12 Shakespeare Source Study in the Age of Google

Revisiting Greenblatt's Elephants and Horatio's Ground

Brett Greatley-Hirsch and Laurie Johnson

For many years the *sine qua non* of new scholarly discovery has been a cache of overlooked manuscripts turning up in a box in a country-house attic, the drawer of an old desk, or, in the classic case of the Boswell papers, an ebony cabinet in an Irish castle. The eureka moments in the life of today's questing scholar-adventurer are much more likely to take place in front of a computer screen.

—Patrick Leary[1]

The philological turn in Shakespeare studies in recent decades has been enabled in large part by the emergence of large-scale databases of digitized primary materials and increasingly sophisticated computational techniques for querying and visualizing the data. This proliferation of electronic resources coincides with a broader disciplinary turn in literary studies towards materialism, as reflected by renewed interest in bibliography and textual studies, the history of the book, and material culture.[2] At the convergence of these methodological and critical paradigms, source study in the Age of Google promises scholars the ability to tease out complex inter-textual relationships across a variety of media without "labor[ing] under the stigma of positivism" as earlier studies had done.[3] In this chapter, we consider how these new approaches can be used to examine the phrase with which some scholars might have once imagined the door to source study to be slammed shut, and we offer two case studies focused on the sources of *Hamlet* to demonstrate the possibilities and pitfalls of these new approaches to Shakespeare "sources" and "source study" while discussing their methodological implications.

If the search for literary sources—conceived of in terms of singular, one-to-one textual correspondences—is not futile, it is nonetheless reductive in nature. As disconcertingly vague as "the circulation of social energy" may be as evidence for the cultural transmission of ideas, the New Historicist readings that employ it as an amorphous explanatory device are anything but reductive. It is precisely the excitement and

freshness of New Historicism that ensured its allure and longevity in literary studies. Even so, discomfort with the historical naiveté with which relations between text and culture tended to be treated by New Historicists provoked calls for more philologically nuanced, theoretically sophisticated, and bibliographically sensitive approaches. One such approach, focusing with meticulous detail on "the specific material and institutional conditions of the discursive exchanges" under investigation, was gleefully dubbed by its chief proponents as "The New Boredom."[4]

Thankfully, there is a satisfactory path for us to follow besides the positivism of traditional source study, the nebulous "circulation of social energy" of New Historicism, and the tedious specificity of its more bibliographically minded successors, accomplished by reorienting the question of what constitutes a "source." As Richard Levin has argued, "a source is not a text or an event; it is always a *relationship* between that text or event" and the work that draws upon them; "there are many possible kinds of relationships that are homogenized under the single word 'source.'"[5] Stephen Lynch goes further, arguing "the old notion of particular and distinct sources has given way to new notions of boundless and heterogeneous intertextuality," such that "sources themselves can be reexamined as products of intertextuality," as "dynamic and often inconsistent texts involving layers of implicit and subtextual suggestions."[6] The case studies we offer here demonstrate the role that new modes of analysis can play in unlocking the relationships between texts and events and in bringing the intertextual and subtextual layers into sharper view, yet we also offer cautionary indications of where the data requires deeper scrutiny, based on lessons learned from the historical and cultural turns that have come before us. Source study in the Google Age need no longer deal in the categorization of correspondences into linear structural relationships, but in mapping complex webs of connotation and resonance.

Googling Graveyards

In 1985, Stephen Greenblatt famously characterized source study as "the elephant's graveyard of literary history."[7] Almost without exception, critics have interpreted this as a negative assessment. For example, Laurie Maguire contrasts an earlier generation's reverence for source study "as one of the highest forms of Shakespeare scholarship" with Greenblatt's declaration as evidence that "by the end of the twentieth century the esteem in which this activity was held had fallen irrecoverably."[8] Other critics cite Greenblatt's essay to illustrate how "scathingly dismissive of source study" both he and the New Historicism are/were[9] and to explain why source study "has had a bad name for some decades"[10] and "been in a state of neglect."[11] Robert J. Griffin provides a notable exception, citing Greenblatt's epithet to set what he sees as New Historicism's recuperation of source study against its distrust of psychoanalytic criticism: "For while the new historicism recuperates the

antiquarian source study of the old historical scholars—what Greenblatt refers to lovingly as 'the elephant's graveyard'—it remains wary of, when not hostile to, psychoanalysis."[12] Does Griffin represent the exception that proves the rule, or is there in his reading of Greenblatt's phrase as being made "lovingly" a glimpse of the potential for this phrase to carry positive connotations that have been forgotten by those who read the phrase as a rejection of source study? By using the tools of source studies, old and new, we aim to show that Griffin's position, while not a majority view, is not altogether untenable. Even if, as Maguire suggests, "Greenblatt's metaphor continues to encapsulate the dominant attitude" towards source studies,[13] the divergence of critical interpretations outlined above suggests little attention has been paid to the metaphor itself. What is an elephant's graveyard, and is it good or bad? Where does the metaphor come from?

An elephant's graveyard (or any of its cognate forms, such as cemetery or burial ground) refers to "a place known only to the elephants where the elderly pachyderms go to die, and bones and tusks pile up beyond measure."[14] One of the earliest appearances of the elephant's graveyard in literature comes from the Seventh Voyage of Sinbad the Sailor in the *Thousand and One Nights*, a collection of stories first translated into English in 1706. After two months of successfully hunting elephants with a bow and arrow, Sinbad is knocked unconscious when the herd eventually retaliates. Carried off by one of the bulls, he awakes to find "a long and broad hill, covered all over with the bones and teeth [i.e., tusks] of elephants." Sinbad concludes, "this was their burying place, and they carried me thither on purpose to tell me that I should forbear to persecute them." He returns to the city to report this discovery to his master, who is thrilled at the prospect of such "considerable riches." They return to collect all of the ivory, and Sinbad is granted freedom and a share of the fortune for his reward.[15]

By at least the eighteenth century, English readers were tantalized by the image of secret ivory hoards. However, an absence of results when searching the *Early English Books Online Text Creation Partnership* (EEBO-TCP) Phases I and II, *Eighteenth Century Collections Online* (ECCO), and *Literature Online* (LION) databases suggests that the phrase "elephant's graveyard" and its cognate forms only entered into common usage a century later.[16] Figure 12.1 plots the frequencies of these phrases as they occur in books printed between 1820 and 2000, using the *Google Books* Ngram English 2012 corpus.[17] The figures are not comprehensive—the corpus contains roughly 4.5 million English books printed between 1505 and 2008, which is only a fraction of the total published. Nonetheless, they are representative of general trends. The spike of references to "elephant cemetery" in the mid-nineteenth century corresponds with the republication of the *Thousand and One Nights*, as well as allusions to Sinbad's tale in travel writing. References pick up at the dawn of the twentieth century, by which time adventure narratives set in inner Africa became popular, inaugurated and exemplified by the novels of H. Rider Haggard.[18]
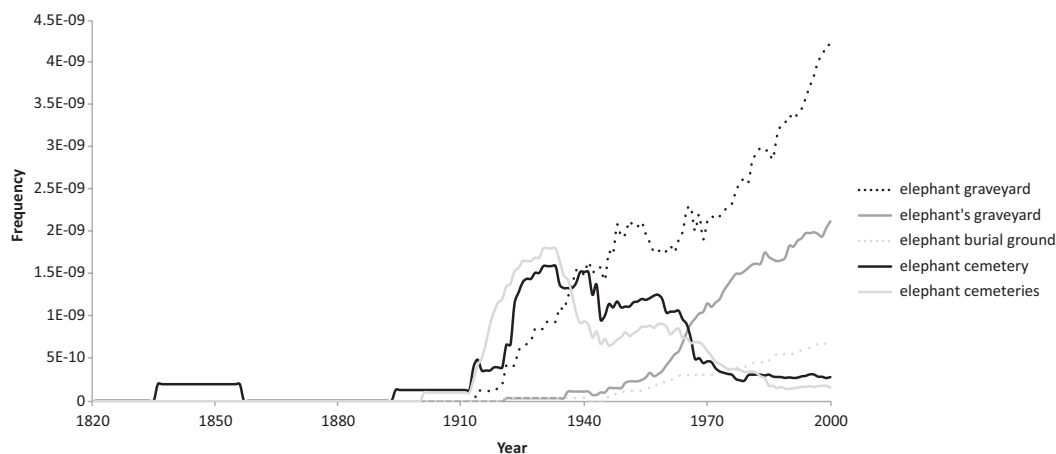
Figure 12.1 Frequencies of "elephant's graveyard" and cognate forms in English printed books, 1820–2000, in the Google Books Ngram English 2012 corpus.

Although it remained a staple in the literature, television, and film of the early twentieth century, biologists and hunters alike dispelled the existence of elephant graveyards as a myth, suggesting that the accumulation of pachyderm remains at particular sites is "not the result of a peculiar habit of the elephants" but rather "due primarily to the question of water supply."[19] The prolific hunter W. D. M. Bell, responsible for shooting over two thousand heavy-tusked elephants and carefully documenting his kills, was particularly dismissive. Upon reaching "what native information called an elephant cemetery," Bell reported being "struck by the fact that there were no recent bones or skulls," surmising that the "white bleached" remains he found were evidence of an earlier drought: "So much for the elephant cemeteries," he concluded.[20] Later in the twentieth century, biologists would also come to blame hunters and poachers for the promulgation of the myth:

> [I]t is possible that old elephants whose days are numbered may congregate on riverbanks to feed on the lush vegetation. Some countries have also seen elephant killing-fields, where poachers have left dead elephants strewn across the landscape. This happened, for example, in the Murchison Falls National Park in Uganda, which used to be home to 8, 000 elephants; they were killed for their ivory by poachers, many of them soldiers of Idi Amin's army, who reduced the population's numbers to less than 100 in the early 1980s.[21]

Statements such as this reflect the growing international concern about dwindling elephant populations, particularly in the 1970s and 1980s, which culminated in the 1989 listing of the African elephant in Appendix I of the 1973 Convention of International Trade in Endangered Species of Flora and Fauna (CITES),[22] effectively banning the world ivory trade.

Although public interest in the fate of the African elephant remained high, resistance to the ban by a number of African states necessitated a series of Dialogue Meetings in the 1990s and 2000s, regulating the sale of African elephant ivory subject to fulfilling strict criteria.[23]

Ivory was a contentious international ecological and economic issue by the time Greenblatt first published his remarks about source study, with the fabled elephant's graveyard to which he likened it no longer romanticized. Hollywood film provides a striking example of this shift. At the climax of the sensational hit movie of 1932, *Tarzan the Ape Man*, the secret elephant's graveyard offers the adventurers a fortune in ivory—"riches, millions"—in a setting described by the character Jane as "solemn and beautiful."[24] Just over sixty years later, Disney's *The Lion King*—the highest-grossing release of 1994—depicts the elephant's graveyard as a "shadowy place" of evil and foreboding.[25] Dictionaries of phrase and fable offer further examples of this shift: the 1870 first edition of Brewer's dictionary does not mention the phrase, whereas the 2006 second edition of the Oxford dictionary defines "elephants' graveyard" as "a repository for unwanted goods."[26] This sense of the phrase entered twentieth-century military and naval slang as a nickname for appointments to desk jobs without any real power before retirement.[27]

Greenblatt's characterization of source study as "the elephant's graveyard of literary history," whether by chance or design, evokes a complex and contradictory set of cultural associations. On the one hand, it could draw on the long romantic tradition of adventure and the mystery of the unknown, of treasure hunting and the mastery of nature, allowing readers to interpret the phrase in a positive light. On the other, it could equally rely upon the stigma surrounding the ivory trade to suggest the activity was destructive, or on the knowledge that the elephant's graveyard is a myth to imply that the search for literary sources is just as futile. However the reader might choose to take Greenblatt's quip, our task here has been to demonstrate that the phrase does not appear in his text on the basis of having been drawn from a single source. In keeping with the claims made by Levin and Lynch, for example, we do not offer a "source" as traditionally conceived in terms of one-to-one correspondence for Greenblatt's epithet; rather, our aim has been to harness the power of electronic databases to identify chains of association with the "elephant's graveyard," as both concept and phrase, which form the rich cultural background available to, if not shared by, Greenblatt and his readers.

Sourcing Elsinore

A source is a source, of course, of course.

— Brian Berliner[28]

These new approaches to source studies are enabled by computational methods and electronic resources, but are bound up with a shift in views of the status of sources—questions of transmission are, for example, no longer confined to an original source text and a later text that draws on it. Sometimes a source is not a source, of course. To explain, we shall consider one of the most famous examples of established source transmission. There are two sources most commonly associated with Shakespeare's *Hamlet*. The first is the *Gesta Danorum* by Saxo Grammaticus, written no later than 1208 and published in Latin in 1514, and which contains the "Vita Amlethi." Francois de Belleforest rewrote Saxo's history in French in the fifth volume of his *Histoires tragiques*, first published in 1570.[29] Studies of the source of Shakespeare's *Hamlet* tend to focus on the question of whether his play is based principally on Saxo or on Belleforest, but when we treat them as "source texts" in this fashion, we potentially overlook the extent to which all three participate in the long history of appropriations of a story that predates them all. Geoffrey Bullough, for example, notes in his *Narrative and Dramatic Sources of Shakespeare* that Saxo's story is woven together from a number of possible older stories, but he also states that the "mythological origins and analogues of the Amleth story in Scandinavian and Celtic lore do not concern us now."[30] Bullough's concern, of course, lies with the most direct source text upon which Shakespeare might have based his play, and he ends up siding with Belleforest: "I see no proof that […] Shakespeare […] used Saxo Grammaticus at all."[31] And yet, curiously, in cataloguing the various texts he reprints in the collection, Bullough lists Saxo first as "Source" and Belleforest subsequently only as an "Analogue." The problem for Bullough is that Belleforest translates Saxo and then, he argues, Shakespeare adapts Belleforest, a transmission path not easily accommodated within a system of categories of *either* source *or* analogue.

While he credits Belleforest's *Histoires tragiques* as the source for the story of *Hamlet*, then, Bullough acknowledges the prior value of Saxo as Belleforest's source, but a question of Saxo's sources is left undecided. Saxo's Amleth seems undoubtedly to have been based on a much older figure in order to meet King Valdemar I and Archbishop Absalon's brief to produce a national history in Latin rivaling the great chronicles being written by the British and French.[32] Perhaps the oldest parallel to Amleth can be located in the Roman tale of Brutus—whose real name was Lucius but who changed it to Brutus, who feigned madness, and who revenged his family's death by killing the king.[33] Yet the name of "Amlethus" suggests a debt to the Icelandic tale of Amloði. Although evidence for the content or even the existence of just such an ancient saga is slight, scholars have identified glimpses in the historical record. The name "Amloði" in Icelandic is a nickname given to any weak-minded or imbecilic person,[34] but it is unclear if this meaning derives from the name of a figure who possessed these characteristics or if the word emerged

first and is given to a hero of a saga in order to convey this impression of him. The earliest reference to the name appears in a ninth-century verse fragment by Sem Snæbjörn, recorded four hundred years later by the Norse historian Snorri Sturlason: "They say the nine skerry-brides turn fast the most hostile sea out beyond the land's edge, they who long ago ground Amloði's mill."[35]

Regarding the etymological origins of the name "Amlethus," Lisa Collinson has argued that both "Amlethus" and "Amloði" share a common linguistic ancestor in the old Irish "Admlithi" from the *Togail Bruidne Dá Derga*—the name means "To-Be-Greatly-Ground," which might be a source, Collinson suggests, for the image of "Amloði's mill" beyond the land's edge.[36] Collinson's argument hinges on the image of "Admlithi" as a "sea-grinder"—the same motion with which the sea grinds the sand (the "mill") at the edge of the shore lends itself linguistically to associations with grinding in general—but she concludes that Saxo is unlikely to have known of this meaning when he took the name of the figure from Icelandic legend for his Danish hero since the maritime associations bound up in the term are all but absent in his tale.[37] In Collinson's account, then, the poet Snæbjörn presents a "corruption" of the older Irish term, which Saxo exacerbates, most likely unaware of the Irish original.[38] This scholarly narrative of corrupted names seems to leave no room for any genealogical connection to the Brutus story; yet a scenario based on translation rather than corruption may strengthen the link: "brutus" in Latin means "dullard," which suggests that the translation of the tale into Icelandic could have involved translation of the name to "Amloði," which we have seen refers to a weak-minded person, and this in turn is rendered in Saxo's Latin as "Amlethus."

This leaves us with two potential genealogies: in one, both the Brutus story and name (with its association with weak-mindedness) are adapted for an Icelandic tale by way of translation; in the other, the Irish name retains the "sea-grinder" association when it is used in the Icelandic tale, but its corrupted form in that tale is exacerbated by Saxo, causing the association to be lost. Translation or corruption—any attempt to resolve the choice either way is made more difficult by the fact that the "evidence" is a textual fragment. The desire to choose one way or the other may be fueled by the tantalizing prospect that the fragment belongs to the very text that Saxo used as *his* source, amounting to but one degree of separation from Amloði to Hamlet. Evidence that this is not the case is provided by Saxo himself: in his preface, Saxo acknowledges his debt to Arnold of Thule, a scholar of Icelandic oral folklore, stating in relation to the Icelandic stories related to him by Arnold to "have examined [them] somewhat closely, and have woven together no small portion of the present work by following their narrative."[39] It should not matter, then, that we do not have any surviving source text for Saxo, if we are prepared to take Saxo at his own word: one of his "sources" is his

Icelandic colleague and the stories he incorporates into his history of the Danes are based on what he has been told, rather than what he has read.

We argue that an approach driven by a desire to identify a single source text tends to ignore the company that writers keep: the human element must not be forgotten, and we suggest, perhaps with only a slight sense of irony, that the proliferation of searchable information on the internet allows us to gauge a better sense of this human element. It matters, for example, that Saxo refers to his colleague, Arnold of Thule, as the provider of Icelandic material that he weaves into a history of the Danes. It also matters that fellow members of Shakespeare's playing company—George Bryan, William Kempe, and Thomas Pope—had been among those who, in 1586 and 1587, performed in the service of the Earl of Leicester, Robert Dudley, before King Frederick II of Denmark at Kronborg castle in Helsingør. The question of where Shakespeare sourced his inspiration for the representation of Elsinore has long been a stumbling block for studies of the sources for *Hamlet*. Shakespeare's setting cannot have been sourced from Saxo or Belleforest, or any other earlier source text because, simply, Kronborg castle was not completed and adopted as the seat of Danish power until 1585.[40] As many scholars have pointed out, Shakespeare cannot simply be using a current name for the sake of currency alone—elements of the interior of the castle seem particularly well matched to representations of locations in the play, suggesting that the author of the play must have had intimate knowledge of the castle, or be relying on an accurate description of the castle in a contemporary text.[41]

Keith Brown argues that the *Civitates orbis terrarum* produced by Georg Braun and Franz Hogenberg (Köln, 1572–1618) could be a valid textual source for Shakespeare's Elsinore: in addition to descriptions of the interiors of the castle, the fourth volume, which appeared in 1588, provides graphic representations of Kronborg, both from a bird's-eye view and in detail (Figure 12.2).[42] The strategic value of the castle's location is rendered immediately visible in the depictions of Kronborg by Braun and Hogenberg, yet the value of the Civitates plate as a source for Hamlet is substantially undermined by at least one crucial inaccuracy: a very large platform defining the southern corner of the castle—enabling views and cannon sighting over both the Øresund to the northeast and Helsingør (Elsinore) to the south—is absent. In the first few scenes of *Hamlet*, involving the sentinels at watch and the appearance of the Ghost, the audience is told that the platform has excellent views of both sea and land, that it is large enough for sentinels to need to call out to each other "Holla" from opposite ends (TLN 26), for the Ghost to beckon Hamlet to "a more remoued ground" (TLN 648) without actually departing the platform, and that in doing so the Ghost may potentially lure Hamlet "into the Sea" (TLN 660).[43] The *Civitates* plate could not have furnished the playwright with the visual image of such a scene, but anybody who had been to the castle would carry strong
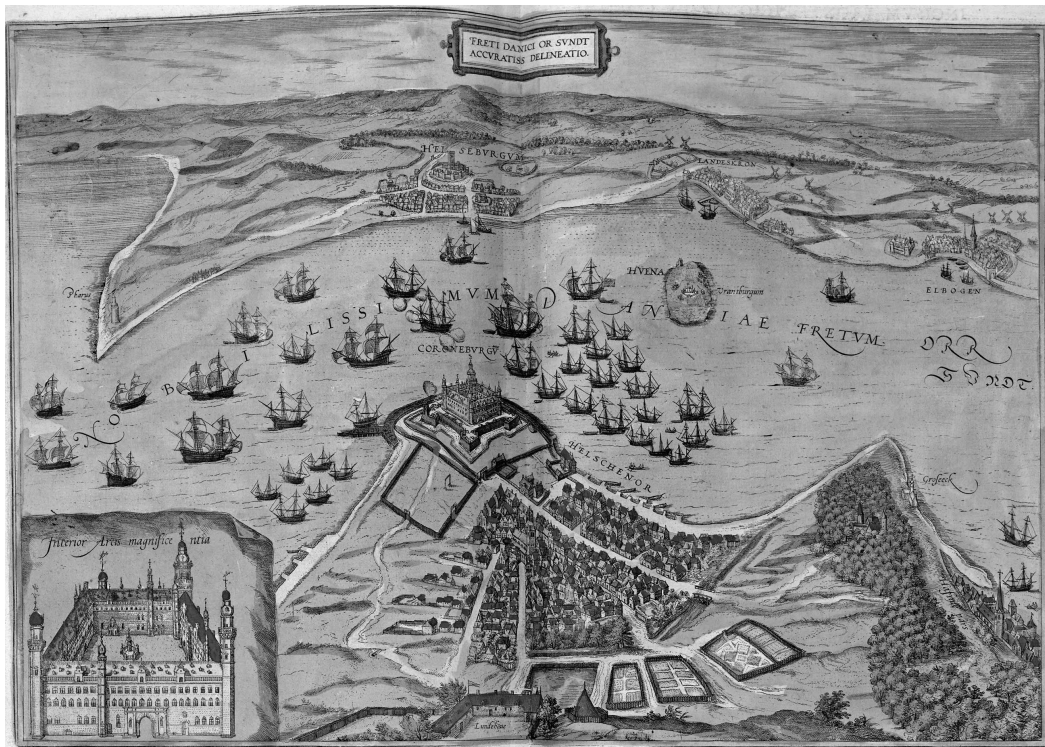
Figure 12.2 Kronborg castle. Georg Braun and Franz Hogenberg, *Civitates orbis terrarum*, vol. 4 (Köln, 1588), plate 26. Courtesy of the Library of Congress, Geography and Map Division. G1028.B7 1612.

impressions of one of the castle's most imposing features from the sea. This person need not have been Shakespeare—it should be enough that three of the members of Shakespeare's company had been to Kronborg for the knowledge of this feature of the castle to be conveyed as part of the imaginative landscape of the play.

In the age of Google, it is enough for the reader to search for images of Kronborg to find numerous views—from either an aerial[44] or southeastern offshore vantage—with which to gauge the problem with imagining the *Civitates* plate as a visual source for the depiction of Elsinore in *Hamlet* (Figures 12.3 and 12.4). Both views offer a sense of the scale of the watch platform, but only from the offshore vantage at sea level does the viewer also gain a sense of why a visitor by water rather than air might retain a sense that the Ghost could beckon Hamlet "into the Sea" from the edge of one side of the platform: the distance to shore is collapsed from this vantage.

It may therefore be more apt to ask: if the *Civitates* plate is not a visual source for Shakespeare's Elsinore, what is the relationship between the two? In an age before Google, or indeed even before aerial photography, any reader familiar with the most readily available depiction of Kronborg might well wonder at a disjuncture between the Elsinore represented in

Figure 12.3 Aerial photograph of Kronborg castle, 2014. © Google and Terra-
         Metrics.

Figure 12.4 Sea-level photograph of Kronborg castle, 2007. Wikimedia Commons.

the opening scenes of *Hamlet* and the castle as they might *expect* to see
it based on the Braun and Hogenberg image. Rather than a source for
Shakespeare's Elsinore in any direct fashion, it is possible instead that
these images served as a spur—if the playwright or his companions were
aware of the existence of the plate, and their relative inaccuracy could
be confirmed by the members of the company who had visited the castle,

then we might imagine a scenario in which the theatrical depiction of Elsinore served as a corrective to some extent for an audience presumed by the players to have already been misinformed.

Parallelography

Such scenarios are, of course, the products of our own speculation, but this is not to dismiss them for lacking any explanatory value. In the case of Elsinore, our interpretive speculation is built upon historically established networks of travelling actors and playwrights, and it allows us to discern parallels between texts, places, and experiences that are not otherwise visible to genealogical textual tracing. By "parallel," we mean a relationship between two objects, denoting a similarity in content and/or structure that varies in degree from direct one-to-one correspondence through to distant echo and faint resonance. Plagiarism, allusion, and homage are typical examples of shared content, whereas the notion of genre is built upon the recognition of shared structural and formal elements that become conventional, such as plot devices and character types.

Each parallel acts as a node within a larger network of associations, with every node illuminating (or illuminated by) other connected nodes, whether textual, visual, or aural. While the quality of individual nodes and connections within such a network—and by extension, their explanatory power—will vary, a parallel nonetheless remains evidence of a relationship between two objects, however strained it may appear to be. Moreover, the precise nature of the relationship evinced by any parallel is not essential, but contingent—it remains always to be demonstrated through argument and with reference to other information. Traditional source study, adopting the philological methodology and theoretical framework of stemmatics, delineates such relationships in linear structural terms: *source* and *derivative*, *archetype* and *variant*. As Mark Houlahan suggests, "a spurious linearity presides over many such studies," which have "proceeded with misplaced confidence in being able to locate the single prior source of any given story" and "with surety in the progression of one story to the next."[45] However, linear source study is not the only methodology to focus on textual parallels. Traditional authorship attribution study offers a pertinent analogue, in using the same methodology but supposing common authorship where traditional source study posits a source–derivative relationship to explain a parallel.[46] Since the eighteenth century, scholars and amateur enthusiasts alike have feverishly scoured the corpus of early modern drama for so-called "verbal" parallels in the works of Shakespeare and his contemporaries.[47] This approach to authorship attribution, derided by W. W. Greg as "the parallelographic school,"[48] remains popular but hotly contested in Shakespeare scholarship, prompting perennial publication of studies to outline the logical and methodological flaws of such investigations as new technologies, resources, and variations in method emerge.[49]

While the "parallelographic school" has upgraded their technological arsenal to include the use of electronic databases and software tools with which to identify and count exact textual parallels,[50] authorship attribution studies have since moved on, for the most part, to employ more robust computer-aided statistical methods for multivariate analysis and machine-learning techniques.[51] The application of quantitative methods and statistical reasoning to literary studies in this way has also enabled scholars to situate their findings within degrees of probability, rather than resorting to the rhetoric of certainty and uncertainty.[52] To identify parallels, Shakespeare source study traditionally relied upon a scholar's ear, capacity for recall, and intimate familiarity with classical, medieval, and Renaissance literature, all cultivated over a lifetime. It is not enough that these tasks can be accomplished with, if not by, a computer. If it is to avoid the stigma of positivism under which it previously labored, source study, especially if aided by electronic databases and software tools, must follow authorship attribution studies in adapting not only its methods, but its critical frameworks and vocabulary as well.

One family of computational techniques that readily lends itself to literary source study is "string matching" or "sequence alignment," by which an algorithm processes a corpus of texts, identifying exact and approximate matches for a given "string" or sequence of characters, words, and phrases. As a form of pattern recognition with applications ranging from DNA sequencing to the operation of Google's web, book, and image search interfaces, the computer science literature on string matching is understandably vast.[53] According to one recent survey article, over fifty algorithms for "exact online string matching" have been proposed in the first decade of the twenty-first century alone.[54] In literary studies, string matching has been applied to the detection of non-cited "borrowings" in the *Encyclopédie*,[55] identification of cross-lingual plagiarism in the works of Oliver Goldsmith,[56] and speculation as to the subject-matter and genre of lost early modern English plays.[57]

For the case studies in this chapter, we conducted systematic searches for textual parallels between our test texts and others in the Google Books, ECCO, EEBO-TCP, and LION corpora, processing exact and approximate matches of sequential words and collocations—that is, every possible string combination of two, three, and four consecutive words, as well as collocations of semantically significant words. While it is possible to conduct such searches locally on one's own desktop computer, the task typically requires more processing power than a single desktop computer can efficiently provide. Instead, our method has been to query the databases directly by hand, or to semi-automate the process by using an Application Processing Interface where available.[58] If the interface supported them, we also took advantage of search functions allowing for variant spellings and grammatical variants, as well as proximity searches. For querying the databases, Macbeth's "So foule and

faire a day I haue not seene" (TLN 137), for example, may be processed into nine sequential bigrams (*so foule*, *foule and*, *and faire*, *faire a*, *a day*, *day I*, *I haue*, *haue not*, *not seene*), eight sequential trigrams (*so foule and*, *foule and faire*, *and faire a*, *faire a day*, *a day I*, *day I haue*, *I haue not*, *haue not seene*), and seven sequential quadrigrams (*so foule and faire*, *foule and faire a*, *and faire a day*, *faire a day I*, *and day I haue*, *day I haue not*, *I haue not seene*), as well as iterations substituting the available spelling and grammatical variations (such as *foul*, *fouled*, *foules*, *fovl*, *fovle*, *fovled*, *fovles*, *fovvl*, *fovvle*, *fovvled*, *fovvles*, *fowl*, *fowle*, *fowled*, and *fowles* for *foule*), as well as proximity collocations of semantically significant words (such as "*foule* NEAR *faire*," in which the order is irrelevant, or "*foule* FBY *faire*," in which *faire* must follow *foule*). The effect of these procedures is to considerably widen the parameters of the search beyond identical letter-for-letter, word-for-word matches.

As promising as these resources and methods may be in "making such comparisons easier, more comprehensive, and more objective than ever before," as Gary Taylor reminds us, "it is important to emphasize that computers alone do not produce conclusions about authorship" and, by analogy, sources:

> Any such test depends on search software and a database, constructed by human choices. Moreover, searches of these databases depend on fallible manual entry of search items. Interpretations of the results depends on existing scholarship about the date and authorship of other works. We are dealing here with work produced not by a machine alone or a humanist alone, but with a combination of the two.[59]

In the example from *Macbeth* given above, for instance, a search for *foule* allowing for spelling and grammatical variation (a so-called "fuzzy search") will return hits for *soule* and its variant forms, to compensate for the fact that the long-*s* is routinely mistaken for an *f* in transcriptions of early modern print.[60]

It is also important to acknowledge the limitations of the databases in terms of their coverage and scope. As increasingly comprehensive as these databases may be, they are not exhaustive. EEBO-TCP, for example, offers transcriptions of just over 53,800 texts, which is only a fraction of the 125,000+ titles listed in the *Short-Title Catalogues* for the period 1475–1700.[61] EEBO-TCP also privileges breadth over depth, preferring to transcribe a larger number of different titles and avoid transcribing different editions of the same title. Manuscripts are excluded entirely,[62] and coverage is further limited to materials printed in England, Scotland, Ireland, Wales, and British America, or to English books printed abroad, thus excluding the substantial corpus of books and manuscripts produced on the Continent during this period. Even with these caveats, EEBO-TCP and similar databases remain invaluable

resources. However, these limitations should prompt us to proceed with caution: to verify that every hit reported by a search is indeed a parallel and to qualify any claims made for the rarity or uniqueness of any given collocation or phrase. We are also mindful that lexical patterns are but one aspect of a larger spectrum of linguistic elements amenable to allusion and imitation,[63] and, as we have seen with the pictorial representations of Kronborg, that correspondences need not be textual.

Horatio's Ground

For our final case study, we employ the method described above to identify parallels in the first scene of *Hamlet*, using the text of the 1623 First Folio. Space does not allow for a full analysis of the results. Instead, we focus on the resonances discovered for a single three-word phrase and their implications for a reading of the play. Horatio's first line in the play, in answer to Francisco's question—"Stand: who's there?" (TLN 19)—is no straightforward identifying statement: "Friends," he says, "to this ground" (TLN 20). He speaks for himself and his compatriot, Marcellus, declaring that both come in friendship. Yet his meaning is evidently not clear, least of all to Marcellus, who speaks immediately after with extra qualifying information: "And Leige-men to the Dane" (TLN 21). It is as if Horatio, not as versed in the protocols of military discourse, has clumsily failed to provide the required response and that being "friends" is not as trustworthy as being "liege" to the same master. Christopher Warley argues that Horatio produces a "central problem" at the outset when Barnardo, "amidst the general confusion," asks if Horatio is there, to which he responds this time, "A peece of him" (TLN 28).[64] The problem is thus: is Horatio wholly a friend to the State, or is he only partially a friend? Warley's reading of this scene hinges on Horatio's use of "friends" in reference to himself, but it also requires that "this ground" can be read in terms of political allegiance. It is of course Marcellus, and not Horatio, who makes a statement of direct State-based allegiance. The central problem identified by Warley hinges, that is, on a conflation of the statements made by the two rivals of Barnardo's watch. This is not to say that the confusion to which Warley refers is removed if we attribute the statements to the right sentinels: confusion is still present in this scene—indeed, Horatio's response, which prompts Marcellus to add clarification, uses a phrase that is potentially vague. It is thus Horatio who may be the source of the confusion yet, as we will show this potentially vague phrase may tell us much about his role in the play as a man of learning, at home in the university rather than on the ramparts.

"This ground" is not a particularly common expression—among dozens of examples of the use of "ground" in relation to various definitions

covering more than seven centuries up to the time of Shakespeare's play, only one comes close to matching this form of the phrase. In *The Libelle of Englyshe Polycye*, an anonymous prose poem dated 1436/7, reference is made to "this Englysshe ground."[65] Were Horatio to have matched this form, he would have spoken of "this *Danish* ground," our point being here that "ground" is never used as the specific object of the demonstrative "this" where it also means a section of earth or the lowest point of something. The type of ground on which sentinels might meet is only ever holy ground, or safer ground, or ground that belongs to somebody or to a State; it is never simply "this ground." Our search for textual analogues has produced a striking string of cognate uses of the phrase, however, in a series of texts related to the reformation of the Church. We find "this ground," for example, in Thomas Dorman's *A proufe of certeyne articles in religion* of 1564:

> The Anabaptystes who deny the baptesme of infants, leane they not thyncke yow **to thys grounde** of yours? yea truely, and good reason it is that being all heretykes as you ar, although in some poyntes dissentyng, yet all ioining and agreing in one cancred hatred against the churche, you should all vse the same rules and principles.[66]

The phrase reappears in Alexander Nowell's 1565 reproof of Dorman, but it is by virtue of verbatim repetition of Dorman's accusation, which Nowell repudiates.[67]

It is to Jean Calvin that the greatest number of examples can be attributed: in translations by Arthur Golding published between 1574 and 1583, we find six distinct examples of "to this ground."[68] The first is particularly interesting in terms of offering insight into what may well be more than simply an analogous use of this phrase. In the 1574 translation of Calvin's sermons upon the epistle of St. Paul to the Galatians, the phrase appears thus:

> And therefore let vs receiue that which S. Paule sayeth: namely that the spirit helpeth our infirmities. And so let vs holde out still and pray vnto God without ceassing, and if wee bee speechlesse, or do stutte, and cannot vtter any one peece of our minde to the purpose, but bee intangled with many impedimentes: well, howsoeuer wee fare, let Gods spirite thrust vs foreward still, and let vs sticke fast **to this ground**, that God is neuerthelesse our father, and let vs flee too him for refuge, and though wee do it not so frankly as were requisite, but be ouerweyed with the heauinesse of our greefes, yet whatsoeuer come of it, let vs go on forwarde still, and not shet our selues out of the gate through our owne default, but holde on still in praying to our God, assuring our selues that he will haue pitie vpon vs in the ende.[69]

The reader might be struck here by further potential parallelographic resonances: in addition to "to this ground," "any one peece of our minde" might be echoed perhaps in Horatio's "A peece of him" (TLN 28), as indeed may the theme of attending "to the purpose" rather than being "intangled with impediments" seem to be a precursor to Hamlet's "blunted purpose" (TLN 2491); and "ouerweyed with the heauinesse of our greefes" might even seem to represent a possible inspiration for the melancholic air overweighing the opening scenes of the play. Yet we stop short of any claim that Calvin's Galatians might be a direct source for *Hamlet*. Beyond the parallelographic approach, it is incumbent upon us to identify the fuller reach of intertextual relations that the technology makes available to us, by considering the other examples of texts that meet the criterion through which this passage came to our attention.

In all of the examples we have found of "this ground," the phrase serves pronominally to refer to a particular principle or tenet. Calvin writes of "this ground" in his sermons upon the Book of Job, "that God may well allow of vs, as of them that shall haue serued & honoured him."[70] Additionally, in the sermons upon Deuteronomy, "this ground" is "that it is because God loued vs," and "Wee must obey GOD."[71] Richard Bancroft also writes in *A suruay of the pretended holy discipline* in 1593 of "this ground" as laid down by Thomas Cartwright: "that few men that are of any stayde or sounder iudgement in the scriptures, and haue seene or read of the gouernment and order of other churches, are against them in such matters, as they haue broched vnto vs."[72] In all such instances, then, the phrase as uttered by Horatio upon his first entrance to the stage in Hamlet would normally require the principle or tenet referred to by "this ground" to be also uttered, and it may be no coincidence, either, that the tenet is invariably theological in nature. It is not to Horatio alone that this phrase is restricted in *Hamlet*: Hamlet himself talks at the end of Act 2, Scene 2 of conscience and damnation, declaring that the Ghost he has seen "Abuses me to damne me," and adding, "Ile haue grounds, More Relatiue then this: The Play's the thing, Wherein Ile catch the Conscience of the King" (TLN 1643–5). It is hardly a coincidence that the two characters who use "this" in relation to "ground" in this play are established as those who have been away from the military stronghold at Elsinore to follow academic and possibly theological pursuits: Horatio is of course Hamlet's closest friend from Wittenberg, a locus of the Reformation.

When Horatio says he and Marcellus are friends "to this ground," the earliest audiences may well have understood perfectly well that the phrase was normally a cue for some further pronouncement, quite at odds with the military setting that is unfolding around him. Horatio's ill fit with the setting is exemplified by the subsequent exchange regarding the Ghost: the sentinels are not given over to exaggeration when the safety of the watch is at stake, but the skeptical Horatio dismisses their

version of events as "Fantasie" (TLN 32). This potential for Horatio's first words to mark his character for the audience as a scholar or theologian rather than a soldier seems to have been lost to the critical heritage of this most studied of plays, but it is revealed by the capacity of a searchable database of primary textual materials to enable identification of wide-reaching analogues within a relatively contiguous timespan. We do not claim that any of these analogues would submit to the kind of sustained parallels required to fulfill the traditional category of a direct textual source; rather, in their number, they reveal patterns in use amounting to what we might consider to be a widely held connotative understanding of the key phrase.

Coda: Elephants and Elsinore

We have considered the rich array of sources for the name of Amleth, pointing to a long history of potential source relationships preceding that between *Hamlet* and one or another Amleth tale, and we demonstrated that Horatio's first words might be understood very differently than hitherto presented in criticism once we track the use of the same phrase in a large sample of preceding texts. It is important that the two procedures be understood separately, lest we stumble toward the brink of a faulty conclusion. Some readers might well have noticed the intriguing prominence of the word "ground" to both exercises and expect us to draw parallels where none can be sustained: Collinson's argument hinges on the translation of "Admlithi" as "Greatly-Ground," and the use of "ground" in the Icelandic fragment on which Saxo's tale is thought by some to be based; and "this ground" emerged in our search for textual parallels as a key to understanding a wider field of connotation within which Horatio's initial lines acquire their fuller meaning. Any parallelographic connection between the ground in the ancient name from which Hamlet is derived and the first words given by the playwright to Horatio would be untenable. If there is some kind of connection between the two—some underlying lexical drive or primary metaphor locked inside the story on which *Hamlet* is based—the discovery of it lies beyond the scope of source study, we suggest.

Similarly, we may pause at the prominence given to the raging sea so early in *Hamlet*, particularly when we recall Collinson's argument about the image of the "sea-grinder" in the Icelandic tale. Collinson mentions in closing the use of "sea" twice in the play to refer to Hamlet's madness and his troubles,[73] suggesting perhaps that just as "Amloði" might mean "weak-minded" and contain resonances of the Icelandic "sea-grinder," so too might Shakespeare's play link madness to the sea via the character whose name can be traced to Amloði. Do we glimpse here an unwitting pointer by the playwright to a deep-seated field of associations linking "this ground" to "the Sea" and, together, to the name of the Ghost that

appears and beckons his son, with the same name, to a more removed ground that could—thanks to an offshore illusion in which the distance of the Kronborg watch platform from the shore is collapsed, creating the impression of a sheer drop—lead him to the cliff's edge and into the sea? If the play does provide such a pointer, it would indeed be unwitting, but the temptation is always strong to want to identify one-to-one correspondences, with the playwright as altogether "witting." The chain of association that seems to be operating here certainly requires an explanation that goes beyond an author and a source text—it might even require an explanation that sits deeper than the field of connotation. Rather than some Amloði-code at the heart of *Hamlet*, the play could be a snapshot in time of a longer cultural process in which the various associations are formed. This is not to say that we feel the processes are beyond scrutiny or, for example, that an appeal to cultural process is sufficient to explain their presence in the play—there will be no appeal here to the circulation of "social energy." If Shakespeare is somehow unlocking a deep cultural memory of associations in this moment, we suggest the process is a slow one, more elephantine than energetic in its movement.

Greenblatt's "elephant's graveyard" may characterize source studies as either positive or negative, but it tends to forget the living, breathing elephant. In the early modern period, the elephant was already an established symbol of steady, reliable motion. In *Troilus and Cressida*, to take but one example, Shakespeare uses "slow as the Elephant" (TLN 180) and the saying that "The Elephant hath ioynts, but none for curtesie: / His legge are legs for necessitie, not for flight" (TLN 1309–10). On the path to the graveyard—if the myth were even true—the elephant would not hasten to its demise. The elephant's graveyard has acquired its various connotations, as we have shown, from this side of a rather complex history of meanings, and no matter how one perceives the metaphor—as either positive or negative—it gains its meaning from the perception that one has as the observer who steps into the field of bones. We would return the elephants to the picture and restore life to their bones, movement to their legs, albeit in somewhat slow and steady fashion. Turning our attention back to the chains of associations in *Hamlet*, let us therefore remember the elephant's lesson—let us move steadily and deliberately through the associations but remain cautious at all times of a recourse to the graveyard of a single overarching explanation: neither social energy nor the *longue durée* of cultural memory are needed to account for the concatenation of terms in *Hamlet*.

Picking deliberately and steadily through a surfeit of data surrounding these terms that we have traced in the play, we would not wish to reduce everything to so much text, like so many bones. We might suggest at the last that it may simply be sufficient to once again cast our eyes at the images of Kronborg, to mount an argument for the agency of the three players who sailed into view of the castle and who imagined upon reading the tale of

Amleth that the story could viably be resituated in this seaside fortress. In this scenario, the circulation of social energy, and even some deep substrate or cultural memory are supplanted in explanatory sufficiency by an actor who gazed from the water, across the strand, and looked upon the most magnificent castle in Europe and liked what he saw.

Notes

1 Patrick Leary, "Googling the Victorians," 73.
2 On the "material turn" in Shakespeare studies, see Knapp, "Beyond Materiality in Shakespeare Studies," as well as the essays in the "Shakespeare and Phenomenology" special issue of *Criticism* guest-edited by Curran and Kearney.
3 James, "Shakespeare, the Classics, and Forms of Authorship," 81.
4 Kastan, *Shakespeare after Theory*, 13, crediting Peter Stallybrass and himself for the name.
5 Levin, "Another 'Source' for *The Alchemist*," 226.
6 Lynch, *Shakespearean Intertextuality*, 1. On this issue we are indebted to Logan's repositioning of the question of sources and influence in *Shakespeare's Marlowe*, especially Chapter 1.
7 Greenblatt, "Shakespeare and the Exorcists," 163.
8 Maguire, "Part I: Editor's Introduction," in *How To Do Things With Shakespeare*, 7. Maguire cites three other critics who quote Greenblatt approvingly in articles published in 1987, 1994, and 2000.
9 Hopkins, *Beginning Shakespeare*, 63. Clare similarly interprets Greenblatt as having "dismissed" source study in his essay: *Shakespeare's Stage Traffic*, 17.
10 Hamlin, *The Bible in Shakespeare*, 82.
11 Sheen, "These are the only men,"156.
12 Griffin, *Wordsworth's Pope*, 141.
13 Maguire, "Part I," 7.
14 Christensen, *Deadly Beautiful*, 225.
15 *Arabian Nights' Entertainments*, ed. Mack, 176–77.
16 *Early English Books Online Text Creation Partnership*.
17 Michel et al., "Quantitative Analysis of Culture Using Millions of Digitized Books," *Science* 331, no. 6014 (2011): 176–82; and, *Google Books Ngram Viewer*, 2010–, Google, http://books.google.com/ngrams. A smoothing factor of 20 was applied to make the lines, plotted here in grayscale, more discernible.
18 Haggard's *The Ivory Child*, for example, features a smoke-fueled prophetic vision of "a cemetery of elephants, the place where these great beasts went to die" (62).
19 "Elephant Cemetery Mystery Cleared by Scientists," 614–15.
20 Bell, *The Wanderings of an Elephant Hunter*, 73.
21 Douglas-Hamilton et al., "Elephants," 97.
22 Convention on International Trade in Endangered Species of Wild Fauna and Flora, March 3, 1973, 993 U.N.T.S. 243. See also the findings of the Ivory Trade Review Group, whose recommendations led to the Appendix I listing: Barbier et al., *Elephants, Economics and Ivory*.
23 On these Dialogue Meetings and other challenges to CITES and the African elephant, see Mofson, "Zimbabwe and CITES," Blanc et al., *African Elephant Status Report 2002*, and Couzens, *Whales and Elephants*, esp. Chap. 5.
24 *Tarzan the Ape Man*, directed by Van Dyke.
25 *The Lion King*, directed by Allers and Minkoff.
26 Knowles, *The Oxford Dictionary of Phrase and Fable*, 225.

27 Sheehan, *The Arnheiter Affair*, 10; Suvorov, *Inside the Soviet Army*, 56, Kennedy, *The Military and the Media*, 68.

28 Berliner, "CVS II: Parallelizing Software Development," 351.

29 Space does not allow here for discussion of the existence of an ur-*Hamlet* as a more direct "source" for Shakespeare. For lengthy consideration of these debates, see Johnson, *The Tain of Hamlet*, esp. Chap. 2.

30 Bullough, *Narrative and Dramatic Sources of Shakespeare*, VII: 9.

31 *Ibid.*, VII: 15.

32 Lauring, *A History of the Kingdom of Denmark*, 75.

33 Bullough, 80–81; see also William F. Hansen, *Saxo Grammaticus*, 25–37.

34 Cleasby and Vigfusson, *An Icelandic-English Dictionary*, 19.

35 Sturlason, *Edda*, 92. Bullough renders the fragment differently—"the Nine Maidens of the island mill stirring the baleful quern of the Skerries, they who in ages past ground Amleth's meal" (VII: 5)—in order to suggest that "Amleth's meal" could match the reference in Saxo to courtiers who tell Amleth to "look at the meal" (the sand on the seashore), meaning that the older fragment could very well be from a tale that Saxo is translating. Unfortunately, Bullough provides no source for the translation he uses, but we feel in any case that Faulkes's translation, with its reference to the "land's edge," could well be sufficient to support Bullough's point without "mill" being rendered as "meal."

36 Collinson, "A New Etymology for *Hamlet*?", esp. 683.

37 *Ibid.*, 692–3.

38 *Ibid.*, 687–88.

39 Qtd in Gollancz, *Hamlet in Iceland*, xxiii.

40 On the contemporary Elizabethan setting of *Hamlet*, see Johnson, *The Tain of Hamlet*, 174–80.

41 Brown, "Hamlet's Place on the Map." The essay first appeared in *Shakespeare Studies* in 1969, and a number of scholars have since adopted Brown's argument. Representative examples include Dollerup, *Denmark, 'Hamlet', and Shakespeare*; Berry, "Shakespeare's Elsinore"; and Olson, "Hamlet's Dramatic Arras."

42 Brown, "Hamlet's Place on the Map," 94–95. More recently, Vedi has questioned the likelihood that Shakespeare might have ever had access to a copy of the *Civitates*. See Vedi, *Elsinore Revisited*, 48–49.

43 All quotations from Shakespeare are taken from the text of the 1623 First Folio, cited parenthetically by Through-Line Number as established by Hinman for *The Norton Facsimile*.

44 de Sousa uses a "Google Earth flyover" to demonstrate the strategic location of the castle in Helsingør: *At Home in Shakespeare's Tragedies*, 113–14.

45 Houlahan, "Shakespeare and the Sea of Stories," 158–59.

46 Lancashire, "Empirically Determining Shakespeare's Idiolect," 172.

47 That is, parallels in the spoken dialogue of the plays, and not the textual and paratextual apparatus (such as stage directions, prefatory materials, and so on).

48 Greg, review of *Sidelights*: 195.

49 Representative examples include Byrne, "Bibliographical Cues in Collaborate Plays"; Schoenbaum, *Internal Evidence and Elizabethan Dramatic Authorship*; Egan, "Impalpable Hits"; and Jackson, "New Research on the Dramatic Canon of Thomas Kyd." See also Love, *Authorship Attribution: An Introduction*, esp. 89–91.

50 A pertinent and highly publicized contemporary example is Brian Vickers's use of plagiarism-detection and concordance software to attribute the authorship of a number of anonymous and contested plays to homas Kyd. See Vickers, "Thomas Kyd, Secret Sharer," 13–15; and, "The Marriage of Philology and Informatics," 41–44. For a comprehensive critique, see Jackson, "New Research."

51 Representative Shakespearean examples include the essays in Craig and Kinney, eds., *Shakespeare, Computers, and the Mystery of Authorship.* See also Love, *Authorship Attribution*, 132–62.

52 This point is developed further in the introduction to Craig and Greatley-Hirsch, *Style, Computers, and Early Modern Drama.*

53 For an overview of the topic, see de Sá, *Pattern Recognition.*

54 Faro and Lecroq, "The Exact Online String Matching Problem".

55 Edelstein, Morrissey, and Roe, "To Quote or not to Quote," and Horton, Olsen, and Roe, "Something Borrowed."

56 Duhaime, "Cross-Lingual Plagiarism Detection with Scikit Learn," *Douglas Duhaime*, 19 July 2015, http://douglasduhaime.com/blog/cross-lingual-plagiarism-detection-with-scikit-learn.

57 Steggle, *Digital Humanities and the Lost Drama*; see also many of the individual play entries in the *Lost Plays Database*, ed. Knutson, McInnis, and Steggle, http://lostplays.org/.

58 We thank Douglas Duhaime for kindly sharing the LION Application Processing Interface he developed with us. For a case study of its use in authorship attribution, see Taylor and Duhaime, "Who Wrote the Fly Scene in *Titus Andronicus*?"

59 Taylor, "Empirical Middleton," 246.

60 On this and similar problems with accuracy in transcription, see Gadd, "The Use and Misuse of *Early English Books Online*," Gants and Hailey, "Renaissance Studies and New Technologies,'" and Hirsch, "The Kingdom has been Digitized," esp. 574–75.

61 Pollard and Redgrave, *A Short-Title Catalogue,* and Wing, *Short-Title Catalogue.*

62 The Folger Shakespeare Library's *Early Modern Manuscripts Online (EMMO)* project seeks to address this imbalance by providing access to transcriptions, images, and metadata for a substantial number of sixteenth- and seventeenth-century English manuscripts.

63 Shore, for example, gestures toward development of a "constructicon"—an inventory of grammatical constructions—for Shakespeare in "Shakespeare's Constructicon." Other tools developed for corpus linguistics research allow for searching by grammatical construction and parts-of-speech. Thus, search queries can make distinctions between homograph forms, such as *stone*$_{verb}$ and *stone*$_{noun}$, or afford a greater level of abstraction by focusing on grammatical construction rather than lexicon, such as strings matching the format "*verb* followed by *noun*." CQPweb, a corpus analysis tool developed by Andrew Hardie at Lancaster University, includes a sample of EEBO-TCP texts with part-of-speech tagging. See Hardie, "CQPweb."

64 Warley, "Specters of Horatio," esp. 1026.

65 Warner, *The Libelle of Englyshe Polycye*, 42 (l. 828). For an insightful reading of the poem and an overview of its critical reception, see Sobecki, *The Sea and Medieval English Literature*, 145–60.

66 Dorman, *A proufe of certeyne articles in religion*, E1r.

67 Nowell, *A reproufe […] of a booke entituled, A proufe of certayne articles in religion*, 2D3v.

68 Calvin, *Sermons […] vpon the Epistle of Saincte Paule to the Galathians*, 2A4v–2A5r; Calvin, *Sermons […] vpon the booke of Iob*, M5v; Calvin, *The sermons […] vpon the Epistle of S. Paule too the Ephesians*, 143r, and Calvin, *The sermons […] vpon the fifth booke of Moses called Deuteronomie*, 167, 169, 724.

69 Calvin, *Sermons […] vpon the Epistle of Saincte Paule to the Galathians*, 2A4v–2A5r.

70 Calvin, *Sermons […]vpon the booke of Iob*, M5v.

71 Calvin, *The sermons* […]*vpon the fifth booke of Moses called Deuteronomie*, 167, 724.
72 Bancroft, *A suruay of the pretended holy discipline*, 2X4v.
73 *Ibid.*, 694.

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