21 Editions project (https://www.c21editions.org/)* funded by the AHRC. The project took a collaborative approach to developing new resources for Chaucer studies. It involved interviews and focus groups with students and teachers in UK and US universities, and a reflective and reflexive development process. The interviews and focus groups explored the ways in which students use teaching resources, and how teachers support their students and develop resources. The assessment of these was done in relation to what students wanted to achieve in their studies and teachers' expectations of learning outcomes.

The development of digital tools for learning and teaching in HEIs is based on supporting key aspects of Higher Education (HE). This means that the design and use of digital tools in HEIs is informed by the need to support active and independent learning. One key aspect of this is that any technology needs to support teaching in ways to foster critical engagement by students in developing their knowledge. This is achieved through two key aspects of learning and teaching in HE, these are research-based teaching and fostering confidence in students to develop their own arguments that are well founded on data, methodology and theory.

Conceptualising teaching and learning in the digital age: communities of learning

The overall approach in learning and teaching in HE is shaped by changing ideas about pedagogy. The term has a long history, starting from early Greek ideas about guiding and educating young people, which was developed over the centuries by Western countries (Shah and Campus, 2021). These early ideas are based on a central tenet that young people were taught, they to a degree are 'empty vessels' into which knowledge was poured. There was a change to this idea during the mid-20th Century where the idea of active learning came to the fore. This argues that learners also bring their experience to learning (Shah and Campus, 2021). This change in emphasis argues that learning is an active process that extends understanding about learning beyond cognitive assimilation to where learning is seen as a social process (Trowler, 2013). This recognises that the learning environment, its social, spatial and relational aspects, feature in the ways students learn. The focus on environment also includes the use of tools, resources (text, data, images, objects) and technologies in learning and teaching. In many ways this change of understanding focuses attention on the ways in which students engage with each other, with teachers and with a wide range of resources.

The above recognition of the social process of learning is brought to the fore with the development of the Internet, WWW and subsequent digital communications innovations such as social media. The digital environment offers the potential of engaging in various social domains

in highly networked and participative ways. The developments within digital socio-technical services fosters an interactive engagement in communication, with data and information, in self-publishing and in producing user-generated context. This not only changed people's relationship with data and in how they communicate; it also changes how people think about knowledge, contribute to knowledge and share knowledge. This results in what some call 'prosumerism', where people both produced and consumed knowledge (Wessels, 2014).

The above trend extends into HEI with universities developing interactive digital resources and new types of pedagogical approaches. These include the development of digital platforms in the humanities, online resources and open data where researchers and students add knowledge to the resource. The *George Thomason Newsbooks* project, for example, enables researchers and students to add knowledge to the resource (https://www.dhi.ac.uk/projects/newsbooks-project/). There has also been an extension of citizen science into HEI, with for example, the *Mark My Bird* project that produces groundbreaking knowledge to the study of birds (https://www.dhi.ac.uk/projects/mark-my-bird/). These types of projects are part of the development of new types of teaching and learning practices. They, and other projects, move the focus away from teacher-driven approaches to those that are student-centred. This move—shaped by both technological developments and in changing ideas about pedagogy—are the predecessors of any AI related innovations.

Developments such as the above are part of a shift that is based on a social learning and constructivist approach to learning and teaching. This posits that learning is an active process in which learners construct their understanding of the world based on their experiences and interactions with the environment (Mascolo et al., 1998; Adams, 2006; Rasul et al., 2023). As Zhou and Schofield (2024) argue, this is based on ideas that learners are not mere receivers of knowledge from their teachers but rather actively construct their understanding through interactions and experiences and interpretation is aided by prior beliefs and knowledge (Adams, 2006; Walker and Shore, 2015; Saleem et al., 2021). This trend and shift change the meaning of pedagogy to one that is more student-centred and sees learning as an active process.

Connections and connecting in teaching and learning in the digital age

In terms of understanding learning and teaching, the above discussion outlines a move away from cognitive approaches to learning towards a social theory of learning. In overarching terms, the social theory of learning argues that learning does not happen in a vacuum and is not solely cognitive. This theory emphasises that the social and cultural contexts of learning are important in the ways in which people learn. It also brings to the fore that people bring their own experiences and knowledge into the learning process and learn from each other in the process of learning (Trowler, 2013). This change of focus is the pedagogical base for developments in digitally supported learning.

The combination of the huge growth of information on the WWW, open data, and the development of research-based digital online resources creates an information and data rich environment (Goldie, 2016). This trend raises issues for teachers in that the more traditional practices of information retrieval and the sole use of peer-reviewed articles and books are no longer the only way in which students learn. Although, these aspects of learning are still relevant, students now also have many online resources to draw on, some from within the HEI environment, some from official datasets and some from public social media. This, for teachers, means changing teaching practices and adapting pedagogical frameworks for this environment. This requires not only new resources but also how to develop new skills in students. Students need to know how to access—and assess—what is relevant information and data and critically assess any resources they draw. They also need to be able to interpret these resources, including those based on the views and opinions of others. This means developing decision-making skills

as well as being digital and data literate. There is an added skill in the context of HE, which is that students also need to have academic literacies (Lea and Street, 2006). Students also need to be able to learn how to network in virtual environments and link online learning with offline learning (Rainie and Wellman, 2011). These types of abilities and skills are an important in an overall skill set in many different types of learning contexts of HE.

One of the main challenges of the social theory of learning is that it needs to address learning in a highly networked learning and teaching environment and one that is characterised by a distributed knowledgebase. To address this, the connectivism theory and constructivist approach develops the social learning theory. Connectivism (aligned with constructivism) is based on a central premise that learning is a networked process that is influenced by technology and socialisation (Goldie, 2016). It is based on an epistemological reference point of distributive knowledge (Downes, 2006). Distributive knowledge is distinctive from other approaches such as objectivism, pragmatism and interpretivism (Siemens, 2005, 2006). In relation to these, connectivism is nested in the idea that learning and knowledge rests in diversity of opinion and that learning is a process of connecting specialised nodes of knowledge sources. Connectivism extends learning into non-human appliances and brings digital technologies into the learning process. One of main principles of this approach is that the capacity to know is more important that what is currently known (Siemens, 2005).

There are specific aspects of the practices of learning within connectivism approaches. These include nurturing and maintaining connections to facilitate continual learning. Students need to have the ability to see connections between fields, ideas and concepts. In engaging with these connections, decision-making is part of the learning process. These feed into the aim of connectivism learning, which is that students develop accurate and up-to-date knowledge.

The starting point of learning based on connectivism is triggered by the ways in which students connect to and participate in a learning community. Participation is realised through various types of conversations between students and other members of a learning community, including those who are seen to be more knowledgeable and/or have specialised knowledge. These conversations vary in form, ranging across the use of video and images as well as text in digital environments. Conversations are conducted through online platforms, Teams and Zoom meetings, social media as well as the more traditional spaces of seminars and lecture halls. These not only provide networked and collective learning, but they also provide personal learning environments that draw on distributed knowledge.

Student, teachers and digital humanities developers' experiences

The students, both in the UK and US, find that starting to engage with Chaucer is daunting. Their key concerns are being able to understand Middle English, to engage with characterisation and the storylines of the medieval period, to understand the issues of that period, and to assess Chaucer's relevance to contemporary society. Teachers confirm that these are the main concerns of students and to address these concerns they seek to ensure students have access to introductory texts, oral resources and in seminars encouraged students to learn to speak in Middle English. These approaches continue and are appreciated by students.

Students have, however, started to use Generative AI to support their studies. They find that using ChatGPT is helpful in starting to understand Chaucer and his works. They argue that it provides a basic and relative clear summary of his works and introduces some of the key debates in Chaucer Studies. However, both students and teachers recognise the limits of ChatGPT. These include that the information it produces is basic and does not provide in-depth analysis of texts – and - of the debates in Chaucer Studies. Another key concern that is raised is that the data that ChatGPT draws does not pull down the latest data and literature. This also limits learning because it means that students are not up to date with current knowledge.

Chaucer's works are part of an oral tradition of literature. This means that the spoken word and expression of Chaucer's text requires command not only of the texts but also of spoken Middle English. Students are taught by teachers to speak this language, but many find it hard. Teachers also find it hard to support students to learn spoken Middle English. They note the time limitations of learning and practising spoken Middle English just in seminars and would welcome more resources that students can draw on to hear and practise Middle English. Although there are some resources, teachers argue more are required, something echoed by the students. Given this finding, the C21 development team explored the use AI, namely Amazon Polly to translate Chaucer text into the spoken word. This however was not successful; Amazon Polly could not translate Middle English in any meaningful way and what it produced was not usable because it did not make sense. The technological aspect could not meet the requirement largely because there is not a large enough language data set for the AI supported neural language processing it draw on. Given this, the C21 project team works with a domain expert in Chaucer Studies and leading expert in spoken Middle English to produce bespoke audio outputs. The expert produces a recording of the one of Chaucer's tales, The Pardoner's Tale, as part of an overall resource. The knowledge and quality of the spoken text has been very received by teachers and students.

There is however another issue that both teachers and students raise. This is concerned with having both an authoritative knowledgebase to draw on as well as networked and distributive knowledge. The two above resources, Chat GPT and the Domain Expert recording are welcome additions to the more established learning and teaching that draws on lectures, seminars and existing texts, data and digital resources. Although these together provide a rounded and participative learning experience, they raise issues in relation to the assessing and validating knowledge. Certainly, the social process of learning is recognised and appreciated, however the connectivism and participative aspects of this raise questions about the quality of student learning, and how teaching can ensure that knowledge is valid and authoritative. This is important in ensuring that students have academic literacies and that teachers can assess student work against a definitive yet changing knowledge base. This concern brings to the fore the value of Digital Scholarly Editions.

There is little knowledge about how best to develop Digital Scholarly Editions for connective and participative learning and teaching environments in HE. However, drawing on the existence of the Chaucer Studies and Digital Humanities learning community, a Digital Scholarly Edition is under design (hereafter Edition). The Edition is digital, so it is networked, participative and provides a distributive knowledge base. The Edition provides a domain expert introduction that draws on the most up to date research as well as tracing the history of Chaucer Studies. It provides background information about terms, history and developments in Chaucer Studies. It uses Chaucer text in digital format, which combine with expert commentaries and allows for student and teacher to contribute their comments to the Edition. The Edition also links to existing digital and data resources, thus giving access to knowledge that is distributed across different sources. The participative and networked aspect of the Edition means it can be kept up to date, gives students and teachers access to current as well a new knowledge and can be combined with a range of teaching and learning methods. This example illustrates that Digital Scholarly Editions play a vital role in teaching and learning in a digital, including AI, environment. It adds an authoritative base to the social process of learning, which is increasingly characterised through the development of meaningful connections, active and critical learning, and distributive learning.

In summary, the project found that: (1) ChatGPT is useful but limited to early and basic familiarisation of Chaucer's text; (2) domain expert Middle English recordings are needed as Amazon Polly cannot reproduce the Middle English oral tradition with any quality; and (3) Digital Scholarly Editions provide authoritative access to data, scholarship, and support interpreting text, Middle English pronunciation, and the themes of Chaucer. In terms of

developing resources for Chaucer for connectivism inspired pedagogy in digitally supported learning requires knowledge about student and teacher experience, it requires domain experts who play important roles in areas where the technology is not able to support teaching, and it needs a development team that understand how a range of digital technologies are best used in the Humanities, namely experts in digital humanities. Other key aspects include having open data sets and tools and an inclusive and supportive environment to support teaching and learning. These combine to produce learning communities in the digital age.

Conclusion

The paper argues that AI can only support learning if it is part of a coherent framework of (1) AI based tools that can support basic knowledge about a subject area, (2) domain experts who bring bespoke and in-depth knowledge to learning and teaching and (3) that it supported by Digital Scholarly Edition. These need to be embedded within inclusive and engaging learning communities. To develop this framework requires learner-centred pedagogical agency, which is a relational and co-creative agency developed within inclusive socio-technological learning environments. To develop support for such learning requires an underpinning infrastructure that is socio-technological - networked to support teaching and learning - and one that is distributive, which requires large data and linked data sets and open-access tools for students and teachers to add to the data sources. Furthermore, the development of learning communities that can develop and support requires the integration of well-established community of domain experts and digital humanities experts.

The above with the development of a coherent framework of resources, AI, domain experts learning resources, and digital scholarly editions generate a new teaching and learning environment. These environments are brought alive through the cultural and social agency of learning and teaching. This agency is generated though the relations between students, teachers, domain experts, researchers and digital humanities developers in producing knowledge using the resources of HE, including AI where appropriate. The benefit of this environment is that it has the potential to foster active learning and critical skills in students. However, the most innovative and important aspect of these types of developments is that they can support the development of knowledge in the ways in which students and teachers learn and undertake research. This is particularly relevant to studies such as Chaucer scholarship because it can support learning, teaching and research in the ongoing interpretation of Chaucer and its relevance to contemporary readers and wider culture and society.

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12.00 p.m. – 1.30 p.m.	**Lunch**

1.30 p.m. – 3.00 p.m. **Session 4, The Council Room**
Chaired by Órla Murphy (University College Cork)

In Which the Author Discusses the Digital Documentary Editions Mission of the Primary Source Cooperative, with a Screed on the Economics of Academic Publishing

Ondine Le Blanc (Massachusetts Historical Society)

If scholarly publishing isn't already broken, it is riddled with fissures. While the limited revenue generation of old-school university press publishing saw the diminution of that system at the turn of the 21st century, major commercial presses began sweeping in huge profits from journal publishing, particularly taking advantage of the professional generosity and career stress of scholars who must publish to gain job security. As recently documented in "The Oligopoly's Shift to Open Access" (Butler, Haustein, et al., Quantitative Science Studies 2023), and summarized by Manuel Ansede ("Scientists Paid Large Publishers over $1 Billion," El-Pais, 21 November 2023), these scientific journal publishers recognized not only the revenue opportunity in charging page fees, but also that publishing more articles would generate more revenue. This abuses the early ideals of Open Access and the thin wallets of early-career scholars; it also appears hazardous to the quality of the scholarship published.

The latter worries me as an editor who does actual editing and as the editor in chief of the oldest historical society in the United States, the Massachusetts Historical Society (MHS). The MHS is a collecting institution that has combined the roles of archival repository and documentary edition publisher since the 1790s, envisioning transcription, annotation, and printing of the text in its holdings as essential to preserving that historical record and making it accessible. So while I have worried about how the reduction of editorial staff and process at many publishing entities may be harming the quality of academic articles and monographs, my primary focus is the well-being of documentary editions. And I am fortunate to be at an organization that prioritizes the quality of what it makes accessible, including care and craft in its publishing endeavors.

The Society's list of print publication expanded some 20 years ago to include digital editions alongside its print edition legacy. The digital projects—some legacy conversions, others born digital—are shared with a broad audience via its website, www.masshist.org. In 2018, the MHS began working with four partner editions and the Digital Scholarship Group (DSG) at Northeastern University in Boston, Mass., on the Primary Source Cooperative (the Coop), part of a digital edition publishing initiative funded by the Andrew W. Mellon Foundation and the National Historical Publications and Records Commission (NHPRC): https://www.archives.gov/nhprc/announcement/depc. The first year of this funding supported a year of planning work for eight projects. A second round of funding, this one for multiple years of implementation, winnowed the cohort to three cooperatives: the MHS-DSG Primary Source Cooperative, the University of Virginia Digital Publishing Cooperative (UVA), and LEAF at Bucknell University.

This talk will focus on one aspect of the Coop's goals and systems: sustainability. That is, how can such an effort be financially maintained once the grant funding has run out? Is it the same issue encapsulated above: if this kind of publishing cannot support itself on its "commodity" value, is it doomed to be jettisoned by parent institutions that won't support it any longer? When that threat becomes real, as it did for many university presses, is the only rescue plan to become a cash cow for publishing behemoths? My fervent wish, conversely, is that modeling the potential for "mutual aid society" self-publishing can offer not just one alternative

but an ecosystem where variant developments can thrive because they adapt to the environment and satisfy a diversity of needs.

In the mid-twentieth century in the US, documentary and scholarly textual editions began depending on grant funding from two federal agencies, the National Endowment for the Humanities (NEH) and the NHPRC. Larger editorial teams in particular were able to establish offices at academic institutions and pursue major projects, often dedicated to political figures such as George Washington and John Adams and to major literary figures such as Ralph Waldo Emerson. The model started to shift in recent decades, in part with the emerging expectation that any edition supported by federal funds would produce a digital edition—and that it would be freely accessible. As that expectation intersected with the academy's reluctance to value editing in tenure and promotion reviews, it discouraged scholars who found themselves with an inchoate desire to make a beloved archival collection more accessible through transcription and annotation.

Responding to the 2017 Mellon-NHPRC call for applications, the MHS sketched out the Primary Source Cooperative, a system that would be of direct service to editors who lacked the on-team expertise and/or institutional resources to meet the digital edition mandate, providing them a low-threshold digital publication environment and an environment of mutual support. Both provisions were essential to our desire to maintain editorial agency in the semantic markup of documents, on the principle that editors must have a defining role in preparing electronic text.

Among the other tenets we committed to were:

i. an XML-based workflow, making use of the editorial richness captured when subject-matter experts take responsibility for their own text encoding;
ii. the potential benefit of beginning small and pursuing modest growth;
iii. being unapologetically human oriented, editor driven, and collaborative;
iv. and providing a take-away model of the publishing platform that is not expensive to implement and is easily adaptable to different circumstances.

With its implementation, the Coop can demonstrate the functionality and value of a system that foregrounds robust communication and support among the editors and the host institution, achieved in part by maintaining a modest size. We can demonstrate the success of a cooperative that depends largely on the content expertise of people who are new to digital publishing, with the respectful guidance of affiliated organizations. With the Coop, the collaboration between the MHS and the DSG at Northeastern University assigns different roles to each organization. The MHS hosts the publishing system and the Coop website for the documentary editions as such, working with the editorial teams on the collaborative aspects of shared editorial standards and processes. The DSG harvests the XML of the content to create data derivatives in the form of visualizations that end users will be able access and query at their Lab Space. Any future adopters of the Coop model may select which portions they want, taking on only so much as they wish to support.

The real key to the sustainability of documentary editing in the US is not the model that our one project has devised. It is, rather, stewardship for a landscape with a rich diversity of overlapping systems, each with its own topical parameters, administrative arrangements, tools and infrastructure, and financial models, and of all sizes. This was also built into the Mellon-NHPRC initiative, which encouraged working toward a federated network of cooperatives. The questions remaining for the federation work are plenty—and also very enticing. What are the values and standards that cooperatives would be likely to share? How can we work together to explore sustainability solutions? I am particularly interested in how editions with different resources and goals would be directed among cooperatives to find the most suitable home, much as archival repositories communicate to direct collections to their best match.

Even in the current network of three cooperatives—MHS-DSG, UVA, and Bucknell—we have substantial variation. While all three share a commitment to working with documentary editors, the two based at larger academic entities bring considerable capacity in digital technology and digital humanities research. As an archival institution with a very lean technical team, but a strong background in documentary editing, the MHS has sought to design a publishing system that could be transferable to similar institutions, seeking thus to propagate variations on the small-is-beautiful approach. Such organizations are also apt to be places where scholars find themselves with an edition idea but no clear path to creating it. By building bridges among cooperatives that vary in scale, emphasis, and editorial tools, this initial association could provide a constructive example of the accessible and resilient ecosystem that we think the Mellon-NHPRC initiative sought.

In its grant application, the Coop asserted it could "provide persistent, long-term technical, financial, and institutional sustainability for its current and future members." Fulfilling this assertion may depend, for us, on staying modest. But is expecting, or even allowing, cooperatives to remain small antithetical to the NHPRC-Mellon initiative, if that initiative seeks to create much greater opportunities for editions to publish their content in a broadly accessible digital format? Are Big cooperatives necessary to create more opportunity?

I'd say no. Creating models and motivation for the propagation of many small cooperatives can create as much capacity for publication as one or several large ventures while at the same time allowing for much greater variation in the kinds of editions "accepted" for membership, the formats that can be processed for publication, and the delivery style of the outcome. Indeed, the propagation approach envisions the possibility of a new cooperative emerging each time a cohort of editions not accommodated in the existing environment creates its own niche.

I realize there is a risk that these cooperatives could end up acting simply as publishing companies and cease to act as cooperatives. Member editions could lose the vital engagement with one another's personnel, content, process, and values, and the processing and publication of content could instead be wholly located in a professional editorial and production center. If that center becomes the authoritative gateway for vetting new projects, setting the editorial and production limits on all content, is it just another publishing company? Indeed, this is a risk even for the MHS: it may be all too easy to find ourselves treating each edition as a product under the aegis of our centuries-old publishing mission, despite our diminutive capacity.

With this potential in mind, I'm willing to argue it is logical—and important—for our cooperative to remain small, even as adding new member editions is key to its mission and its continuation. It does not necessarily benefit scholarly publishing to follow an economic model that rewards efficiencies of scale based on high-capacity fabrication of nearly identical widgets. It is not unreasonable to consider the host institution/s a source of support when the cooperative (1) is maintained at a scale that keeps its costs within a small percentage of an institution's overall costs; and (2) produces work that enhances the overall mission of the host and complements the other work the institution does.

A Demonstration of the University of Virginia Digital Publishing Cooperative Publication Platform for Digital Editions

Erica Cavanaugh (University of Virginia)

While the number of tools and platforms developed by and for digital humanists has grown exponentially in the past few years, there is still no approachable, flexible, powerful platform that supports all stages of digital editorial work: 1) cataloging content (i.e. document catalog, repository information, etc.); 2) editing content (i.e. transcribing correspondence, diary entries,

legal records, etc.); 3) capturing information about that content (i.e. metadata); 4) providing context about the content (i.e. annotation, indexes, data visualizations, metadata, etc.); 5) managing content (i.e. tracking workflow steps and versions of content); 6) and publishing content as needed (i.e. publishing in bulk, in various stages of workflow, etc.). Furthermore, finite resources, including the availability and affordability of technical expertise, and the lack of stand-alone platform solutions and digital publication options, limit what editors can produce with these existing tools.[1]

In 2017, the National Historical Publications and Records Commission (NHPRC) and the Andrew W. Mellon Foundation invited proposals for Digital Edition Publishing Cooperatives. The purpose of this grant was to task collaborative groups to

> … develop technical and human infrastructures to support the digital publication of documentary and scholarly editions and to provide for their long-term preservation, discovery, and use. This initiative responds to the urgent need of scholars and documentary editors for reliable, sustainable, authoritative, and field-driven outlets for publication and discovery of digital editions. At the same time, we hope to investigate the possibility of creating a federated system or systems for publishing and sustaining digital editions.[2]

The University of Virginia Digital Publishing Cooperative (UVA-DPC) responded to this call and received funding to build the necessary infrastructure to facilitate and support the conceptualization, development, publication, discovery, and preservation of digital editions and projects within a single, comprehensive, flexible system. The foundation of this work comes from years of developing several all-inclusive editorial systems at the University of Virginia's Center for Digital Editing for partner projects. These systems served as models for a platform that supported all stages of editorial and publication work, allowing the editor to work within one environment and produce one or more digital publication outputs, all using Drupal.

Why Drupal?

An open-source content management system, Drupal allows users to build highly customized sites to capture the type of complex data that is often seen in digital humanities projects. Drupal is flexible, has a large user community, and "allows scholars with a much lower level of comfort with technology to build much more complex projects".[3] However, while it is a powerful tool, creating a Drupal-based site on your own can be daunting. Its customizability is both its strength and weakness, forcing users to traverse a notoriously steep and rocky learning curve to develop their site while also taking on the task of data modeling, one of the most important aspects of developing any site using Drupal.[4] But what if users were able to bypass the rocky slope and the majority of data modeling altogether?

The UVA-DPC Drupal module

The UVA-DPC has been working to develop a Drupal-based module that would remove these hurdles for future editorial projects. While heavily influenced by the work at the Center for Digital Editing on projects like the George Washington Financial Papers Project, and the Papers of Martin Van Buren, the UVA-DPC technical team collaborated with editors and editorial projects that are thematically, chronologically, and methodologically diverse. These collaborations provided a deeper understanding of how documents are structured and formatted, how they relate to one another, and how best to craft annotations and indexes that allow for intellectual accessibility. As a result, this platform supports the major workflow components of creating digital publication outputs—content management, editorial process, content markup

and visualization, and user interface development—while adding a layer of standardization including name authority files, metadata standards, shared vocabularies, and data models. Drupal-based digital editions that previously required months just to create the underlying infrastructure can now be created in only a few minutes using this module's prebuilt templates for capturing various document elements. This isn't to say data modeling should be ignored, but instead that editors won't be starting with a blank slate, scratching their heads and wondering where to start. Projects will be able to make use of a series of standardized fields and layouts to capture information. If they then determine that additional fields are necessary, projects will be able to add them. Though this customization would still require some data modeling and the tackling of Drupal's notorious learning curve, the module that we have created will help to make the customization of a Drupal project less like a treacherous mountain, and more like a large hill.

The UVA-DPC module is built on top of a collection of Drupal modules that we have specially configured for use by editors. During development, the UVA-DPC tech team placed a strong emphasis on using well-supported and established modules to create the desired functionalities needed for the primary goals of digital editions. There has been a strong focus on limiting the amount of custom coding and avoiding features that have little support within the Drupal community. By following a "less is more" philosophy, the sustainability of the module—as well as any sites that would use it—markedly increases. Furthermore, the use of a shared data model and consistent infrastructure across multiple sites will significantly aid in the process of updating/upgrading as new versions of Drupal are released.

During this conference presentation I will demonstrate the capabilities of the UVA-DPC module. This demonstration will particularly focus on showing the process of installing the module, as this step is when the module adds a series of content types (templates for collecting data) and all their associated fields.

As I will explain during the presentation, the fields related to the document/object content type are extensive, covering the various phases of workflow: cataloging, organization, selection, transcription, annotation, publication, and any steps in between. To encourage standards used within the scholarly editing community, the fields created can be mapped directly to specific elements in TEI XML. Other built-in content types capture information about people, organizations, places, and transactions contain fields that encourage the use of authority records such as: the Virtual International Authority File (VIAF), Wikidata, and Enslaved: Peoples of the Historical Slave Trade.[5] These options serve as possible starting points for editors, but as we know there are a number of authority records available for use, the platform also allows editors to add additional authority records as necessary.

The demonstration will also focus on the editorial interface. Document transcription and the representation of the text as it appears in the manuscript are important features for many editions. The editorial interface allows editors to transcribe each document directly into the system. The transcription fields use a standard WYSIWYG editor with markup buttons that most editors are accustomed to seeing—bold, italics, strikethrough, etc. The options have been expanded to allow for a series of custom styles, including marking paragraph indents, small caps, hanging indents, deleted text, inserted text, etc.

Afterwards, the focus of the demonstration will turn to reviewing the preconfigured layouts and page displays that have been included and showing how they can also be customized by the individual project staff. These page displays directly call on the data and transcriptions entered into the system. While initially setting them up can be a difficult task for editors, it becomes much easier with our established template available to follow. The preconfigured views and blocks[6] include various digital derivatives that projects should find helpful; for example, a searchable document catalog and glossaries for all people and organizational records added to the digital edition. Other preconfigured content includes a link for downloading a PDF of the published record, social sharing links to aid in content sharing, and a standard search interface.

There will be a number of additional features and functionalities that will be highlighted during the presentation that will demonstrate how editors will be able to quickly create digital editions. These include: customized user roles and project workflows to help track productivity, the potential for pre-configured taxonomy lists, importing and exporting content, and more. I will also discuss how both new projects and those in progress will be able to use and benefit from our work on this module.

To conclude the demonstration,I will discuss our multi-pronged approach to the sustainability of this module and the projects that use it. To start, the platform is able to generate export files in CSV formats and supports the creation of REST APIs. As such, the UVA-DPC technical team has made it possible to treat collections as data instead of as a static representation of materials to be found on a website.[7] Configurations are included upon module installation for file paths to export published content to be used for archival storage. In collaboration with the University of Virginia Libraries, projects within the cooperative will be able to add their datasets to the institution-based archival digital storage solution, LibraData.[8] Taking advantage of this archiving resource allows projects, especially new projects, to have a clear long-term preservation and sustainability plan for the content with which they are working, even when the technology used for the digital edition may no longer be available or functioning. Furthermore, content can also be exported into both XML and JSON formats. This has allowed the tech team to explore a pipeline for creating minimal editions for projects that have reached their end of life and are no longer receiving funding or adding new content. Such a pipeline will help to reduce overhead costs of hosting, and maintenance will still allow a version of the site to remain active and operable for the users. Lastly, this pipeline approach has also allowed us to consider and begin developing an environment that will allow cross-site searching of all projects that are or will become a part of the cooperative.

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[1] During the planning year, the UVA-DPC performed an environmental scan of technologies in use in the field of documentary editing. We also evaluated the different technologies and workflows in use at the participating projects.

[2] Meadows, R. D. (July 6, 2017). *Call for proposals: NHPRC-Mellon Planning Grants for Digital Edition Publishing Cooperatives*. H-Net. https://networks.h-net.org/node/73374/announcements/171968/call-proposals-nhprc-mellon-planning-grants-digitaledition

[3] Quinn Dombrowski, https://quinndombrowski.com/blog/2019/11/08/sorry-all-drupal-reflections-3rd-anniversary-drupal-humanists/

[4] Quinn Dombrowski, https://drupal.forhumanists.org/drupal-humanists-chapter-1-first-things/when-use-drupal

[5] The Virtual International Authority File (https://viaf.org) brings together multiple name authority files into one. Enslaved: Peoples of the Historical Slave Trade (https://enslaved.org/) is a discovery hub documenting people of the Atlantic slave trade, both enslaved and freed. Many of these individuals would not have identification in datasets like VIAF.

[6] Views can be understood as SQL-queries done through a user interface to display site content in various formats. Blocks are pieces of content that can be rendered onto various regions of a page.

[7] Thomas G. Picadilla, Collections as data: Implications for enclosure. Association of College & Research Libraries, vol 79, no 6, 2018.

[8] Libra makes publications and datasets freely available and provides storage through the Academic Preservation Trust. Libra is part of UVA Libraries and is available for use by UVA-affiliated individuals. For more information, see https://www.library.virginia.edu/libra/.

Cooperative Publishing as a Potential Future for Small-scale Digital Editions

Serenity Sutherland (SUNY Oswego)

One of the challenges for editors is finding an institutional home that can serve as a position of stability for their edition. Given this, many potential editions never materialize as the scholars who might lead them don't have the support or resources to do so. This phenomenon is well-known in the digital humanities generally as scholars have frequently mentioned the need for support or collaboration when that support is lacking at their own home institutions.[1] Many editors are subject-matter experts who have years of experience researching and writing on the historical figures whose papers they are editing, and are also highly adept at handling and interpreting archival materials, but may not have access to the tools and infrastructure needed to publish their work online—and especially not in a form that makes the best use of their insight as scholars or their understanding of the source materials as editors. The impediments these editors face are thus also a detriment to the researchers who would benefit from the content of these source documents, since the digital medium is the first—and sometimes only—point of access people use to find historical sources.

For my own case, as a professor at a teaching institution with a high teaching load and limited resources, the possibility of managing and supporting my own digital edition with the resources at my institution is not a possibility. Grant-writing is one option that individuals in my own situation might employ, however, this also takes time and resources (granting officers, buy-in from the institution, and grant-matching funds). Collaboration is another way for scholars with limited resources to complete their editions, and my contribution to the conference will address a type of collaboration: that of cooperative publishing. My small edition is the Ellen Swallow Richards Papers Project, and it is part of the Primary Source Cooperative, funded by the National Historical Publications and Records Commission (NHPRC) and the Andrew W. Mellon Foundation.

The purpose of the Primary Source Cooperative (PSC) at the Massachusetts Historical Society (MHS) is to provide a platform, designed and governed by consensus, to assist with the digital publication of documentary editions led by scholars who study the American long nineteenth century (1789–1914) and who would not otherwise have a portal for online publishing that is affordable and supportive. With this focus, the PSC is a resource for scholars and other users seeking primary sources about this critical period in American history, when revolution and reform were causing fundamental changes in social and political culture. More broadly, however, the PSC's praxis is meant to be reproducible, making available a model of digital publication that runs on human and organizational collaboration that can be adapted to varying circumstances and replicated for use by other cultural institutions and archival repositories. Working toward the goal of a federated network of cooperatives, we see our cohort as one in a landscape of overlapping systems, each with its own topical parameters, administrative arrangements, tools, infrastructure, and financial models. There are currently four smaller editions that make up the cooperative. I will now describe my own edition and how it fits within the cooperative.

My edition is the Ellen Swallow Richards's Papers, and is made up of the correspondence between MIT chemist Ellen Richards (1842-1911) and other prominent nineteenth and twentieth century scientists and intellectuals, including Maria Mitchell, Edward Atkinson, Melvil and Annie Dewey, and Marion Talbot. Educated first at Vassar College and then at the newly formed Massachusetts Institute of Technology Richards early on understood herself as a trailblazer for other women who wished to pursue scientific education. After her1875 marriage to MIT mining engineer Robert Richards, who became her lifelong scientific partner with whom she researched and published on mining engineering and mineralogy, she maintained a teaching position at MIT (sometimes paid and sometimes not) and established a Women's Laboratory for women

students. The Women's Laboratory became part of the main college in the 1880s, and Richards then went on to teach, research and publish in sanitary engineering and water chemistry, fields today known as environmental management and sustainability. Richards introduced the term "ecology" to English-speakers, she started a water testing procedure that determined levels of pollutants in Massachusetts waters, and she worked on the first modern sewage treatment system. At the end of her life, she introduced a holistic environmental philosophy that linked the home with the natural world called *euthenics*, which argued that the unchecked pollution of air, waters, and soil would lead to the end of humanity.

Richards also contributed to the bourgeoning field of home economics with her work at the Lake Placid Conference on Home Economics and her efforts to establish home economics as a curriculum. Richards saw home economics as a practical field for women's employment and professional success. Her work in nutritional science throughout 1880-1890 also contributed to home economics. She attempted to instruct working class and immigrant populations in the art and science of nutritious cooking with her endeavors at The New England Kitchen in Boston, a take-home meal service. Tinged with Richards's zeal for scientific eating was her belief that New England foods of beans, cod, and stew were the most wholesome foods. Richards scientific logic was not immune to her personal biases, and this was also demonstrated in her logic for women's involvement in science, which included essentialist claims that women's fingers were dainty and therefore suited to fine, technical laboratory work. Ellen Richards's papers illustrate the nexus of gender, science, technology and reform within nineteenth and twentieth century America. As Richards became a well-known figure within the history of women in science and higher education an edition of her letters offers a unique look into the late nineteenth and early twentieth century. There are about 250 documents that are part of the edition and the materials span across five different repositories. In this way, the edition makes widely dispersed archival materials available to researchers and the general public.

This paper argues that the power of cooperative publishing is three-fold: 1) the sharing of resources, both financial and structural; 2) the collaboration of content expertise across a wide range of topics; and 3) the support of a community striving for the same goal. For an individual edition this can have a ripple effect as finding support to serve as an institutional home means the editors can focus on actually doing the work of creating a digital edition: working with students and volunteers to transcribe, annotate and encode the material, create the digital infrastructure to support the content, and contribute to scholarly knowledge on the topics and persons mentioned in the edition. In addition to exploring this in-depth, my presentation will also show the infrastructure currently part of the PSC and the visual tools that have resulted.

The cooperative has remixed various tools and approaches to editing with the end goal of providing a pragmatic pathway for publication for small to midsize editions.[2] This ensures more voices will be part of the future of editing, and editors will have a structured publication avenue that has been tested and grows the future community of editors. Publishing as a cooperative is a pragmatic and essential approach to the future of small to mid-scale digital editions.

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[1] Rebecca Frost Davis and Quinn Dombrowski, *Divided and Conquered: How Multivarious Isolation Is Suppressing Digital Humanities Scholarship*, National Institute for Technology in Liberal Education (2011); Bryan Alexander and Rebecca Frost Davis, "Should Liberal Arts Campuses Do Digital Humanities? Process and Products in the Small College World," *Debates in the Digital Humanities*, edited by Matthew K. Gold,(University of Minnesota Press, 2012): 368–89; Julia Thompson Klein, *Interdisciplining Digital Humanities: Boundary Work in an Emerging Field* (Ann Arbor: University of Michigan Press, 2015).

[2] Christopher Ohge, *Publishing Scholarly Editions: Archives, Computing and Experience* (Cambridge: Cambridge University Press, 2021), 15.

3.00 p.m. – 3.30 p.m.	**Break**

3.30 p.m. – 5.30 p.m.	**Session 5, The Council Room** Chaired by Órla Murphy (University College Cork)

Multimodal modeling of born-digital artifacts: The digital estate of Walter Kempowski

Vanessa Klomfaß (University of Hamburg)
Julia Nantke (University of Hamburg)
Qianqi Huang (University of Hamburg)
Frank Steinicke (University of Hamburg)

The Cross-Disciplinary Lab 'Multimodal Modeling of Cultural Artifacts in Digital Space' (MuMokA) is a cooperation of digital humanities and informatics at Hamburg University. The project runs from 2023 and aims at developing concepts for exploring multimodal born-digital cultural materials and representing them in a digital scholarly edition. In this we apply methods of data restauration, visual computing, natural language processing, machine learning, computer vision and affective computing to explore the born-digital work fragment *Ortslinien* left behind by the contemporary German author, collage artist and archivist Walter Kempowski (1929–2007) on his Apple Power Mac G3.

Walter Kempowski was best known for his project *Das Echolot. Ein kollektives Tagebuch* (1993–2005) which is a multimedia collage of mainly private German documents related to the Second World War (private letters, photos, diary entries) and represents the variety of events and perspectives of both Nazis and resistance during this period. *Das Echolot* was published in three print editions in 1993, 1999 and 2005. Additionally, Kempowski built up a huge private archive during the work on *Das Echolot*. This archive subsequently formed the basis for further extensive collage projects. While his works at the border of literature and archive were innovative and widely discussed in literary studies and historical sciences, Kempowski worked in a rather conservative manner at the beginning of his literary work. From the mid-1980s onwards, his projects became increasingly experimental on the level of media usage and went further beyond literary conventions. This was not least due to his reflection on the (emerging) possibilities of digitalization. In his last major project, *Ortslinien*, which he began in 1997, he logically left the medium of books and worked on the computer to connect text, image, sound and film files, each of which was compared over a period of 200 years, day by day. On the hard drive of his Power Mac G3, which is located in the Kempowski Archive at the Akademie der Künste Berlin, he left behind several data folders labeled "OL" (for "Ortslinien"). These folders contain the materials that were to become part of *Ortslinien* and provide an insight into the structure Kempowski planned for the work. According to the documents left behind by Kempowski, the title *Ortslinien* is a mathematical term for sets of points and refers to 'lines or areas on which all points lie that satisfy given conditions'.2 The individual points in Kempowski's project include texts, photos, films, paintings and pieces of music or film collected by the author. Dating plays a central role in all the documents (collected from a wide variety of sources) insofar as it was Kempowski's intention to make the various media tangible on a kind of timeline and thus convey a 'spatial sense of time'. 3 The material related to *Ortslinien* also shows that Kempowski has systematically engaged with questions of media change and digitalization in the field of publishing. This

includes quotations from a symposium on the developments in scholarly editing which took place in 1999.

Kempowski was not able to finish his project during his lifetime. Therefore, *Ortslinien* only exists as a born-digital fragment on the hard drive of Kempowski to date. At the same time, it was Kempowski's intention to keep the work open for extensions even after he would have left the project.4 It is the goal of our project to develop digital concepts of exploring this innovative literary project and making it available for today's public and scientific community. *Ortslinien* poses a variety of challenges, from making the original files legible to dealing with the constitutive multimodality and the incompleteness of the work fragment. We therefore assume that the work is an ideal use case for developing concepts for dealing with born-digital materials beyond the specific case.

Research Questions

Ortslinien operates at the boundary between artwork and digital archive and offers points of reference for a wide range of humanities issues relating to the maintenance and representation of art and culture in digital space and the digital modeling of multimodal cultural estates. The fragment forms the core of the MuMokA project, in which we deal with the question of how this material can be made accessible and presented to a contemporary audience. Multimodality, the conceptual incompleteness and the fragmentary character of the work build the starting point to address fundamental questions regarding the digital modeling of cultural artifacts with regard to their development, representation and research in the interdisciplinary dialogue between the humanities and computer science. In our project, we (will) address the associated scientific, technical, legal and ethical challenges.

Within the project, a number of questions arise that carry significance with regard to the future of digital scholarly editing and publishing: How can the multimodal ensemble of Ortslinien be represented digitally, taking Kempowski's designs into account, in order to make it scientifically usable and stable to cite? How do you deal with the incompleteness of the object, which is in parts accidental, partly intentional and conceptual, when transferring it to current digital formats? What should a digital architecture and corresponding design solutions look like that take into account the different modalities of the original object and also make tangible the characteristic multimodality, the interactions between the different modalities, for the recipient? How can the perception of art and culture be made possible in virtual spaces for different user groups and usage scenarios, namely in a scientific context as well as a museum setting?

Challenges and work packages

In order to tackle these questions adequately, the data must first be made fully accessible for scientific research. Ortslinien is a multimodal, unfinished work of art that the artist worked on until the end of his life in 2007, using the latest technical possibilities at the time. Kempowski left behind an extensive collection of several thousand excerpts from documents of various modalities (text, sound, image, moving image), organized in a specific (and peculiar) file and folder structure on his Power Macintosh G3, parts of which are no longer supported by Apple. Following initial empirical analyses of Kempowski's datasets by the computer scientists in our team, which also featured an attempt at reconstructing its no longer accessible parts, some brief, preliminary conclusions are described below.

There are four main target file formats in the datasets:

1. Document formats: TXT (plain text), Microsoft Word for Macintosh 5.0)
2. Image formats: JPEG, PICT

3. Audio formats: AIFF
4. Video formats: QT (QuickTime), MOV (QuickTime)

While it is easily possible to reveal the contents of files containing pure text, images, audio or video, decrypting the Microsoft Word for Macintosh 5.0 file format presents a challenge. These documents can contain formatted (colored, underlined, . . .) text, images and in this particular version also videos. A target format that carries over all of the information contained in the files has to preserve all of these aspects and must be easy to work with. Currently there are two solutions to reconstruct and restore the information hidden in these files: 1) using the current version of LibreOffice to open and display most of the files with some losses regarding media formats (mainly to look at the basic contents) and 2) emulating the original OS system used to manage the files as close to the original as possible. We currently work with both variants.

From a humanities perspective, the restoration work of the computer scientists is accompanied by a classification into different document types (each with their own requirements for remediation). This is complemented by an examination of the individual file folders with regard to the degree of completeness in relation to the artistic concept issued by Kempowski, as well as an identification and classification of media ›weathering‹ (illegibility or incompatibility of files and formats). This step of reconstructing the state of the art of the original data delivers a first set of relevant metadata to structure, explore and represent the Ortslinien in a scientifically valid manner. It is followed by a digital modeling process which explores the data beyond the borders of single documents and document types to make them accessible and searchable for contemporary users. We plan to use methods from natural language processing, machine learning and affective computing to develop modality-specific as well as cross-modality semantic annotations and display of contents and we will experiment on possibilities to use AI methods to autocomplete the fragmented parts of the work. Our challenges and work packages can be summarized as follows:

i. Access, restoring, and enabling of the readability of legacy data
ii. Modeling data across modalities: structuring, annotation, representation
iii. Dealing with accidental and intentional incompleteness, algorithm-supported
iv. addition to the database
v. Development of digital presentation scenarios
vi. Dealing with copyright and personal rights restrictions in a digital presentation

We use the multimodal nature, the conceptual incompleteness and the fragmentary character of Ortslinien to address fundamental questions regarding the digital modelling of cultural artifacts with regard to their indexing, representation and research in an interdisciplinary dialogue between the humanities and computer science and to identify solutions for the associated scientific, conceptual, technical, legal and ethical challenges.

Exploring the Digital Expansion of Teachers College Record Since 2020

Shrien Alshabasy (Columbia University)
George Nantwi (Columbia University)

Teachers College Record (TCR) is an academic journal published by Teachers College, Columbia University since 1900. For most of its history, the journal appeared in print on at least a quarterly basis. The remarkable growth of the web in the 1990s presented countless opportunities for academic journals. The Association of Research Libraries, which began tracking online journals

in the early 1990s, found 110 electronic journals and newsletters in 1991, 240 in 1993, 675 in 1995, and 3400 in 1997 (Mogge, 1999).

In 1995, *TCR*'s initial efforts to move the journal online encountered resistance from our editorial board and readers. Their concerns stemmed from their unfamiliarity with online journals at the time and fear that researchers would be reluctant to submit their work to an online journal (Natriello & Rennick, 2006). They were concerned that researchers did not view online publication as legitimate and committees at their institutions would also share this view during tenure and promotion reviews (Kling & Covi, 1995; Sweeney 2000). *TCR*'s primary mission since its inception is to serve as a social good through education. Online publishing provided countless opportunities to enhance and expand this mission. Despite the concerns, *TCR* started its online adventure with little fanfare. The initial website was simple and included basic contact information and subscription options. The next few years saw gradual improvements to the site such as reading entire articles online (including book reviews) and indexing all articles published in the journal. (Natriello & Rennick, 2006)

The turn of the century confirmed *TCR*'s presence as an online publishing entity. With gradual and meaningful changes to the website, the past several years has seen the journal increase its digital presence and offerings. A change in administration at Teachers College in 2019 brought on a new executive editor who wanted to rethink *TCR*'s digital presence. The homepage was text heavy and full of outdated information and resources. The editor wanted to leverage social media and other digital platforms (i.e., videos) to increase *TCR*'s reach and impact.

In 2020, at the height of the Covid-19 pandemic, we partnered with SAGE Publishing to increase our visibility and leverage their vast network to improve our digital offerings. Furthermore, the website had an outdated interface and the backend infrastructure was not collecting user data. We collaborated with SAGE to create a website that met our immediate needs and a framework for future iterations and improvements. We focused on improving the search function where users could search for articles using author name, institution, and keywords, among others. We also created categories (e.g., Most recent, Most read, Most cited) so readers can instantly find articles. In addition to full length peer reviewed articles, *TCR* also publishes book reviews, commentaries, and research notes. These additional content pieces are published exclusively online and do not receive the same level of interest as articles. Therefore, we redesigned the website to make these pieces easily accessible. To further leverage our content pieces, we also create "special collections" to commemorate celebrations (e.g., Black History Month, National American Indian Heritage Month) and current events (e.g., student loan debt, affirmative action). We have also moved to a new online submission system that was specifically built to meet our editorial and production needs.

Our digital presence extends beyond the website and submission system. Social media and other digital platforms have opened an array of possibilities for journals. Since 2020, *TCR* has prioritized the migration of content to specific digital platforms and tailored new approaches to engage with our ever-expanding online community. We discuss these in great detail below.

The Voice

We launched *The Voice,* a video series that affords authors a chance to summarize the key findings from their articles. Videos are a useful medium for researchers in various disciplines. A study found that 1,808 Scopus publications cited at least one YouTube video, and there was a steady upward growth in citing online videos within scholarly publications from 2006 to 2011 (Kousha et al., 2012). *The Voice* was originally hosted on *Vialogues*, a since-retired internal website that enabled viewers to comment and share videos with their community. Earlier this year, we migrated all *Voice* episodes to Vimeo, a platform that allows us to increase visibility and gain insightful user data. The data from Vimeo offer insight into content and research topics that are

of interest to users. We will use the data to center future events and research projects, thus creating a reciprocal relationship between users and the journal. *TCR* authors who are featured in *The Voice* are able to share their research with a broader community in a concise and engaging format. *The Voice* episodes are also helpful for graduate students as "videos have regularly been shown to lead to higher learning gains than static media" (Castro-Alonso et al., 2019; Höffler & Leutner, 2007). The migration to Vimeo is another area of expansion for the digital presence of the journal.

Twitter

In 2020, *TCR* prioritized its social media presence by expanding its digital team and redefining its Twitter approach. Prior to 2020, *TCR*, like other scholarly journals, had a straightforward approach to Twitter. Tweets featured the link to the journal's content and a short encouragement to followers to "read this article here." In 2020, the digital team decided to revamp the journal's approach to Twitter. We created an intentional space of digital community for *TCR* scholars by tagging authors in tweets as well as their relevant institutions and publishers. In addition, the digital team recognized the importance of Twitter in amplifying the journal's history by launching thematic tweets such as *Relevant Research for the Times*, a collection of tweets that spotlights important research from the journal's extensive history that was relevant to current events (e.g., schooling during a global crisis, race and education). During commemorative months, *TCR* collaborates with SAGE in creating digital collections that highlight the diverse and important topics for communities often marginalized in research conversations. These collections are shared often with the journal's Twitter community. This altered approach to Twitter has positively impacted engagement and impression rates for *TCR*'s content and has also created a space for dialogue with readers of the journal. Scholars who publish with us are more likely to tag us in their published research or career accomplishments as a result of their involvement with the journal.

Newsletter

To inform subscribers about newly published content and upcoming events, *TCR* sends a newsletter twice a week. Originally hosted through an internal system, the newsletter was text dominant and lacked the capability to feature images and videos. In 2021, we migrated to Mailchimp with two major goals: leverage *The Voice* and other multimedia content and analyze subscriber behavior to tailor campaigns. The team also wanted to personalize the newsletter for the more than our 34,000 subscribers. Research shows that personalized conditions in newsletters "increases attitude certainty, and thus strengthens the attitude–behavior relationship, which makes it more likely that behavior will be influenced" (Maslowska et al., 2011). The move to Mailchimp allowed us to personalize content to our subscribers, such as including their name at the top of the newsletter and inviting feedback about our content and invitation to *TCR* events. Similar to our Twitter approach, the newsletter migration created a reciprocal relationship between the journal and its community. Subscribers provide us with helpful feedback about mobile design, desired content, and different ways to engage with the journal.

Virtual Book Talks

TCR differs from other education research journals by the sheer volume of content we publish a year, the type of content we publish, and our increasing efforts to diversify our digital assets. We publish over 200 book reviews annually. In order to highlight book reviews, a content type traditionally more geared towards early and mid-career scholars, we launched a virtual book talk in Fall 2020. The aim of the virtual book talk is to highlight a book whose contents are not

typically featured in the journal (e.g. school-community partnerships, Indigenous education, Hispanic Serving Institutions). Through the virtual book talk, we hope to create space for the book reviewer to engage with the book author, and invite community members from various disciplines and roles to engage in a conversation about the contents of the book. Virtual book talks bridge the gap between published content and our diverse and expanding digital community. Virtual book talks also provide the journal with the opportunity to cross-collaborate with departments at Teachers College, academic publishers, educational organizations, national and domestic institutions, and practitioners, among others.

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Relevance and Authority: Holding Space for the Public Digital Humanities

Patrick Lewis (Filson Historical Society)

How do digital editions find a sustainable balance between scholarly rigor, new and theoretically driven analytical features, and the potentially divergent desires of a wider, non-academic user population and their funders? This presentation draws on experience and observation from managing digital humanities projects in research libraries in the United States, within state government and in the private, not-for-profit sector. As the symposium considers the future capacity of university-based projects to apply new technology to the production and analysis of edited texts, this paper will present a perspective from the periphery of the academy in the public humanities. A conscious space in this conversation must be held, I argue, for a track of community-driven digital editing that is usable for public humanists and the diverse populations with whom they collaborate in the interests of a stronger and more inclusive society.

Academic digital editing and publishing projects are facing an intertwined crisis of relevance, funding, and authority. In the United States, the era of exhaustive print editions funded through generous and virtually open-ended federal support has given way to a new digital

frontier where the essential tools of text and facsimile sharing and collaboration have opened up the transcription, description, and annotation of texts to virtually anyone.

Like the revolutionary impact of oral history for the recording and amplification of marginalized voices in the late-20th century, this technological proliferation makes textual preservation—at least in the short term—more accessible than ever. How do professional digital humanists reposition their approach from authoritative gatekeeping to support and enhancement of community-driven efforts—especially around the problematic (and expensive) issues around visibility, accessibility, and preservation? How do we as practitioners shape projects that serve the missions of our organizations while balancing the interests of governmental funding agencies in an era of global austerity must demonstrate value to skeptical legislators?

The metrics of impact that are increasingly attractive to funders of public humanities projects are less frequently about citation and research scores but about broader public usage and engagement—particularly by and with communities whose histories and experiences are bound up in the texts being digitized. This takes the form of quantitative measurements of research access (page views, time-on-site, unique users) as well as qualitative assessments of special programs such as community share-ins, transcribe-a-thons, and in-person exhibitions.

This presentation will take the form of case studies that point to certain tensions within the field, particularly for scholars operating in public-facing institutions adjacent to or outside of the academy. In 2021-22, I led a strategic planning and bylaw review committee as at-large council member for the Association of Documentary Editing. In that process, we dealt with privately shared and anonymized concerns from practitioners in the field, with a widely varying amount of time in the industry but sharing significant fundamental concerns about the sustainability of their own and similar projects, the crumbling support from host institutions, as well as the relevance and viability of the ADE itself—a cipher for the broader systemic crisis facing its members.

While directing the Civil War Governors of Kentucky Digital Documentary Edition at the Kentucky Historical Society from 2015-19, I led a multi-year federally funded investment in a system to annotate and socially network each of the people, places, and organizations in the corpus produced next to no increased research usage of the project. Yet users continued to use the transcribed documents but not view biographies or leverage the digital tools that allowed historical individuals to be visualized in social space. This project sat at an uncomfortable intersection of the scholarly project with exciting AI-assisted research potential and the publicly popular demand to devote more staff resources to basic textual editing and metadata. What is the path to sustainability for a project such as this, whose external funders, institutional home, and primary user bases all desire different outcomes?

In my current role as the Director of Collections & Research for the Filson Historical Society in Louisville, Kentucky, the institution has been successful in foregrounding its community-driven work, including and prioritizing marginalized voices who had been structurally excluded from the mechanisms of archival and historiographical power. The tools of scholarly editing and digital (re-)presentation of archival documents has proved to be of great interest to, for example, the descendants of enslaved people documented in plantation records collections. The Filson has launched one descendant-informed digital project and is planning two more similar projects with an incorporated nonprofit descendant network and a local African American history museum. The technological needs for this work will not be significant, from the perspective of those who have gathered at this symposium, but as we develop increasingly sophisticated analytical tools, how can we as scholars also advocate for and participate in the creation of software platforms, training, and digital preservation solutions for projects like those facilitated by the Filson?

The Filson encountered this latter point explicitly in a National Endowment for the Humanities-funded project called Resurrecting the First American West. A collaboration between the Filson, the University of Chicago, and the Library of Congress begun in the late-

1990s established many of the technical standards for digital archival projects that have followed in subsequent decades. Yet this project, which was widely used for research and classroom teaching about 18th century North America, was no longer technically viable and had been pulled down by the Library of Congress in 2016. In the 2022 relaunch project, the Filson encountered and talked openly to its public audiences about a number of questions raised about the changes to the field including the mass digitization of open access historical books, the unreliability of non-standardized pre-Dublin Core metadata, the ephemerality of web architecture, and the failure to plan for the long-term sustainability of the first generations of digital humanities projects. It was an important set of professional conversations to have internally, but also to share with non-specialist audiences who place too much faith in the sustainability of the digital.

The future of digital scholarly editing is exciting. Expanding the capacity of AI-driven tools to improve productivity, facilitate deep analysis, and make editions discoverable to new audiences is of the highest priority. The backdrop to that potential, however, is a fragmented and contentious public sphere with desperate need for reliable and widely available sources of reliable information as well as universities and national research agencies feeling pecuniary and political pressure from lawmakers hostile to a broader and more inclusive public humanities. The power of the texts that we work on and the meaning that they can give to the communities our organizations can serve, however, can play a powerful role in making a new, global, generational case for the value of humanistic research and scholarship.

Reinventing the Scholarly Monograph in Digital Age

Gabor Toth (University of Luxembourg)

In 2022, one of the oldest publishing houses, De Gruyter Verlag, and the Center for Contemporary and Digital History (C2DH) of the University of Luxembourg formed a partnership to develop a new digitally-born scholarly monograph series. The goal of the new series is to offer a sustainable publishing platform for scholars engaging with digitally born materials, such as for instance webcontent, datasets, and interactive visualizations. The goal of my presentation is to demonstrate the first prototype of the publishing platform, and to discuss the challenges and open questions the development has involved. Throughout my presentation, I will also seek feed-back from the audience.

First, I will discuss the base technology underlying the digital platform that C2DH and De Gruyter Verlag jointly develop. This is the Jupyther notebook, which is customized throughout the development process. In short, Jupyther notebook is an interactive and browser based computing environment that can host executable research code, visualization, and textual content formatted by means of Markdown. Its major advantage is that it can effectively combine the key components of state-of-art digital scholarship: scholarly work (essays and narrative argumentation), multimedia content (video, audio, image), datasets, research code in Python and R. Furthermore, it facilitates interaction with datasets and web-content through a sophisticated linking and embedding mechanism. It has been already used by journals, such as for instance the Journal of Digital History published by C2DH and De Gruyter Verlag as part of another joint and already well-established venture. Hence, the new digital monograph series draws on this earlier project and aims to transpose know-how and best practice to publish digital works longer than articles.

Second, I will focus on how the platform renders traditional scholarly material, i.e. essays and analytical work that printed monographs usually host. I will present our author's guidelines that explains the input format in Markdown. I will offer a very short introduction into Markdown, including its advantages and disadvantages. I will discuss the question, to what extent

Markdown is sustainable and discuss the challenges it involves from the perspective of authors who are not familiar with its syntax. Furthermore, I will discuss other input formats (MS WORD DOCX, TEI XML) that we took into consideration. Finally, I will point out one of the key challenges we have faced: the difficulty of validating Markdown files, which is necessary for the flawless operation of a production pipeline.

Third, I will discuss the challenges that the direct inclusion of datasets into a scholarly monograph involves. This is problematic for a number of reasons. First, it brings about issues related to copyrights. Is it for instance acceptable to include web-scraped data without the consent of the data owner? Alternatively, can an author claim that a derived data is copyright free? Second, datasets are often too large to scrutinize and to accomplish a proper quality-control. How can a publisher or the editor ensure the quality of data embedded into a publication? While tables, figures, and other data-oriented components of traditional publications, which are usually added to the appendix of a printed book, are relatively easy to handle for an editorial team, large datasets are significant challenges. The heart of the matter is that there are no clear editorial standards for assessing the quality of a dataset. Furthermore, a dataset can be too large to assess and editorial teams often lack the knowledge and tools to accomplish the quality control. I will raise these issues throughout my presentation and trigger further discussion of it in the Q&A.

Fourth, I will address the use of research code in a digital monograph. The inclusion of research code into a digitally born scholarly monograph brings about similar difficulties discussed in the context of datasets. While it is easy to correct the language and style of an author, how can an editorial team accomplish similar tasks with research code? Embedding research code is also problematic from the perspective of sustainability since it is questionable whether code in Python or R will be executable in twenty years. To address this last problem we rely on virtualization by means of Docker, which I will briefly discuss during my presentation.

As a whole, this presentation will offer an overview of the difficulties and challenges that the development of digitally born monographs brings about; most importantly, it will aim to raise awareness of these difficulties and discuss their implications with the audience. Finally, the presentation will show the solutions we have worked out to tackle these challenges.

6.00 p.m. – 8.00 p.m. **Closing Reception**
Accompanied by a poetry reading by Annemarie Ní Churreáin

Aula Maxima, North Wing
https://maps.app.goo.gl/RhMamXuMDUmxcmcG9

ANNEMARIE NÍ CHURREÁIN is a poet from Ireland's Donegal Gaeltacht. Her books include Bloodroot (Doire Press, 2017), Town (The Salvage Press, 2018) and The Poison Glen (The Gallery Press, 2021). She is a recipient of the Irish Arts Council's Next Generation Artist Award and a co-recipient of The Markievicz Award. Ní Churreáin has held literary fellowships in the U.S. and throughout Europe. She was the 2022-23 Decades of Centenaries Artist in Residence at Donegal County Archives. Ní Churreáin is the Poetry Editor at The Stinging Fly Magazine.

Introduction by Éibhear Walshe, Director of Creative Writing at University College Cork

Chaired by James O'Sullivan (University College Cork)

Biographical Notes

ATHENA BOZIKA was born in 1993 in Athens. She studied Art Theory and History at the Athens School of Fine Arts, and holds a Master's degree in Political Science and Sociology from the Department of Political Science and Public Administration of the University of Athens. Since 2023 she has been working on her PhD thesis on the history of the digital book at the School of Philosophy of the University of Athens. She works at the Research Centre for the Humanities (RCH) as a Junior Researcher, as RCH Secretary and as editorial coordinator of RCH's publishing project, the RCH Digital Library. She has participated in various artistic and research projects, including the *1821 Digital Archive*, where, apart from her administrative role, she has helped in gathering and indexing digital publications of texts contemporary to and regarding the 1821 Greek Revolution. Her research interests include global history, the history of the book as an object, the history of digital technology and digital design, with an emphasis on the relationship between the body and digitality, as well as the relationship between materiality and digital space.

BRIDGETTE WESSELS is Professor in the Sociology of Inequalities at the University of Glasgow. Her research focuses on social exclusion and digital divides, financial exclusion and the e-economy, social media and political inequality, health inequalities and telehealth, welfare services and (digital) identity, local journalism and inclusion and e-policing, ethnicity and communities. She is also addressing the developing uses of open and big data in open services and data-driven science.

ERICA CAVANAUGH is the Project Developer at the Center for Digital Editing (CDE) at the University of Virginia. Her academic background is in history, digital humanities, digital storytelling and library and information science. She is responsible for the development of several Drupal-based digital editions, ranging from complex editorial production and publication platforms to exhibit-focused projects concentrated on metadata collection, searchability, and display. The first of these editions was the George Washington Financial Papers Project which she became a part of in 2013. Since then, the number of projects working in collaboration with the CDE and whose digital editions she has built has grown significantly to include the Papers of Martin Van Buren, the Papers of Julian Bond, the Jefferson Weather and Climate Records, and MosaicNC, the digital publishing venture of the North Carolina Office of Archives and History. Currently, in her role with the CDE, she is working as a part of the University of Virginia Digital Publishing Cooperative to create an accessible, robust, and sustainable system for publishing historical scholarly digital editions which has been sponsored by the Andrew W. Mellon Foundation and the National Historical Publications and Records Commission.

GABOR TOTH obtained a PhD in medieval history from the University of Oxford, Balliol College. In his thesis he investigated knowledge and thinking in late medieval Florentine diaries and notebooks. Following his PhD he was assistant professor of digital humanities at the University of Passau. In 2016 he moved to the United States where he worked as research fellow in digital humanities at GMU, Yale, and USC. Specifically, he worked in digital archives of Holocaust testimonies (Yale Fortunoff Archive, USC Shoah Foundation Visual History Archive). His research focuses on the application of data science for historical research. He is the author of two monographs. With Barbara Mcgillivray he wrote Applying Language Technology in Humanities Research (Palgrave Macmillan : 2020). He is the author of the digital monograph, In Search of the Drowned: Testimonies and Testimonial Fragments of the Holocaust (Yale Fortunoff Archive: 2021,). He also has a background in information culture; he researched and published about Venetian ambassadorial reports and early modern handwritten news. Currently,

he applies dynamic system modelling, simulation, and Bayesian statistics to study early modern news sheets.

GILLIAN PINK, for many years a textual editor at the Voltaire Foundation (University of Oxford) with the 205-volume *Œuvres complètes de Voltaire*, is now Deputy General Editor of the Digital Voltaire project, working on the digitisation and enrichment of printed content. She has particular responsibility for the Voltaire Studio, currently overseeing work on the Library database as well as the Manuscripts catalogue. Her own research principally concerns Voltaire's marginalia and notebooks (*Voltaire à l'ouvrage: une étude de ses traces de lecture et de ses notes marginales*, CNRS, 2018), as well as reading extracts, working notes and text reuse in the French eighteenth century more generally. She is also interested in critical editing, manuscripts, book history, and in the genesis of literary texts. Since 2021 she has been on the Advisory Board of Electronic Enlightenment. She is an associated member of the Équipe Écritures et Lumières at the Institut des textes et manuscrits modernes (ITEM, Paris) and a founding editor of the online journal *Digital Enlightenment Studies*.

NICHOLAS CRONK is Director of the Voltaire Foundation and Professor of European Enlightenment Studies at the University of Oxford. His research interests focus on the French Enlightenment, and he has published extensively on Voltaire in particular, including *Voltaire: A Very Short Introduction* (OUP, 2017), and, with Glenn Roe, *Voltaire's Correspondence: Digital Readings* (CUP, 2020). He was the creator and Principal Investigator of *Electronic Enlightenment* [http://www.e-enlightenment.com], launched 2009, a digital collection of eighteenth-century critically edited correspondences in English and French, now including 80,000 letters and over 10,000 correspondents. Winner of the 2010 BSECS Digital Prize, this remains the most important online collection of correspondence from the early modern period. In 2000, he became the director of the project to edit and publish the *Œuvres complètes de Voltaire* (*Complete works of Voltaire*), the first ever scholarly edition in French of the complete writings of Voltaire. This large and complex project, involving over 120 international scholars, was brought to completion in 2022. He is now leading the project to build an innovative digital edition that reimagines the contents of the 205 print volumes of the *Œuvres complètes de Voltaire*.

JAMES CUMMINGS is the Reader in Digital Textual Studies and Late-Medieval Literature at the School of English Literature, Language, and Linguistics at Newcastle University. His interests include the use of digital technology for scholarly editing and also late-medieval performance. He has a long history of involvement as a part of the Consortium of the Text Encoding Initiative and is currently an elected member to the TEI's Board of Directors. He founded and then directed for many years the Digital Humanities at Oxford Summer School. He created and is the main instigator of the grass-roots DH Awards awareness-raising activity. Recently he has been leading projects on both HTR to TEI workflows and digital pedagogy, as well as part of the project building LEAF-VRE. He is planning a project on digital editing of late-medieval drama to help merge his interests. He is often found wearing t-shirts displaying either markup or quotes from early drama on them which he is all too happy to explain.

JANA KLINGER is a research associate at the department of Digital Humanities at the University of Wuppertal, where she works on a project digitally editing a medieval *Stadtbuch*. Additionally, she is a research associate at the Centre for Philology and Digitality at the University of Würzburg, where she is involved in digital scholarly editing projects *William Lovell digital* and *Richard Wagner Schriften*. She holds a Master's degree in history and English studies from the University of Wuppertal.

PATRICK SAHLE has been interested in digital scholarly editing since his student days in 1995. Following various research positions in digitisation and editing projects, and completing his PhD on digital editing, he served as the managing director of the Cologne Center for eHumanities (CCeH) at the University of Cologne from 2009 to 2019. Since 2019, he has been a full professor of Digital Humanities at the Bergische Universität Wuppertal, in the department of history. Patrick teaches in the master's program *Editorial and Document Studies*, is part of the graduate school *Document – Text – Edition*, and is currently the principal investigator for several research projects in the broader field of scholarly editing which cover topics like early modern Greek poetry (*rhodomanologia*), medieval biblical genealogy (*Compendium Historiae*), 20th century history of thought (*Niklas Luhmann Archive*), historical linguistics (*VedaWeb*) or the history of the late medieval town (Red Book of Görlitz 1305-1416).

MICHAEL SINATRA founded the open access electronic journal "Romanticism on the Net" in February 1996, and has been a full professor at the University of Montreal since 2001. He is the founding director of the "Centre de recherche interuniversitaire sur les humanités numériques" since fall 2013, based at the University of Montreal with its institutional partners Concordia University and McGill University. He is also the head of the Research team on Critical Editions in a Digital Context (funded by the Fonds de recherche du Québec – Société et culture since 2018) and co-director, with Marcello Vitali Rosati, of the "Parcours Numériques" series at the Presses de l'Université de Montréal since 2014. Sinatra is also the former (French) president of the Canadian Society of Digital Humanities, a past member of the coordinating committee of Humanistica, the French-speaking association of Digital Humanities, and co-president of centerNet, the global association of digital humanities centers. He is the President-Elect of ADHO, the Alliance of Digital Humanities Organizations.

JOYCE BORO specialises in Renaissance and medieval literature, with a focus on romance and Anglo-Spanish cultural relations. Her current research project explores the reception of Spanish literature in early modern England by providing an account of the circumstances surrounding the adaptation, production, dissemination, performance, and reading of John Fletcher's (1579-1625) dramatic adaptations of Spanish literature. Prof. Boro is the editor of John Bourchier, Lord Berners's Castell of Love (MRTS 2007) and Margaret Tyler's Mirror of Princely Deeds and Knighthood (MHRA 2013), and author of articles and essays on romance, translation, John Fletcher, book history, and Anglo-Spanish literary interactions. Her work has been awarded research fellowships from SSHRC, FQRSC, the Folger Shakespeare Library, the Henry E. Huntington Library, and the Harry Ransom Center at the University of Texas.

EMMANUEL CHÂTEAU-DUTIER is an architectural historian and assistant professor in digital museology at the Université de Montréal. His research focuses on the administration of public architecture in France in the nineteenth century, the architectural profession, and architectural publishing. In addition, his work concerns digital museology and digital art history. He participates, or has participated, in several important collective research projects in art history that place digital technology at the heart of their thinking. In particular, he was the digital director of the critical edition of the Cours d'Antoine Desgodets, and he is one of the main collaborators of the Guides de Paris project of Labex les Passés dans le présent. In addition to several personal research projects funded by SSHRC and FRQSC, he has been involved since 2018 in a multidisciplinary research on Parisian experts in the 18th century, supported by the French National Research Agency. Emmanuel Chateau-Dutier is a member of the Centre de recherche interuniversitaire sur les humanités numériques (CRIHN), he is part of the Coordinating Committee of the Humanistica association and is the French-speaking Vice-President of the Canadian Society for Digital Humanities (CSDH/SCHN).

DOMINIC FOREST is a full professor at the School of Library and Information Sciences at the University of Montreal. He carries out research and teaching activities in the fields of artificial intelligence applied to the analysis of textual data (text analytics), digital humanities, digital publishing and Web technologies.

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