2019 Seminar Abstracts: Navigating Early Modern Interfaces
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Mapping Consensus:
Performing Toponymic Histories in *Tamburlaine, Parts I and II*

While scholars have long recognized that Christopher Marlowe populates *Tamburlaine the Great, Parts I and II* with characters who invoke toponyms from Abraham Ortelius's *Theatrum Orbis Terrarum*, the first so-called modern atlas, my essay treads new ground by arguing that Marlowe portrays his characters' toponymically laced invocations as generative acts that summon forth new histories. I argue that Marlowe depicts the conquests of Tamburlaine, Cosroe, and others as a series of ritualized performances in which groups of influential social actors assemble to speak and internalize toponyms to claim "authentic" histories. I contend that these toponymically infused rituals are performative in a Butlerian sense in that they represent what Judith Butler would term a "stylized repetition of acts" that institute identities (519).

Furthermore, I suggest it is through these performative rituals that maps, or rather, what Vincent J. Del Casino Jr. and Stephen P. Hanna have called "map spaces" take form. Casino and Hanna, who also draw upon Butler's theory of performativity, argue that cartographic representations cannot be extricated from the spaces in which they emerge as "all spaces are always already representations that are produced by and productive of a myriad number of bodily practices and performances as social actors draw on their intertextual knowledges while reauthoring both space and representation simultaneously" (41). A map space, then, is continually transformed by the social actions that momentarily sustain it.

By portraying his characters' "mapmaking" as a series of toponymically permeated performances, I argue that Marlowe challenges the historical verisimilitude attributed to the so-called "new geography," and especially the *Theatrum Orbis Terrarum* in the late sixteenth

century. I assert that Marlowe portrays his characters' "mapmaking" as a performative process resting on the precarious foundation of a collective consensus to denaturalize the apparently true portrait of history that geography was thought to provide in the late sixteenth century. In Marlowe's narrative universe, the eye of history—i.e. a map space—takes form as merely the temporary outcome of a stylized repetition of acts.

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Long-Term Future of Digital Interfaces

In recent years, as the field of Digital Humanities has expanded and evolved, there has been an influx of digital projects and interfaces supporting new scholarship and allowing researchers to explore their fields in innovative ways. Digital interfaces have significantly improved with the incorporation of recent technology trends and have provided opportunities for scholars to explore texts from new perspectives, or perhaps for the first time if the physical text is damaged or there is an inability to travel to the holding institution. As a tool created through and for digital scholarship, one of the key features of these interfaces is the continual technological development and expansion of content. It is the "multi-faceted nature of much digital humanities research, which so often straddles the divide between content development and technological experimentation"[1] that leads to a lack of finality among these projects. This characteristic requires long-term human intervention to ensure continual functionality. Because of this inherent aspect of digital interfaces, what happens when a primary developer of the project moves on to new research interests, or resources, financial or technological support, are no longer available to maintain it for future researchers?

This paper aims to define key aspects of digital interfaces and outline the current challenges facing the longevity of these scholarly tools. Additionally, it intends to provide an overview of tools and methods from the fields of digital curation and digital preservation. On the one hand digital curation "focuses not just on preserving digital entities but on keeping them functional, supporting their continuous annotation and maintaining their fitness for purpose" while digital preservation has the "objective of retaining the ability to display, retrieve, manipulate and use digital information in the face of constantly changing technology."[2] Through the focus of digital curation and digital preservation the goal of this paper is to provide recommendations for tools

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[1] Brown, Susan, Patricia Clements, Isobel Grundy, Stan Ruecker, Jeffery Antoniuk, and Sharon Balazs. "Published Yet Never Done: The Tension Between Projection and Completion in Digital Humanities Research." *Digital Humanities Quarterly* 3, no. 2 (2009). http://digitalhumanities.org:8081/dhq/vol/3/2/000040/000040.html.

[2] Ross, Seamus. "Approaching Digital Preservation Holistically." In *Record Keeping in a Hybrid Environment: Managing the Creation, Use, Preservation, and Disposal of Unpublished Information Objects in Context*, eds. Alistair Tough and Michael Moss, 115-153. Oxford: Chandos Press, 2006.

and methods that creators of digital interfaces can apply to their workflows in developing a project, or after a project is fully formed, to ensure usability for future scholars.

Lianne Habinek
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Title: Know thyself, know the world:
Early modern paper engineering and anatomical-geometrical bodies

This paper opens by considering a peculiar phenomenon in scientific history – namely, the invention of the anatomical flap-book in the 16th century, in which a reader can lift a torso flap on a picture of a seated figure to reveal the organs beneath. Thus the reader replicates the experience of the anatomist, successively uncovering the body's secrets. Usually these texts were uncomplicated, with one figure and one flap; but we will consider here a bizarre multi-flap, moving-part anatomy first published in Europe at the beginning of the seventeenth century, Johann Remmelin's *Catoptrum microcosmicum*. This anatomy was republished in England, and by the end of the seventeenth century, it contained not outdated copies of images from a prior century, but pirated illustrations from a famous contemporary neuroscientific text, Thomas Willis's 1664 *Cerebri anatome*.

Yet anatomy was not the only discipline to make use of flaps, as mathematical texts such as Sir Henry Billingsley's 1570 *Elements of Euclid* deployed similar pop-up page elements to illustrate geometrical concepts of surface area or volume. This paper will address the *folded page*, namely the ways in which flaps could be folded up, in, or out to replicate three-dimensional figures and spaces. As a corollary, I will consider the particular relationship such similar paper folding techniques invites (or provokes) between the disciplines of geometry and anatomy.

Noam Lior
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"Interface Marriages:
Print as Performance Recording in Early Modern Drama"

In considering the transmediation of medieval South Slavic epics from oral tradition to print, John Miles Foley posits three organizational questions: What gets recorded? What gets published? What gets received?" (Foley). Foley's analysis is an invitation to consider print as a technology for the storage and playback of performed media, a technology which is both lossy and generative at each step in this process. Early modern drama is a similar case in that it uses a multiply-coded text both to convey linguistic meanings and to provide a 'recording' of a performance event. The text, as interface, enables a user to produce an ideational construct – a mental image of the play's fictional people and events, as well as a sensory construct – a kinesthetic idea of the fiction as conveyed by bodies and voices in a space. Drama is not unique

among early modern print genres, as this multiplicity is shared by poetry, ballads, sermons, and other orations. Early modern texts – and dramas in particular – are also variable and promiscuous in the slippage between one form of coding and the other, as in the variability of speech-headings, the use of stage directions to refer interchangeably to fictional action and practical staging, and the occasional use of actor's names instead of character names.

The processes of recording and reception/playback use convention as a form of compression – most things that a hypothetical user already knows don't need to be included in the recording, as the user can supply these elements at the playback stage. In the case of Shakespeare's plays, knowledge of staging practices, rhetorical structures, and cultural connotations enables the recording process to do away with lengthy explanations, such that a complex set of instructions and meanings can be compressed into a stage direction such as "*drawn*," or "*retires*."

This paper aims to sketch a framework for a consideration of early modern printed drama as multimedial storage and playback, aiming towards an exploration of digital multimedia interfaces – tools which combine print with sound and video recordings – evoke the processes already encoded in early modern documents.

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Thinking Through Objects: Tiny Ontologies and Database Design

We experience the world imperfectly, in a fragmentary way. Books, brains, and computers all offer ways to arrange the fragmentary information we gather from around us. We call this information "knowledge" or "facts" or, most commonly now, "data" and the process of discovering that information and giving it form, of "making sense," epistemology. As literary scholars, we do this with texts, treating them as "carriers of information" (to borrow Natalie Zemon Davis's phrase) that may be broken and reassembled into what we consider to be a meaningful order. Literary critics are far from the only interpreters of texts, however, and occasionally objects themselves document readers' processes of breaking and reassembling in the form of annotations. Annotated books are hybrid objects and as such demand a hybrid methodological approach. This paper suggests that one can be found in what Christy Desmet calls "tiny ontologies," a critical approach that regards texts as disaggregated objects of inquiry which possess individual integrity while also, on the level of their aggregate parts, engaging in ever-shifting relationships with their surroundings.

It suggests that Shakespeare's texts have, in a sense, always been just such disaggregated objects since, at every stage in their lifecycle, they were composed, performed, experienced, and interpreted in parts. I argue that digital instantiations merely add another layer to the shifting network of relations that constitutes a Shakespearean text and take a case study a subset of texts from *Common Readers*, a digital project dedicated to designing and building a relational database of annotated early modern plays. Concentrating on a group of second folios, I analyze the relationship between information organization in the mind of individual readers, as captured

by their annotations, and the organization of those annotations as information to be incorporated into a relational database design. As the data contained by these physical objects is remediated and resituated, I will reflect on the process itself and what we might learn from the differences (and similarities) of building digital information architecture vs. navigating the information architecture of the page. I hope to conclude with visualizing my own data on these annotations, and perhaps by reflecting on the process of data visualization as itself a form of information organization which enables us to re-view Shakespeare's plays form a new vantage point.

M. Stephanie Murray
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"The Undiscovered Country:
Mapping Personal Narratives in Early Modern Contexts"

Early in the late part of his play, Hamlet directs Horatio that "We must speak by the card or equivocation will undo us" (5.1.129). The (sea-)card that will stabilize their narrative is a kind of memory device, a narrative encoded as a visual progression through a land- or sea-scape. The process of creating these personal maps of journeys is based on the nautical concept of dead reckoning, which, as a method for charting a vessel's position without reference to astronomical observation, charts progress based on a known, previously fixed point in the past course. To go there, you must first know where here is. Travel is from known to known, with the sea-card serving as the memorial account of the relationship between those knowns. In this way, the unknown is eventually circumscribed by the known and integrated into a sequential and logical account of self and place.

I'm thinking through the conceptual import of the personal map in dramatic narratives, as characters establish their current position in a generic form so they can recognize landmarks as they move forward. In my paper, I pull together the physical, conceptual, metaphoric, and political presences of early modern maps to consider how the theatre borrows from them and loans its own concepts.

Rebecca Niles
Folger Shakespeare Library

'Rarely and exactly wrought': the Technology of Navigating Shakespeare's Texts"

Throughout the history of Shakespeare editing, one constant and yet routinely unnoticed role of the editor is as technologist. Historically, while the dialogue of playtexts is treated as sacrosanct, the textual scaffolding surrounding it, including stage directions, speech prefixes, and the mis-en-page itself, has typically been the editor's domain; to refine as a means of improving the book's functionality as a record, or method of transmitting, the abstract entity of the play. Because of this freedom to tinker, this aspect of the text has experienced a great deal of

technological refinement in terms of its expression on pages and screens, and how the various elements of this textual scaffolding interrelate.

One feature of textual scaffolding that has evolved throughout the course of Shakespeare publishing and continues today is line numbering. Throughout the history of Shakespeare publishing we are afforded a clear view of how line numbering evolved in response to editorial need. As it developed, line numbering provided means of wayfinding that enabled increasingly more precise modes of reference — both direct reference, in the form of in-text annotations, and remote reference, in the form of commentators referencing Shakespeare texts in other works. This trajectory continues into the digital era, where technological affordances enable a level of granularity that forces editors to confront the question: what is the smallest meaningful unit of the text, and by what criteria is this unit determined?

To review this trajectory and understand more about its catalysts, we will focus on the practical aspects of line numbering, including an analysis of how, historically, editorial requirements propelled the development of increasingly precise modes of indexing and referencing texts. Through reference to how fragments of text are stored and indexed in modern digital editions, we will consider whether we are continuing a trajectory of improvement, or if it is possible to be too precise in today's editing landscape. Additional topics may include a comparison of how, historically, editors used line numbering as a way to enable different books to interface with each other vs how digital texts are made to interface with each other today; what kinds of analysis/scholarship are supported by increased precision, and whether the degree of precision propels the investigation, or vice versa; and what we stand to lose through the "craven scruple of thinking too precisely" about texts that are rich with sites of productive ambiguity.

Lauren Shohet
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Shakespeare as Interface

Perhaps because the most usable interfaces are the least visible ("the secret to interface design [is to] make it go away . . . the content of . . . communication [should] dominate"), "interface" can hover conceptually between the figurative and the actual.[i] My paper thinks about interface as a space where unlike things need to be put into functional relation. When this works successfully, the ensuing illusion of natural commensurability reveals congruities we might not otherwise ponder. On the other hand, it also can mask incompatibility, facilitating misrecognition that we would do well to reconsider. As Matthew Kirschenbaum remarks, "the interface is . . .where representation and its attendant ideologies are most conspicuous to our critical eyes."[ii]

A primary purpose of my paper is thinking about Shakespearean drama as an interface between early-modern artifact and modern-day receivers. Drama recruits receivers into affective and intellectual commitments that press us to imagine we have access to things that might actually inhabit deeply foreign realms. Do we know what "love" was to early moderns? "parent"? belief? causality? I want to ask whether dramatic constructions that draw us into their worlds are

usefully comparable to interfaces between semiconductor pulses and human senses, or between binary code and screen icons. Are there large categories (performance, form, theatricality) or more local ones (a particular prop, figure of speech, or character) that usefully can be investigated as interfaces? Can contemporary interface theory illuminate congruities, incompatibilities, and especially transactions between (for instance) past and present, historical event and dramatic form, person and character, subjectivity and language?

The play that will focus my consideration is *Cymbeline*, whose multiple timeframes and genres thematize the problems of transactional mediation that interfaces are tasked with managing. I would be pleased if the investigation could also shed some light on questions in interface theory, such as the predominance of spatial metaphors in an objectively multi-dimensional phenomenon that could equally well emphasize temporailty, embodiment, and the like; or Steven Johnson's twenty-year-old prediction about interface as the master trope of early-twenty-first-century culture. Jonson identifies the "technological breakthrough" that distinguishes computers from earlier machines in "the idea of the computer as a symbolic system, a machine that traffics in representations and signs."[iii] I hope to unfold a discourse about interface that lets us think about how this symbolic system is like and unlike drama.

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A Phenomenology of Reading Shakespeare Screens and Pages

Books about the "reading brain" continue to proliferate[3], as authors consider how the transition to digital reading has altered cognition and appreciation. In a recent *Harper's* article, for example, Will Self argues that "the screen is indeed not a good vehicle for the delivery of long-form prose," a conclusion that may also apply to reading Shakespeare's plays on digital interfaces. The differences between paper page and digital screen reading have also been investigated by cognitive psychologists such as Anne Mangen who attempt to assess and measure the "sensorimotor contingencies" which differentiate interface formats. My approach to interface and cognition is phenomenological, as I systematically record my reading engagement with four Shakespeare page/screen designs, examining iPad, Kindle, computer/internet, and Arden Shakespeare print editions. Whether the Shakespeare reader is experienced or inexperienced, motivated by entertainment or scholarship, the interface must support the unique cognitive demands of reading early modern drama and making it meaningful. If the brain is rewired by interface exposure over time, then readers may already be conditioned to engage more successfully with some interfaces over others. While such a phenomenological reflection may only illuminate my own idiosyncratic reading practices, it may also reveal more generally how interface properties across platforms profoundly condition both pleasure and understanding.

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[3] See Wolf, Maryanne, and Stoodley, Catherine J. *Reader, Come Home: the Reading Brain in a Digital World.* New York: Harper, 2018; and Carr, Nicholas G. *The Shallow: What the Internet Is Doing to Our Brains*. New York: W.W. Norton, 2010.

[i] Nicholas Negroponte, *Being Digital* (NY: Knopf, 1995), p.

[ii] Matthew G. Kirschenbaum, " 'So the Colors Cover the Wires': Interface, Aesthetics, and Usability," in Susan Schreibman, Ray Siemans, and John Unsworth, eds., *A Companion to Digital Humanities* (Blackwell, 2008), 523-42, 525.

[iii] Steven Johnson, *Interface Culture: How New Technology Transforms the Way We Create and Communicate* (San Francisco: HarperEdge, 1997), 15.