Theories and Methodologies

Early Modern Translation and the Digital Turn in the Humanities

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Early modern scholars have long relied on digital technologies, from the "Search" function in digitized versions of extant texts to catalogs and databases of early modern works; yet the development of digital humanities as a specific field of enquiry has opened up significant critical opportunities, as well as occasions for debate among early modern researchers. Defined broadly, the term *digital humanities* (*DH*) refers to the application of computer-based resources and methodologies to research questions traditionally addressed in the humanities, such as the study of historical and linguistic phenomena as well as literary, cultural, and social trends. In their seminal volume *Early Modern Studies after the Digital Turn*, Laura Estill, Diane Jakacki, and Michael Ullyot summed up the contributions of DH-based methodologies to early modern scholarship as follows: accessing larger corpora and employing quantitative methods help renew overly linear literary narratives by revealing patterns and connections that are not directly apparent to the human eye. The broader outlook thus created helps in turn expand critical interest beyond the established canon and traditional definitions of authorship, by drawing attention to texts, agents, or forms of mediations that had been long overlooked. Finally, the growing consensus among DH practitioners about combining telescopic or distant kinds of reading with finer-grained, microhistorical studies holds great potential, in that it promotes new forms of "interconnected reading" (Estill et al. 5; 2–5) that may at once attend to and transcend boundaries of textual genre, national language, or geographic location.[1]

These critical directions seem particularly well aligned with recent research on early modern translation, which has consistently challenged cultural narratives based on traditional conceptions of

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authorship, textuality, language, and national identity. The long invisibility of translation in the early modern literary canon is gradually being remedied (Venuti; Coldiron, "Translator's Visibility" and "Visibility Now"); the complex yet crucial role of translation in the construction of early modern authorship (including print authorship) has been under sustained scrutiny over the last few decades (see, e.g., Coldiron, *Printers*; Chartier); and recent attention to early modern cultures of translation has revealed how translation activities involved complex transnational networks of human agents, working in no-less-complex combinations of place, time, and material conditions (Burke; Tylus and Newman; Boutcher). While the potential and limitations of DH methodologies for the study of translation in general have already been discussed at length (Wakabayashi), this essay investigates the apparent natural convergence between DH methodologies and recent critical developments in early modern translation studies. I present some of the digital resources currently available for that specific field, with particular (yet not exclusive) attention to the English domain,[2] and discuss the critical avenues and scholarly outcomes created by the application of DH methodologies to the study of translators, translated texts, and languages of translation in the early modern period.

Digital Resources

Digital catalogs and databases represent a crucial first step in identifying and studying early modern translations. While not containing a complete repertory of early modern texts, the *Universal Short Title Catalogue (1450–1650)* (*USTC*) brings together the collections of a wide array of European libraries (www.ustc.ac.uk/). Translations are tagged as such in the metadata, but in order to locate translated texts, researchers need to query the data through a combination of keywords (e.g., around the root "transl*" for English titles, or "trad*" for romance languages), which requires sorting through the results manually, and accepting that the results will be incomplete.

Translation-specific catalogs do exist for the early modern period—although they are more limited in scope than the *USTC*. The most comprehensive resource to emerge so far is perhaps the *Renaissance Cultural Crossroads Catalogue* (*RCC*), which documents all translations printed in Britain (as well as all translations into English printed on the Continent) for the years 1473–1640 (www.dhi.ac.uk/rcc/). Its forthcoming follow-up catalog, *Cultural Crosscurrents in Stuart and Commonwealth Britain* (*CCC*), covers the next two decades (1641–60). Openly accessible and based on the combined resources of the *English Short Title Catalogue* (estc.bl.uk) and of the *Early English Books Online* (*EEBO*) digital collection (eebo.chadwyck.com/), these catalogs aim to offer a more complete overview of the presence of translated texts in early modern English print culture. Other language-specific, or region-specific projects include the *Early Modern Spanish-English Translation Database, 1500–1640* (www.ems.kcl.ac.uk/content/proj/anglo/tldb/index.html); the *Marburger Repertorium zur Übersetzungsliteratur im Deutschen Frühhumanismus* ("Marburger Repertoire of Literary Translations in Early German Humanism" [www.mrfh.de/index.php]); the *Catálogo Hipertextual de Traducciones Anónimas al Castellano* ("Hypertextual Catalog of Anonymous Translations into Spanish" [dhumar.web.uah.es/chtac-catalogo-hipertextual-de-traduccion es-anonimas-al-castellano]), which covers the fourteenth through sixteenth centuries; the forthcoming *Online-Repertorium Deutsche Antikenübersetzung 1501–1620* ("Online Repertory of German Translations of Classical Antiquity 1501–1620" [www.orda16.gwi.uni-muenchen.de/]); and the *Radical Translations* database, which extends to the modern period (radicaltranslations.org/). Early modern translations may also be identified in databases that acknowledge linguistic transfer as a feature of their data. This is the case of *RECIRC—The Reception and Circulation of Early Modern Women's Writings, 1550–1700*, in which translation is recognized as a distinct type of reception: translated texts are therefore easily identifiable (recirc.nuigalway.ie). If gathering a corpus of printed translated texts presents a challenge in itself, the study of manuscript translations poses even more difficulties, given the fragmentary state of the archive. However, keyword searches through the *Catalogue of English Literary*

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Manuscripts 1450–1700 (celm-ms.org.uk/) or *Perdita Manuscripts, 1500–1700*, (www.perditamanuscripts.amdigital.co.uk/), a corpus of early modern English women's manuscripts, for example, may represent a good starting point for scholars of English translation.

While catalogs may help us identify translations and their agents, other digital platforms are equally useful in documenting the manifold connections that underlie the production and circulation of translated texts. The task of reconstituting a given translator's social or professional connections is greatly facilitated by projects such as the *Six Degrees of Francis Bacon* initiative (www.sixdegreesoffrancis bacon.com), which offers visualizations of social networks in early modern Britain and beyond, as documented in the *Oxford Dictionary of National Biography Online* (www.oxforddnb.com) and other sources (notably including user contributions). Databases of early modern correspondence, such as the *Early Modern Letters Online* project (emlo.bodleian.ox.ac.uk/), can prove equally useful: mentions of otherwise obscure translators may be found in the letters of their better-known patrons, friends, colleagues, or readers.[3] Projects dedicated to early modern print networks, such as the *Shakeosphere* website (shakeosphere.lib.uiowa.edu), or wider-scope resources such as the *Fifteenth-Century Book Trade* interface (15cbooktrade.ox.ac.uk/), equally allow scholars to retrace the links between translators, stationers, and wider European networks of print production and dissemination.

International connections obviously played a major part in the dissemination of texts and translations, but local factors (cultural, material, commercial) could be equally important in shaping translations (Armstrong). Interactive websites like the richly annotated and documented *Map of Early Modern London* (mapoflondon.uvic.ca/) offer wonderful opportunities for understanding marketing strategies underlying the dissemination of translations—with some stationers collaborating, for example, to cover a wider area of dissemination, and others focusing instead on specific locations where they might reach a distinct readership (e.g., female shoppers at the fashionable New Exchange near Covent Garden in the 1650s). A digital annotated map may also help us understand why translators with no documented social link, but with activities recorded in close proximity, ended up collaborating in a given project. Finally, digital collections allowing one to examine the visual features of translations (e.g., the Bibliothèque nationale de France's *Gallica* [gallica.bnf.fr] or, again, *EEBO*) have become almost indispensable—especially in the last few years of travel restrictions and library closures—for scholars focusing on the materiality of translated texts. Again, collections of digitized books are far from comprehensive, or even representative, in certain cases; yet they offer useful proxies when one is seeking to document translators' and printers' use of font, format, illustration, *mise-en-page*, and *mise-en-livre*, as well as the manuscript annotations that offer precious traces of a given translation's reception and afterlife.

The fragmentary status of many digital resources may perhaps be considered an obstacle to research. Yet digital projects remain in a continual state of progress: as new information continues to be gathered, catalogs and databases are bound to be updated. While it may be somewhat destabilizing to have to account for the provisional nature of quantitative data or for the incomplete perspective afforded by more qualitative analyses, this reality also constantly reminds us of the perpetually shifting early modern archive, and of the acts of selection and interpretation that are involved, not only in translation itself but also in the critical narratives that surround it.

Methods and Tools

One of the distinctive aspects of DH research is a commitment to evidence-based, "bottom-up" methodologies. As noted above, the underlying goal is to try to minimize critical filters and biases, and to counter or complement the selective nature of canonical case studies by including lesser-studied texts or phenomena, and allowing computational tools to reveal patterns that may have been obscured by traditional perspectives.

When one is working with catalogs of translations, the combination of a wide-angle view and an inclusive outlook (within the limits of an

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incomplete, evolving archive, as indicated above) yields immediate results. With relatively simple quantitative methods, one can obtain general indications of language flows, translation types, and the relative popularity of specific genres or authors. Previously unexplored research questions may also be directly answered: for example, looking at the presence of indirect, or "second-hand," translations in the *RCC*, Brenda M. Hosington has found that they represented between ten and fifteen percent of the printed output for 1473–1640 (Bibles included), thus giving nuance to existing hypotheses about the widespread use of indirect translation in the period (Burke; Hosington). A plain computation of the mediating languages recorded in the catalog has similarly confirmed the pivotal role of Latin and French as linguistic intermediaries for early modern Britain's literary culture (Hosington). Annotated catalogs such as the *RCC* and *CCC*, which include data on stationers, dedicatees, and known readers, have equally made it easier to document and assess the presence of women in Britain's culture of translation—as authors, translators, stationers, dedicatees, or subscribers (Belle and Guénette, "Connected Identities"). The presence and significance of less canonical texts or formats, such as translated newsbooks and other forms of ephemera, may also be directly assessed through annotated catalogs and databases. Naturally, certain forms of metadata, or categories of classification, are determined by the scholars compiling their corpus (e.g., textual genres, which can be notoriously slippery in the early modern period); a high degree of self-awareness and transparency is therefore required when one is performing and disseminating quantitative analyses of this kind.

Digital tools can also be fruitfully employed to conduct text analysis on early modern translations. As scholars of corpus-based translation studies have long established, such methods depend on the existence of complete, reliable, and fully searchable digitized texts (Baker). Scholars of English translation have an advantage with the *Early English Books Online—Text Creation Partnership* (*EEBO-TCP*), a text-encoding initiative that makes available a corpus of over 125,000 volumes, including newsbooks, pamphlets, and ephemera published between 1473 and 1800 (quod.lib.umich.edu/e/eebogroup/). In order to conduct full comparative studies of source-texts and translations, one would need parallel digital versions, with aligned segments of original and translated texts. This is only possible with certain sources—for example, with Latin texts available through the *Perseus Digital Library* (www.perseus.tufts.edu/), or with the collection of French Renaissance texts available through *Epistemon* (www.bvh.univ-tours.fr/Epistemon/index.asp). Here again, there are limitations: the digitized texts do not necessarily correspond to the editions used by early modern translators, and text alignment would probably need to be performed manually. The potential of such initiatives is, however, demonstrated through the example of the *Narragonien Digital* website (www.narragonien-digital.de/exist/home.html), a rich multilingual interface offering parallel textual versions and digital images of early modern editions of the *Narrenschiff* in German, Latin, French, and Dutch.

Text analysis programs may also prove extremely valuable when one is analyzing translated works in themselves. Stéfan Sinclair's *Voyant* visualization platform (voyant-tools.org/), for example, provides a user-friendly way of capturing the global semantic profile of (translated) texts, through a combination of word clouds, search tools, and quantitative charts. Plagiarism-detection programs such as *WCopyfind* or *InfoRapid Search and Replace*, as used by Brian Vickers, among others, for authorship attribution (Vickers), can be employed to identify semantic clusters within a given translated text that match other textual productions by the same translator, alternative translations of the same text by other translators, and contemporary works (translated or not) in the same literary genre. These connections can help us situate a translation within a wider literary corpus, or retrace verbal echoes and intertextual relationships that might not otherwise be detected. Other text-analysis tools such as *Sketch Engine*, for example, offer ways of assessing how frequently a given expression may have been used in a given linguistic and historical context. Obviously, the results of such

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queries are limited by the vagaries of early modern spelling, and automatic programs such as Dennis McCarthy's *Ye Olde Spelling Corrector* will probably not allow one to catch all instances of a given semantic cluster in English corpora such as the *EEBO-TCP* database (McCarthy). Still, these methods offer useful information on early modern linguistic and stylistic uses, and on translators' relative adherence to such norms, which represents a central research question in the descriptive branch of translation studies (Toury). Finally, stylometry programs designed to identify the syntactic and phraseological signature of a given writer (or translator) may also help trace patterns of influence and imitation. Maciej Eder's 2019 stylometric analysis of Ciceronian stylistic traits in early modern Latin texts (conducted with the *stylo* package in *R*) could thus be applied to a corpus of translations into Latin to reveal translators' varying attitudes to the Classical model in the wake of the pan-European Ciceronian/anti-Ciceronian debate of the sixteenth century.

To establish stylistic similarities between early modern Latin authors, Eder's analyses combine stylometric tools with a network-analysis software. Such programs (the most directly accessible being *Gephi* and Stanford University's *Palladio* online platform) are designed to reveal patterns of relationships between the various components of a network, as well as to identify major connection nodes and their relative influence on the network as a whole. They can be used not only to perform literary analysis (revealing the connections between, say, semantic or rhetorical components within a given corpus, or various characters in a work of fiction) but also to examine early modern social and cultural networks (Ahnert et al.; Greteman). Recent studies have thus focused on the relationships between translators and authors, printers, dedicatees, or other players documented in the paratexts of translations and other biographical documents, as well as their relative agency within British and Continental networks of print production (Belle and Guénette, "Translation"). Symbolic or virtual connections can also be traced through network analysis: in 2021, for instance, John R. Ladd analyzed name-dropping patterns in early modern English print, a study that could be replicated with a corpus of translations from the *RCC* and *CCC* and perhaps shed some light on the "status anxiety" that Neil Rhodes identified in 2011 as a common feature among early modern English (literary) translators.

Finally, following Guyda Armstrong's call in 2019 for a "spatial" early modern translation studies, the potential of digital-mapping and geo-location technologies should not be overlooked. Projects on European epistolary and literary networks, such as *Mapping the Republic of Letters* (republicofletters.stanford.edu/) and the *Encyclopedia of Romantic Nationalism in Europe* (ernie.uva.nl), provide inspiring templates for future initiatives on early modern translation. Combining dynamic maps representing common trajectories of connection and diffusion with network-visualization tools, searchable databases, interactive timelines, and micro–case studies, they offer the kind of rich, multilayered environment that may best represent the complex interconnections between human agency and the material, historical, and geographic contexts underlying early modern Europe's cultures of translation.

While the diverse digital tools and methods discussed above vary greatly in their design and their critical uses, their practitioners hold in common a concern for combining the large-scale, bird's-eye perspectives afforded by computational methods with detailed attention to the specific textual, material, and historical traits of the cultural objects under scrutiny. Variously called "mid-range reading" (Booth), "disclose reading" (van Vugt), and "multiscalar" analysis (Armstrong), these approaches are characterized by a high degree of attention to process and a shared awareness of the ways in which apparently neutral computational tools are deeply entangled with the critical perspectives, interpretive choices, and potential biases of the human scholar.

Outcomes and Challenges

Besides the research avenues outlined above, digital environments offer rich opportunities for the academic study and teaching of early modern translated

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texts. Digital annotated editions of translations, in particular, appear to be ideally suited to the multilayered hypertextuality of early modern translations themselves. One could envisage forms of "hyperediting" (McGann) including textual variants, comparisons with source texts (including composite sources, where pertinent), links to commentaries and other documents probably consulted by translators, and textual concordances and intertextual references, as well as commentaries and annotations on contextual elements (historical, cultural, topical, etc.). Recent digital initiatives offer inspiring templates: *Narragonien Digital*, mentioned above; the *Pulter Project* (pulterproject.northwestern.edu/), which, while not dealing with translations as such, offers rich "amplified" versions of Esther Pulter's poems, as well as "curations" and "explorations" sections providing additional textual and contextual material by a large team of scholarly contributors; and the *Devonshire Manuscript* project, which takes the innovative form of a social edition (*Wikibook*), embracing the dynamics of social networking and collaborative knowledge production (Siemens et al.).[4] In these projects, the multitiered, open-ended format of the digital edition is put forward as a way of reflecting the multivalent nature of early modern textuality, as it shifts the emphasis from the establishment of a final, authoritative version to the complex textual, social, and interpretive processes that underlie the making of early modern texts. This approach seems particularly well attuned to the polyphonic, collaborative, and multimediated nature of translation in the early modern period and beyond.

A crucial point here is the accessibility of digital resources to the scholarly community, whether for research or teaching. While many of the projects mentioned in this piece are accessible to all (most often under a Creative Commons license), some are only available to subscribers: this is the case for the digital collections of *EEBO* and its forthcoming, wider-ranging equivalent, *Early European Books*. Sustainability can be a major concern, be it in terms of financial resources, institutional support, or technological support. Some projects, such as the *Perdita* corpus, started as academic research initiatives but were subsequently commercialized, perhaps for lack of enduring financial or institutional support. Access to such resources remains difficult for students of nonsubscribing institutions and for independent researchers.

Issues of academic rank and status may also arise in the collaborative dynamics of digital projects. Whether dealing with catalogs, digital editions, or multifaceted interfaces involving data collection, curation, and analysis, digital initiatives depend on the combined expertise and effort of scholars and students at various stages in their careers. Collecting, structuring, cleaning, and visualizing data, as well as extracting, aligning, and annotating corpora are highly iterative and at times frustrating processes, often performed by student or early-career members of the team. Yet a recursive, trial-and-error approach is integral to what Sinclair and Geoffrey Rockwell call the "agile interpretive cycle" of digital analysis (278): as they rightly note, new critical outlooks and research questions are often generated in the very process of collecting, curating, and manipulating data. This calls for a decentered, fully collaborative team dynamic whereby project directors engage with the minutiae of the editing or curating process (if not the programming tasks themselves), and whereby diverse forms of research contribution, including more mechanical or technical aspects, are fully acknowledged.

Finally, while recent digital initiatives have clearly committed themselves to values of cultural inclusivity and gender equity (see the free access and now multilingual DH tutorial library *The Digital Historian*), certain archival and critical biases remain to be overcome. A solid majority of projects and databases currently accessible are in English and concern English-language corpora; other languages are significantly less well-represented, with direct consequences for the study of multilingual or translated texts outside the English-speaking domain. Women remain underrepresented in the early modern archive in general, and while certain DH initiatives are clearly committed to correcting this bias, much remains to be done to give women their full place in early

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modern translation scholarship. The same is true of non-European languages and cultures, which too often remain in the blind spot of narratives of early modern cultural and literary exchanges. There have been repeated calls to de-Westernize and decolonize the discipline of translation studies, and new projects are now specifically devoted to examining early modern European cultures of translation in terms of global contacts and exchanges. In this context, the media, methods, and critical approaches developed in the digital humanities certainly open unprecedented opportunities for new, fully historicized and self-reflexive accounts of the multilayered linguistic transfers, social connections, material exchanges, and cultural transfers marking what we call the early modern period.

Notes

1. On the debate about distant reading, see, e.g., the essays in the Theories and Methodologies section of the May 2017 issue of *PMLA*, in particular Booth's "Mid-Range Reading: Not a Manifesto."

2. This happens to be my own field of research, but it also appears to be one of the most developed or, at least, most readily accessible to international scholars with an Internet connection. I am fully aware of the linguistic and cultural biases inherent in my focus on English-language literature.

3. See also the project *Reassembling the Republic of Letters*, which gathers a number of corpora and digital projects on early modern correspondence across Europe (www.republicofletters.net/).

4. See also the *Digital Cavendish* project (digitalcavendish.org), which features a collaborative, crowdsourcing interface for the editing of some texts not available through *EEBO-TCP*.

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