



Disparate Structures, Electronic and Otherwise:

Conceptions of Textual Organisation in the Electronic Medium, with Reference to Electronic Editions of Shakespeare and the Internet[1]

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Introduction: Electronic Editions of Shakespeare

1. In beginning his 1995 review of editions and textual studies for *Shakespeare Survey*, H.R. Woudhuysen refers, wryly, to the increased challenge that contemporary movements in textual and editorial theory appear to be giving proponents of the New Bibliography:

When considering some of the editions and textual studies published in the last year or so, it is hard not to be reminded of the Chinese curse, "May you live in interesting times." (268)

2. The review itself chronicles work on a number of text-related and textual issues of no small import to the Shakespearean scholar, some more specifically related to the challenge against the New Bibliography than others: the credence given to performance and non-performance texts in recent editions, scene divisions, attribution, editorial emendation, dating, and beyond -- integral issues, all. But if Woudhuysen's survey had also included issues relating to the growing number of *electronic* editions of Shakespeare, the proverbial curse that is brought to his reader's attention would surely take on new and much larger dimensions.
3. There is, of course, no small amount of discussion about 'types' of editions these days[2] -- in fact, scholarly editing currently appears to be a site of some contestation -- but into that discussion the electronic edition has been rarely projected adequately; save for a few remarkable exceptions, such as Jerome McGann's "Rationale of Hypertext," the salient features of the electronic edition remain unarticulated in the larger discourse of literary-

textual culture.[\[3\]](#)

4. It is not that electronic editions of Shakespeare (and other authors) were unheard of when Woudhuysen wrote in 1995; while the years since then have seen an explosion in academic interest about such editions, they had already developed a significant presence by 1995.[\[4\]](#) In a review some five years prior to that of Woudhuysen, Whitney Bolton had singled out and scrutinised the three leading electronic editions of Shakespeare at that time: the *WordCruncher Bookshelf Shakespeare* (derived from the 1974 text of the *Riverside Shakespeare* edited by Evans), *William Shakespeare: The Complete Works, Electronic Edition* (reproducing the 1986 modern-spelling edition produced under the general editorship of Wells and Taylor), and the body of old-spelling quarto and First Folio editions of Shakespeare made available through the Oxford Text Archive (created by Oxford UP and Howard-Hill, editor of the single-text concordances). Moreover, in his paper at the 1992 Modern Language Association conference, "The Public Domain Shakespeare," Ian Lancashire was able to draw upon the evidence of a considerable body of electronic texts and editions of Shakespeare in pursuing his convincing argument about the need for a series of Shakespeare editions that are freely accessible and accurately represent the original texts.[\[5\]](#)
5. The presence of the electronic edition was then, and is still now, quite overshadowed by that of the print edition -- rightly so, perhaps -- and yet today one need only look so far as a good research library, or an Internet-connected computer, to see evidence of the integration of electronic editions of Shakespeare into our literary and critical cultures: consider Chadwyck-Healey's very useful *Editions and Adaptations of Shakespeare* on CD-ROM, A.R. Braunmuller's edition of *Macbeth, The Complete Moby[tm] Shakespeare* and the *Arden Shakespeare CD-ROM*.
6. Although electronic editions of Shakespeare have been about for some time, today they are receiving an ever-increasing amount of attention. From the perspective of Shakespeareans concerned with scholarly editing and issues of the edition as it is brought into the electronic medium, these are truly "interesting times" -- probably most interesting because, in addition to taking into account potentially-controversial issues akin to those raised by Woudhuysen (and all others that are associated with editing Shakespeare's work, regardless of medium), the editor of an electronic edition of Shakespeare must also take into consideration issues specifically pertinent to the new medium. These issues are not few, and would be impossible to treat in proper detail in a work of this length; however, just as the debate surrounding many issues pertinent to the textual edition in print format can be addressed by surveying models of the edition and their unique rationales,[\[6\]](#) so too can the numerous individual issues associated with editing in the electronic medium be treated to some degree by an examination of the underlying conceptual and intellectual structures that inform them.
7. This paper takes such an approach. Herein, the two major models of the electronic edition as they have existed up to this point are surveyed to highlight and exemplify several ideas central to each, and also to explore some of the benefits and problems posed specifically at this time by the Internet. In drawing from that survey and related discussion, some ways are suggested in which electronic scholarly editions intended for dissemination on the Internet, such as the Internet Shakespeare Editions (ISE), can best take advantage of the medium of their offering; that said, all facets of the electronic medium are taken into account, including those that are Internet-oriented and those that are not. In conclusion,

some thoughts are offered on the new role that the editor of such editions must fulfill, chiefly because of the nature of the medium.

Perspectives on the Electronic Edition: The Dynamic Text and the Hypertextual Edition

8. Simplifying (to some degree) for the sake of contrast, there are two basic models for electronic editions of a scholarly nature, each put forward before what we might call the explosion of the Internet. Each has seen some good exemplification and some development since its initial conception, each has different emphases, and each has the potential to offer much when considering the nature of the ideal electronic edition intended for the Internet. This is so, specifically, because of the ways in which each demonstrates some of the disparities (structural and others) between paper and electronic editions and champions a relatively distinct approach to the central matter of electronic editions -- the text(s) around which they are built -- distinctions that the reader familiar with only paper editions may find quite nebulous. Each model of the electronic edition promises an interaction with the text possible only with the assistance of the computer (and impossible, for all practical purposes, in print), offering something quite distinct from its print counterparts.

The Dynamic Text

9. One of these models, the older of the two, is typically referred to as the *dynamic text*.^[7] In 1989, its principles were fully articulated by Lancashire in his paper "Working With Texts," which put forward the idea of an electronic text that, in essence, indexed and concorded itself, allowing the reader to interact with it in a dynamic fashion; this model of the electronic edition is made up of the combination of a properly-encoded^[8] electronic text with text-retrieval and analysis software. One of the most universal examples of such a dynamic text is found in the *WordCruncher Bookshelf Shakespeare*, which combines an electronic text of the *Riverside Shakespeare* with the *WordCruncher* text analysis software.^[9] On a slightly smaller and more manageable scale, another example is found in the combination of Shakespeare's *Twelfth Night*^[10] and the *Text Analysis Computing Tools (TACT)* program *USEBASE*.
10. The text analysis program does allow a traditional linear reading on-screen of, say, Sir Toby Belch's exploits much as one might read of them in a print edition; for this purpose, however, a print version would more readily suffice, as even the most dedicated computer-aficionado would agree. Such use in itself is a limited, though quite valid, employment of the technology. What makes this type of edition *dynamic* is the way in which the computer facilitates a non-linear interaction with the text -- in essence, structuring and treating it as a database -- and allows the reader to draw, seamlessly, a good deal of text-based information not easily accessible to the reader of the print edition of the play. In addition to linear reading, then, those using this dynamic edition of *Twelfth Night* could also carry out a number of different types of text-based searches, from the very simple, such as a search for the character names of "Viola" and "Cesario" in the play, to the complex, such as an analysis dependent on the isolation of the words "brother" and "Sebastian" in scenes in which Viola/Cesario is present. The reader could also map out the distribution of those search results over the course of the play in order to determine, for example, where Viola/Cesario might most express concern over the lost Sebastian. Moreover, using the

software's statistical analysis capabilities, one could analyse connotative "clusters" of words associated with Viola/Cesario and her brother, an analysis that would provide insight into the nature of her separation from Sebastian and their ultimate reunion.^[11] Moreover, should the text of *Twelfth Night* come with a large corpus of related materials in the same format, as it does in the MLA's publication of *TACT*,^[12] the reader could draw upon related textual resources beyond that of *Twelfth Night* alone.

11. All of these interactions with the text might possibly, of course, be carried out with a paper edition, preferably with the assistance of a reliable concordance, a great amount of calculation paper, and a considerable amount of time. But to carry out even the simplest of searches in this manner could take tens of minutes; to carry out what is, perhaps, the most complex of these interactions with the text -- the analysis of interrelated word clusters, or semantic patterns -- could take months, or years. A reader of a paper edition is not equipped properly for such a consideration of the text, one that draws on precise word searches, patterns of distribution, and semantic patterns;^[13] the importance of such a consideration, moreover, may never be apparent to the reader of a paper edition, *solely*, because patterns of readership associated exclusively with print technology itself may inhibit that reader from considering the content of a text in valid ways but ways unsupported, and unsupportable (because of the large investment of scholarly and critical time and effort), by a print text alone. But because useful text-analysis processes are automated by the specialised software, the reader of a dynamic edition is properly able to take into account these considerations in a convenient manner, one that doesn't present an interruption, and one that is conducive to immediate exploration. This type of interaction with a text, one might convincingly argue, produces a new kind of critical reader, one with a potentially more powerful grasp of the text.^[14]

The Hypertextual Edition

12. The second model to be discussed here is what might best be referred to as the *hypertextual edition*. Seen by some as being, potentially, the technological manifestation of social theories of editing,^[15] this type of electronic scholarly edition exploits the ability of hypertextual organisation^[16] to facilitate a reader's interaction with the apparatus (textual, critical, and otherwise) that traditionally accompanies scholarly editions, and with relevant external textual and graphical resources, critical materials, and so forth (Faulhaber, "Textual Criticism" 134 ff.). One example of this type of edition is provided by A.R. Braunmuller's edition of *Macbeth*,^[17] which promises to include the text, its collation, commentary, annotation (glossarial and otherwise), a concordance, Royal Shakespeare Company audio performance, video clips from three film performances (Polanski, Welles, and Kurosawa), and several critical essays centring on aspects of the play (history, language, biography of Shakespeare), as well as other materials. Another example, though still under development, is the *Shakespeare Electronic Archive*, which employs early editions (transcribed and in facsimile), films and relevant artwork, as well as interactive film, commentaries, and other aids.^[18] As an example in this context, however, we might best imagine an edition based upon the principles that have informed the production of Braunmuller's work and that of the *Shakespeare Electronic Archive*: that is, we might conceive of a hypertextual edition that includes nearly everything of value relating specifically to Shakespeare.

13. Readers of such an ideal hypertextual edition, based upon these principles, could choose

from among all early versions of Shakespeare's works (folios and quartos), in both machine-readable transcription and facsimile form, and a good number of those versions that followed. In using this edition's *Othello*, the reader could look over the exchange in which Othello requests a handkerchief of Desdemona (3.4.51 ff.), and follow a hypertextual link to a discussion of the similar use of the letter and other tokens in Nicholas Udall's comedy *Ralph Roister Doister*;[19] another link could lead, alternatively, to a video clip of the scene captured from the recent movie starring Lawrence Fishburne and Kenneth Branagh.

14. When coming across the deposition scene of *Richard II* (4.1.154-318) -- assuming that the critically-edited text were being examined, and not a transcription or facsimile of one of the first three quartos (1597, 1598, 1598) -- the reader could follow a hypertextual link which leads to, say, Peter Ure's discourse on the text of that scene focussing on its absence from the first three quartos (and, hence, its possible censorship) and his discussion of that scene's, and the play's, importance to the Earl of Essex and his fellow conspirators on the eve of their 1601 rebellion; readers could also easily examine the textual evidence for themselves. Alternatively, other hypertextual links emanating from the same scene could lead to other critical essays, perhaps by Stephen Greenblatt or Jonathan Dollimore, highlighting from a cultural materialist standpoint the play's importance and drawing attention to Elizabeth I's revealing statement to William Lambard, some months after Essex's trial, "I am Richard II, know ye not that";[20] further links might lead to essays by Leeds Barroll and James Siemon that sharply contest Greenblatt and Dollimore's reading of Lambard's anecdote.
15. As with the dynamic text, all of the interactions facilitated by a hypertextual edition could be carried out, hypothetically, with a print edition; here, however, that edition would have to be supplemented by the resources (paper-based, audio, video, and so forth) of an excellent library and considerable leg-work. But the issues to be considered here, again, are of time, convenience and, further, access to materials. What is hypothetically available to the reader in a research library, or group of libraries, is here made immediately available, encouraging use of the resources by the reader in a seamless fashion; as such, the hypertextual edition, like the dynamic text, also makes accessible dimensions of the text not normally or conveniently available to readers, but does so by providing immediate access to a different sort of material than that handled by the dynamic text. Moreover, as with the dynamic text, it can be convincingly argued that the type of interaction with a text allowed by the hypertextual edition produces a critical reader with, potentially, a more powerful grasp of that which is being read than one employing print resources alone. Lastly, because of the broad range of materials that can be incorporated therein, both because of the economy of data storage in the electronic medium and the benefits of hypertextual navigation, the hypertextual edition can quite comfortably accommodate many 'types' of editions: documentary, genealogical, copy-text, multiple version, socially-based, eclectic, variorum, and so forth.[21]
16. To sum up, one model of the electronic scholarly edition, the dynamic text, emphasises extant linguistic relationships; its historical roots are in word-based scholarship -- concordancing and indexing, collocation and distribution, attribution and dating, rhyme analysis, content analysis, and so forth -- and, by its combination of electronic text and text-analysis software, the dynamic text facilitates an interaction with the text that is unavailable, in practical form, to the reader working with a printed text. The other, the

hypertextual edition, is most often embraced for its employment of hypertext to emphasise relationships of textual and extra-textual natures, facilitating the reader's interaction with the text and materials related to it with an ease unknown even in the best of scholarly editions published in print; its historical roots are to be found in the apparatuses of scholarly editions and, in the best of examples, the variorum editions. The dynamic text automates reading-related functions that would likely not be carried out without the assistance of the computer because of the expense in time involved, such that one's *computer-assisted analysis* of the text and one's linear *reading* of it are acts that become closely affiliated and, potentially, equivalent. The hypertextual edition, as well, facilitates a close affiliation of the acts of reading and analysis, by providing and assisting in the management of a significant amount of related material extra to the text of the edition itself. Promoting such an affiliation of reading and analysis, it is worth noting, is in keeping with the goals of all scholarly editions, electronic and otherwise.^[22] In summary, extant examples of the dynamic text sacrifice display for analysis and extant examples of hypertextual editions sacrifice analysis for display.

17. It is worth re-stating that there has been some simplification of matters for the sake of contrast in this discussion of the two chief types of electronic editions. In this simplification, it should be added, the dynamic text and the hypertextual edition have been defined and exemplified by deliberately favouring the principles underlying their actual implementations over their theoretical ideals. Making such a distinction between each type of electronic edition's ideal and its implementation is necessary because there is very real and significant divergence from theory in implementation, primarily with the hypertextual edition.
18. Most notable is the fact that, in his seminal discussion of the hypertextual edition, Charles Faulhaber saw the hypertextual edition as having evolved from the dynamic text;^[23] components of the dynamic text were integrally incorporated into it, along with tools for collation and linguistic analysis ("Textual Criticism" 134 ff.). In practice, however, hypertextual editions often relegate the principles of the dynamic edition to the background (if they are included at all)^[24] and instead emphasise the ability of hypertext to provide interaction with materials common to, or ideal for, print-based editions -- albeit, with much greater ease-of-navigation and with the potential for interaction with a much larger body of material than that which typically accompanies a paper edition.
19. Elements central to the dynamic edition may very well see emphasis in hypertextual editions of Shakespeare currently in development or in press -- projects akin to the *Arden Shakespeare* CD-ROM, for example, hold much promise in this regard^[25] -- but at this time no electronic edition of Shakespeare exists that is exemplary of the theoretical union of dynamic text and hypertextual edition.

The Potential of the Internet, and Some Problems Facing Electronic Editions Thereupon

20. To urge a return in electronic editorial practice to its theoretical principles, one would draw upon Michael Neuman's 1991 discussion of the developmental trends in electronic editions,^[26] the 1993 discussion paper circulated by Peter Shillingsburg, "General Principles for Electronic Scholarly Editions," and the recently-released draft of the MLA Committee on Scholarly Editions' "Guidelines for Electronic Scholarly Editions," which

adopts many of the principles discussed above.[\[27\]](#) While the purpose of this paper is not specifically to urge such a return, it is right to note that those preparing literary editions intended for dissemination in electronic form (such as those being carried out on the Internet by the ISE) would best take advantage of the medium of their offering by keeping such guidelines in view. Each of the two models discussed suggest a number of useful and necessary features that electronic editions can have; discussions dealing with theoretical views of these models -- especially those that see the harmonising of elements integral to the dynamic text and the hypertextual edition -- suggest what an implementation of an electronic scholarly edition can be expected, rightfully and ideally, to have.[\[28\]](#)

21. That these expectations should, and can, be met is clear. One matter that is less clear, however, is exactly how such a union can be made practicable in an edition that is to appear on the Internet. A related matter, also unclear perhaps, is why one would publish such an edition on the Internet in the first place; to this, there are a number of answers -- encompassing issues relating to economics, distribution, and beyond[\[29\]](#) -- but for the editor and his or her audience, the best answer is that the Internet, as electronic publishers (including software companies) have proven, provides the most efficient and universal way of delivering electronic information, much more efficient than a number of platform-specific floppy-disks, CD-ROMs with storage limits of under 1 gigabyte, and awkward digital tape.[\[30\]](#)
22. To duplicate on the Internet the structure of the standard hypertextual edition, as it exists in practice today chiefly in personal computer-based implementations, is relatively straightforward; the process of linking one related document to another, an act that is key to navigation on the Internet, allows the textual and extra-textual materials we expect in such an edition to be included with little additional concern beyond the act of linking.[\[31\]](#) But does such a process easily allow for the introduction of text-analysis features central to the dynamic edition? Programs that allow some analysis capabilities of the dynamic text via the Internet -- *TACTWeb* and *DynaWeb*, to name two -- do exist, but their level of interaction with the text may not be the same as that present in their non-Internet versions, and their Internet interface may not be as interactive and seamless as that of their earlier incarnations.[\[32\]](#) As well, a site on the Internet can serve several different textual witnesses with ease but, to my knowledge, there exists no program that would allow the reader of an Internet edition to collate several given witnesses using an interface akin to, say, *Collate*; ideally, there should be.
23. Such gaps between what is and what should be do give rise to some concern, but the most serious problem facing the electronic edition intended for the Internet will not be found by examining these gaps; rather, it will be found in an examination of the issue of information management as it pertains to materials of relevance to specific electronic editions.
24. The spirit of Lancashire's "The Public Domain Shakespeare" -- which made clear the need for a series of Shakespeare editions that are freely accessible and accurately represent the original texts -- is the same spirit shared also by a sizeable, and growing, number of scholars and scholarly institutions and organisations (the ISE among them) that publish their work in freely-accessible form via the Internet; it is also a spirit captured by Louis Marder as early as 1982.[\[33\]](#) As a result of this spirit, there is now much highly-relevant information available for inclusion by editors in Internet-based scholarly editions. Moreover, as time passes the amount of useful information will increase.

25. To the editor and reader of the Shakespearean edition, the best examples of such useful Internet resources include the several scholarly editions and many accurate transcriptions of Shakespeare's own works, dramatic and otherwise, those of his contemporaries, and those works of considerable import to Shakespeare and his contemporaries; the best of these are provided (and promise to be provided) by Internet sites such as those of the Internet Shakespeare Editions, the Renaissance Electronic Text series, the archives of the *SHAKSPER Electronic Conference*, the University of Virginia Electronic Text Centre, the *Versions of King Lear* and *First Folio Project* undertaken at the University of Pennsylvania's Furness Shakespeare Library, and others. Further resources include the *Early Modern English Dictionaries Database* and the *Michigan Early Modern English Materials* -- arguably the best lexicographical resources for the period covering Shakespeare (notably, these are available solely on-line) -- and several soon to be available on-line, among the most promising of these being the *SHAXICON* database, the body of materials to be included with the *Perseus* database's "Renaissance Sources Project" (Crane), materials from the Folger Shakespeare Library, and other repositories.[\[34\]](#)
26. This body of highly-relevant information, however, is sure to be effectively hidden by a larger mass of irrelevant information;[\[35\]](#) the location of pertinent resources and the determination of 'pertinence,' best accomplished by first-hand evaluation, is a time-consuming process. Once pertinent resources are located, they must be properly integrated into the edition; assuming that formats are compatible, integration will be by the use of explicit links to documents at sites external to that of the edition (given currently-preferred practices), though some resources, such as the *Early Modern English Dictionaries Database*, would be better integrated by way of scripts that would automate interaction from within the edition. Once integrated, in whatever fashion, resources at external sites may suffer from the problem of instability, both in terms of their Universal Resource Locators and also in terms of internal content. Add to this, moreover, the considerable effort that will be involved in maintenance, given that new resources can be assumed to be appearing on a regular basis,[\[36\]](#) and also the growing trend of the Internet being used for the delivery of materials for which a subscription charge is assessed; in consideration of this latter point, the editor must realise that one person's 'Internet' may not be that of another because of cost/subscription issues.[\[37\]](#)
27. One solution to the problems associated with dealing with Internet-based resources at external sites is, simply, not to consider the inclusion of such resources. To do so, however, would be to lose the potential contribution that these resources would add to the edition and, arguably, already do make to the field; moreover, it would betray the very spirit that would drive one to edit for the Internet. Pragmatic decisions sometimes have to be made -- this is best evinced by the discrepancy that currently exists between examples of the hypertextual edition and that edition's theoretical vision; but if pragmatic decisions of this nature are to be made at all, they are best carried out in the full knowledge of what is lost by making them. That said, in consideration of the highly-relevant resources that are now available and will in the future be made available on the Internet, it is unclear why the Internet-based reader would settle for a dynamic-hypertextual edition that was anything less than representative of the full range of pertinent resources available.

Conclusion: Proverbial Wisdom and the Internet-Edition Editor

28. To conclude, one might wonder what the role of the editor becomes for an electronic Internet edition. The proverbial curse introduced by Woudhuysen -- "May you live in interesting times" -- is strangely appropriate to this role; restated in more specific terms, it might best be rephrased as "May you work in an interesting medium." One can assume that problems related to integrating, in a practical way, features of the dynamic text into the hypertextual edition[38] will be solved in the coming months or years with software revisions and updates; but, just as one cannot assume that all information available via the Internet will remain cost-free, one cannot assume that materials on the Internet will see print-like stability within the same period,[39] nor necessarily should one -- because of the Internet's very nature. Of this nature, one hears much about the liberating qualities of hypertext and about the democratic virtues and 'healthy' subversive potential of the Internet,[40] though most often in contexts outside that of scholarly editing; manifested in issues such as the Internet's lack of stability, among others, these exciting qualities taken as a whole translate into a challenge for the editor, whose end-goal may seem quite divergent from that suggested by the school of Greg and Bowers.
29. In addition to all the considerations that must be made by the editor of Shakespeare for the print medium,[41] to the concerns held by the editor of an electronic scholarly edition of Shakespeare specifically intended for dissemination on the Internet, one must add issues associated with the dynamic text and the hypertextual edition, as well as the complex task of information management -- with full consideration of what it means to manage information in an electronic environment such as the Internet. Acknowledging this, one might conclude that editing for the Internet is less the traditional (though increasingly questioned) act of bringing stability, even if artificial, to a text for its readers; rather, one might conclude that it is more a task of managing and navigating what is acknowledged to be unstable, with regard to matters of the text but also specifically, and unquestionably, to those of the Internet. The future role of the editor may very well become that of a mediator between the reader -- who will become, with access to such a range of materials, an editor of sorts him- or herself[42] -- and the vast amount of electronically-based information that is pertinent to the scholarly edition, both that which is included immediately in the electronic edition and that which lies beyond it, on the Internet.[43]

Notes

[1] I wish to thank the Killam Trust for its generous support during the time in which this paper was written, and John Lavagnino, Michael Best, and Paul Dyck for helpful comments made on earlier drafts of this paper. This paper incorporates some material from my presentations "Disparate Structures, Electronic and Otherwise: 'Nebulous' Approaches to Textual Content in Electronic Editions of Shakespeare" and "'A worlde of wordes': Conceptions of Textual Organization in the Electronic Medium, or, The Dynamic Text as Hypertext," and, more implicitly, draws from arguments presented in my papers "The New Scholarly Edition" and "Lemmatization and Parsing." [\[Back\]](#)

[2] The best summaries of these discussions, for an audience concerned with Shakespeare and his contemporaries, are found in Hill ("English Renaissance: Nondramatic Literature," and "Where We Are and How We got Here"), Howard-Hill and Werstine ("Shakespeare"). [\[Back\]](#)

[3] It should be noted that the essays contained in Finneran's *The Literary Text in the*

Digital Age also represent a step in this direction. As Hill notes of the collection, one point made is that "the print-based scholarly edition is morphing into the electronic archive or database" ("Editorial Theory and Literary Criticism: Lamb and Wolf?" 54). [\[Back\]](#)

[4] This does not mean that the issue was overlooked; rather, it simply was an issue that did not receive comment. Woudhuysen does note the role of the computer as an investigative tool in his 1993 *Shakespeare Survey* review (199) and, hence, acknowledges the presence and importance of the electronic text to some facets of Shakespearean scholarship. [\[Back\]](#)

[5] A list of these texts is provided by Lancashire ("The Public Domain Shakespeare," Appendix A); this list includes additional details regarding the three electronic editions reviewed by Bolton. As Lancashire notes, "Shakespeare's works, altered silently or emended on explicit grounds, may be obtained commercially or freely in electronic form, but not the originals from which every one of these editions must flow." [\[Back\]](#)

[6] This approach has recently been taken by Hill, in his survey "Where We Are and How We Got Here," presented initially in response to a series of questions proposed by Susan Zimmerman; these questions dealt with the significance of changes in bibliographical and textual studies (specifically with consideration to the contemporary poststructural climate in which we work), the use of such studies to conduct research about the early modern period, and the major problems facing such studies today. Aspects of my argument here are, in part, an elaboration of that which Hill presents in his discussion dealing with the hypertext as edition.

Hill's voice in the aforementioned article is one of a number in a forum on editing published by *Shakespeare Studies* (24 [1996]). It should be noted that a number of divergent opinions are articulated in this forum, and that Werstine ("Editing After the End of Editing") disputes some of the views put forward by Hill. [\[Back\]](#)

[7] We must clearly distinguish the proprietary *DynaText* from the general idea of the *dynamic text* here discussed. [\[Back\]](#)

[8] One definition of encoding, or tagging, is the process whereby the form of an electronic text is described. Differing systems exist; see, for example, C.M. Sperberg-McQueen and Lou Burnard's *Guidelines for Electronic Text Encoding and Interchange (TEI P3)* and Lancashire's *RET Encoding Guidelines*; see also Lancashire's "Early Books, *RET* Encoding Guidelines, and the Trouble with SGML." Specialized encoding systems can also be used to aid specific types of critical work; see, for example, Siemens ("Lemmatization and Parsing"). [\[Back\]](#)

[9] When considering that the dynamic text is composed of both text and software, it is significant that, in his aforementioned review, Whitney Bolton treats also the text-analysis software that assists the reader in the management of the electronic texts (among them *WordCruncher*, *Nota Bene* and its accompanying *Text-Base*, and *Micro-OCP*) alongside the electronic texts themselves. [\[Back\]](#)

[10] This presumes the text is in a properly-tagged, electronic form; *Twelfth Night*, *Or what you will* (in Lancashire, et al., eds. *Using TACT with Electronic Texts*) is

one such text. [\[Back\]](#)

[11] For examples of the insights offered by the most complex of these dynamic interactions, see Lancashire's "Computer-Assisted Critical Analysis" and "Uttering and Editing," as well as Steele (and other papers in the volume in which Steele's appears). [\[Back\]](#)

[12] The version of *TACT* available for no cost over the Internet, from the University of Toronto's Centre for Computing in the Humanities and Social Sciences <URL: <http://www.chass.utoronto.ca/cch/tact.html>>, comes with no such library of texts. [\[Back\]](#)

[13] When weighing the time spent carrying out some types of interaction manually against the potential gain that the resultant knowledge might bring, it is plain to see why such work, and a good degree of work involving textual detail of most kinds, is carried out today exclusively with the assistance of the computer. Note Potter's comment in 1989 that "Constructing large critical editions or dictionaries, collating variant readings from different texts, concordancing entire corpora of prolific writers, deciding questions of disputed authorship . . . -- all of these activities, and numerous other equally complex tasks, now are routinely performed by computer methods; in fact, very few of these projects get funded without computers. The practice of computing is widespread and little disputed in these supporting areas of literary study" ("Preface" xv). [\[Back\]](#)

[14] It should also be noted that capabilities akin to those provided by the dynamic text, along with a good degree of critical acumen and considerable scholarly effort, have made possible and believable what may well be the most important Shakespearean discovery of the decade, and beyond: the *Funeral Elegy* by W.S., as recently demonstrated by Don Foster.

That said, this type of critical reading is not obviously in keeping with current trends in critical and textual theory that place emphasis on reading in a historical context and also on what Peter Shillingsburg has recently referred to as the "event-ness" of the historical textual edition. [\[Back\]](#)

[15] Noted by Hill ("Where We Are and How We Got Here"). See McGann's *Critique of Modern Textual Criticism* and McKenzie's *Bibliography and the Sociology of Texts* for social theories of the text; see also McGann's "The Rationale of Hypertext" for the way in which a hypertextual edition has the potential to de-centre the critically-edited text ("Coda"). [\[Back\]](#)

[16] An excellent primer to hypertext is found in Christopher Keep, Tim McLaughlin, and robin's *The Electronic Labyrinth*. The *hypertextual edition* is best exemplified theoretically in the work of Charles Faulhaber ("Textual Criticism in the 21st Century"). In this conception, and that later discussed by Neuman, the hypertextual edition ideally builds on notions of the dynamic text (finding text and text-analysis tools offered in combination), but adds considerably to it. This relationship, de-emphasized here because of this section's reliance on a practice-informed definition, is discussed more fully below. [\[Back\]](#)

[17] See also its review by David Ritchkoff at <URL: <http://web0.tiac.net/users>

</minga/macbeth.html>>. [\[Back\]](#)

[18] See Donaldson. An intriguing demonstration video of this edition has been in circulation for some time. [\[Back\]](#)

[19] For the letter in *Ralph Roister Doister*, see 3.4.31 ff. (first reading), 3.5.45 ff. (second reading), 4.3.31 ff. (confusion with Christian Custance over its promise of marriage), 4.5.37 (Christian Custance's acknowledgment of the potential problem, of the letter combined with the ring and token), and later for Sym Suresby's report of the evidence to Gawain Goodlucke and the plot's eventual comic outcome. [\[Back\]](#)

[20] Excerpted from Munro (1.100). [\[Back\]](#)

[21] For a survey, with exemplary discussion of the types of editions and the issues involved, see Hill's "Where We Are and How We Got Here" and "English Renaissance: Nondramatic Literature" as well as Werstine ("Shakespeare") and Howard-Hill. [\[Back\]](#)

[22] John Lavagnino has also discussed the nature of these acts, though with a different emphasis; he notes: "Working with a hypertext edition, we will move back and forth between two distinct activities, reading and scholarship: between reading versions of a work in their entirety, and studying those versions and their relationships. Facilitating reading is an important achievement, but, as Robin Cover observed, it is also not something that particularly calls for hypertext; the real advantage of a hypertext edition will lie in its tools for scholarship." [\[Back\]](#)

[23] Neuman also explicitly notes the evolutionary nature of electronic editions. [\[Back\]](#)

[24] Lavagnino notes: "it is striking how many proposals for hypertext editions fail to mention even the rather ordinary function of text searching . . . mundane as it is, it is one of the most valuable things that can be done with electronic texts . . ." [\[Back\]](#)

[25] The *Arden Shakespeare CD-ROM* has, at the time of writing, not seen wide distribution. However, its description is widely available (at <URL: <http://www.ardenshakespeare.com/products/cdrom.html>>) and it has been recently reviewed (*Computers & Texts* 15 [August 1997]: 17-19).

Employing a hypertextual interface, *The Arden Shakespeare* CD-ROM combines the full text of those plays and poems included in *The Arden Shakespeare* [second series] with their introduction, commentary, textual notes, and so forth; facsimile reproductions of each page of early folio and quarto texts for most plays and poems are included, as are several helpful scholarly works, among them Bullough's *Narrative and Dramatic Sources of Shakespeare*, Bevington's *Shakespeare* bibliography, Abbott's *A Shakespearean Grammar*, Onions and Eagleson's *A Shakespeare Glossary*, and Partridge's *Shakespeare's Bawdy*. As well, it employs *DynaText* software to facilitate simple and complex text searches. [\[Back\]](#)

[26] This surveys several trends in the development of electronic editions and outlines the computing tools that should ideally accompany any electronic text, specifically those offering collation, concordance-like functions, statistical analysis

capabilities, facilities for linguistic analysis, the ability to employ lexicographical resources, and the ability to accommodate hypertextual links (369). [\[Back\]](#)

[27] Such ideal principles as those discussed by Shillingsburg, Lancashire, Faulhaber, Neuman, and others. These include, for example, the suggestions that "Delivery software involves both presentational and analytical software" (II); that the software included facilitate both dynamic interaction, such as that offered by *TACT*, and textual collation (II.A, II.C); that hypertext be employed (II.B.2); and offer guidelines for the provision of extra-textual materials ("Parts of the Edition" V.D.). A case for the necessity of textual collation software, something often overlooked in hypertextual editions, is convincingly made by Lavagnino, who comments as follows: ". . . in a world where thinking about works as composed of multiple versions is not widespread, a hypertext edition needs to offer as much help as it can to the scholar--going beyond simple access to the texts and the analytical tools, like text searching, that are common today," and "Hypertext editions as currently projected are incomplete; . . . the display of reading texts needs to be supplemented by the analytical tools that scholarship will demand for working with multiple versions." [\[Back\]](#)

[28] That said, it should be added that such an edition should, ideally, adhere to the guidelines set out by the MLA Committee on Scholarly Editions (as the ISE does plan to do; see the principles noted in the document "Internet Editions of Shakespeare: A Preliminary Prospectus" [Best]) and should, moreover, employ elements integral both to the dynamic and hypertextual editions. [\[Back\]](#)

[29] See Siemens ("A New Humanism" n.11) for a brief survey. [\[Back\]](#)

[30] One of the chief advantages of disk-based delivery systems is that of speed; one can assume, though, that the bandwidth problems that slow data transmission speeds on the Internet will be solved in the near future. [\[Back\]](#)

[31] Speaking chiefly of structuring here, the "ease" of the action of linking does not take into account the process of converting resources into digital form and obtaining proper permissions for the inclusion of necessary materials into an edition -- themselves no small tasks. This also assumes that what are referred to as browser "add-ons" are in place to handle the display of extra-textual materials, such as those in audio and video formats. Moreover, we must remember the complex relationship that exists between primary record and its representation, a digital one in this case; as Tanselle reminds us, while such materials may be easily integrated and accessed, we must not lose sight of what is not captured, or what is lost, by such representations (31). [\[Back\]](#)

[32] The issue of 'interface' on the Internet for such editions seems a serious issue, at this time. For *TACTWeb*, see Bradley and Rockwell; for *DynaWeb*, see also its review by Burrows. Especially noticeable on *TACTWeb* is the absence of the "collocate view," one of the most powerful and useful views of a text offered by *TACT*. To these, one might add a growing number of commercial database products with potential application; one of these is Oracle's "ConText Option" to its *Universal Server* (Redwood Shores, CA: Oracle, 1996. <URL: <http://www.oracle.com>>). [\[Back\]](#)

[33] See Marder's "Thoughts on a 'Definitive' Edition of Shakespeare," wherein he looks to the future of Shakespeare studies and notes:

Eventually, when everything necessary for further study will have been stored in a constantly updated Shakespeare data bank . . . and all the relevant information on every given act, scene, place, word, or line is retrievable on command, we may have the means for a universal, up-to-date, constantly improving, eclectic "edition" of Shakespeare. (29)

On how this might be accomplished, he continues:

My solution is to call for a moratorium in the making of editions, and the writing of articles, too, for that matter, . . . and the channeling of efforts . . . to devise a project (for which I already have a preliminary plan) to computerize all that is known about Shakespeare's life, times, and work . . . (29) [\[Back\]](#)

[34] These examples are presented here with the knowledge that this paper could not possibly hope to provide a fully inclusive list; many valuable resources have not been mentioned, among them the considerable body of scholarship and criticism available on-line through the several electronic journals that serve the field and through the personal Internet pages of many academics. [\[Back\]](#)

[35] As Alfred Glossbrenner has said, on-line information in general can be a double-edged sword: "On the one hand everything is available. But on the other hand, *everything* is available." There are at the time of writing, for example, 80,314 occurrences of the word "Shakespeare" on the Internet, some of which are in reference to scholarly articles, good texts, and scholarly resources, but a discouragingly large number of these are to a product listing of the fishing gear of the same name, the furniture line, and so forth (*HotBot* <URL: <http://www.hotbot.com/>>; accessed 15 September 1997). [\[Back\]](#)

[36] The issue of completeness is a difficult one to escape when thinking of editions intended, specifically, for the Internet, a medium where, unlike what we expect of print, one of the assumptions for scholarly resources is that they will be constantly updated to emend corrections, add new pertinent material, and so forth. This may well be, as John Lavagnino has suggested to me privately, a transference to the electronic medium of the desire for 'total libraries' that evolved from library cataloguing movements in the late print era. Such a desire may also be resultant from the general sense among scholars who publish their work on the Internet -- perhaps akin to the type of 'hyperworld' envisioned by Nelson -- that their work is a small part of a much larger whole, a whole united by topic and clearly connected by hypertextual links that, ideally, lead to the related work of others; as an edition is, in many ways, an expression of scholarship and criticism, it follows that such an expression should represent itself as part of that larger whole, as it is done in the medium of its dissemination. [\[Back\]](#)

[37] See Siemens ("A New Humanism?" 172 ff.) for a brief discussion of varying discourses of information exchange on the Internet as they relate to economic issues. There are numerous examples of cost-free Internet-based academic resources that have, for whatever reason, begun charging for access. [\[Back\]](#)

[38] Those akin to determining the right interfaces for text-analysis and collation software, and so forth. [\[Back\]](#)

[39] That said, the use of aliased domain names and Persistent Universal Resource Locators (PURLs; see <URL: <http://purl.oclc.org>>) can add to the locational stability of documents on the Internet. [\[Back\]](#)

[40] This is something in which the ISE participates (in Harnad's view of subversion; see also Brent), by promising to make *freely available* high quality editions of Shakespeare's work and a good body of supporting material that one might expect in hypertextual editions carrying a significant price. [\[Back\]](#)

[41] Such as those noted, above, in Woudhuysen's survey. [\[Back\]](#)

[42] Consider the thoughts of Charles L. Ross, who urges that "the birth of the reader-as-editor," something brought about by the access the reader is given to the wide-ranging textual resources available for inclusion in electronic editions, "must be at the death of the [print-based] critical edition" (225). [\[Back\]](#)

[43] Moreover, and thinking specifically of dramatic texts, one must also consider the role of the text in a world where text and dramatic representation ('page' and 'stage') are stored in the same medium, accessed in the same manners, and displayed on the same screen; there is the potential that the dramatic performance -- that is, the enactment of what is captured in the textual record -- will be privileged over the textual record itself. If one is to believe that there is to be any distracting influence away from the textual record by having both text and performance available in the same electronic edition, the role of the electronic editor may well also include justifying the presence of the text for more than archival/reconstructive purposes. On this, one might consider the de-emphasized role that the dramatic text has been shown to have in classrooms where electronic resources that give good access to performance are present; see the *Shakespeare Electronic Archive* (Friedlander's discussion) and the *Shakespeare Interactive Archive* (see Donaldson; for implementation by Milla Riggio, see Greene). [\[Back\]](#)

[44] See also the log of discussions around the 'subversive proposal' found at <URL: <http://ftp.princeton.edu/pub/harnad/psycology/Subversive.Proposal/>>. [\[Back\]](#)

Works Cited

- Abbott, Edwin. *A Shakespearian Grammar: An Attempt to Illustrate Some of the Differences Between Elizabethan and Modern English*. London: Macmillan and Co., 1888.
- *The Arden Shakespeare CD-ROM: Texts and Sources for Shakespeare Study*. Walton-on-Thames: Arden Shakespeare, 1997.
- Barroll, Leeds. "A New History for Shakespeare and His Time." *Shakespeare Quarterly* 39 (1988): 441-64.
- Best, Michael. "From Book to Screen: A Window on Renaissance Electronic Texts." *Early Modern Literary Studies* 1.2 (1995): 4.1-27 <URL: <http://purl.oclc.org/emls/01-2/bestbook.html>>.
- ---. "Scholarly Editions of Shakespeare for the Internet" Paper delivered in the "The Shakespearean Texts in the Electronic Age" panel at the International Shakespeare Association, Los Angeles, April 1996. <URL: <http://web.uvic.ca/shakespeare/Annex>

[/Articles/ISA1996.html](#)>.

- ---, gen. ed. "Internet Editions of Shakespeare: A Preliminary Prospectus." <URL <http://web.uvic.ca/shakespeare/Foyer/Prospectus1.html>>.
- Bevington, David. *Shakespeare*. Arlington Heights, IL: AHM Publishers, 1978.
- Bolton, Whitney. "The Bard in Bits: Electronic Editions of Shakespeare and Programs to Analyze Them." *Computers and the Humanities* 24 (1990): 275-87.
- Bradley, John, and Geoffrey Rockwell. *TACTWeb*. <URL: <http://tactweb.chass.utoronto.ca/tactweb/home.htm>>.
- Brent, Doug. "Stevan Harnad's 'Subversive Proposal': Kick-starting Electronic Scholarship -- A Summary and Analysis." *Information Society* 11.4 (1995): 275-283.
- Bullough, Geoffrey. *Narrative and Dramatic Sources of Shakespeare*. 8 vols. New York: Columbia UP, 1957-75.
- Burrows, Toby. "Using DynaWeb to Deliver Large Full-Text Databases in the Humanities." *Computers & Texts* 13 (December 1996). <URL: <http://info.ox.ac.uk/ctitext/publish/comtxt/ct13/burrows.html>>.
- *Collate*. Peter Robinson, dev. Oxford: Centre for Humanities Computing, 1994.
- Cover, Robin. "Encoding for Textual Parallels and Critical Apparatus." Text Encoding Initiative Working Paper, February 21, 1990. [Cited in Lavagnino.]
- Crane, Gregory R., ed. *The Perseus Project*. <URL: <http://www.perseus.tufts.edu>>.
- ---, ed. "Renaissance Sources Project: Perseus Project, Tufts University." in Crane, ed. <URL: <http://www.perseus.tufts.edu/Renaissance.html>>.
- Donaldson, Peter S., et al. *The Shakespeare Interactive Archive*. Cambridge, MA: MIT, [in development]. <URL: http://web.mit.edu/lath/LATHWWW/Home_Pages/ShakespeareHP.html>.
- ---. "The Shakespeare Interactive Archive: New Directions in Electronic Scholarship on Text and Performance." 103-28 in Edward Barrett and Marie Redmond, eds. *Contextual Media*. Cambridge, MA: MIT P, 1995.
- Dollimore, Jonathan. "Introduction: Shakespeare, Cultural Materialism and the New Historicism." 2-17 in J. Dollimore and Alan Sinfield, eds. *Political Shakespeare: New Essays in Cultural Materialism*. Ithaca: Cornell UP, 1985.
- *DynaWeb*. Boston: Inso Corporation, 1997. <URL: <http://www.inso.com/frames/consumer/dynatext/index.htm>>.
- *Early Modern Literary Studies*. R.G. Siemens, ed. <URL: <http://purl.oclc.org/emls/emlshome.html>>.
- *Editions and Adaptations of Shakespeare*. Cambridge: Chadwyck-Healey, 1996.
- Faulhaber, Charles B. "Textual Criticism in the 21st Century." *Romance Philology* 45 (1991): 123-148.
- Finneran, Richard J., ed. *The Literary Text in the Digital Age*. Ann Arbor: U of Michigan P, 1996.
- *First Folio Project*. Pennsylvania: Furness Shakespeare Library, U of Pennsylvania. <URL: <http://www.library.upenn.edu/etext/furness/>>.
- Foster, Donald. *Elegy by W.S.: A Study in Attribution*. Newark: U of Delaware P, 1989.
- ---. "A Funeral Elegy: W[illiam] S[hakespeare]'s 'Best-Speaking Witnesses'." *Publications of the Modern Language Association* 111 (1996): 1080-1105.
- ---. "SHAXICON 1995." *The Shakespeare Newsletter* 45.2 (1995): 25-32.
- Friedlander, Larry. "The Shakespeare Project: Experiments in Multimedia Education." 257-71 in George Landow and Paul Delany, eds. *Hypermedia and Literary Studies*. Cambridge, MA: MIT P, 1991.
- Glossbrenner, Alfred. *How to Look it up Online*. New York: St. Martin's P, 1987.
- Greenblatt, Stephen. "Introduction: The Forms of Power and the Power of Forms in the

- Renaissance." *Genre* 15 (1982): 3-6.
- Greene, Bob. "Milla Riggio is Paving a New Road to Shakespeare." *Comments: News from the Academic Computing Department of Trinity College* (Winter 1995). <URL: <http://www.trincoll.edu/~acad/comments/article4.html>>.
 - Harnad, Stevan. "The PostGutenberg Galaxy: How to Get There From Here." *Times Higher Education Supplement* (12 May 1995). Rpt. at <URL: <http://cogsci.ecs.soton.ac.uk:80/~harnad/THES/thes.html>>.[44]
 - Hill, W. Speed. "Editorial Theory and Literary Criticism: Lamb and Wolf?" *Review* 19 (1997): 37-64.
 - ---. "English Renaissance: Nondramatic Literature." 204-30 in D. C. Greetham, ed. *Scholarly Editing: A Guide to Research*. New York: Modern Language Association, 1995.
 - ---. "Where We Are and How We Got Here: Editing after Poststructuralism." *Shakespeare Studies* 24 (1996): 38-46.
 - Howard-Hill, T.H. "English Renaissance: Non-Shakespearean Drama." 231-52 in D. C. Greetham, ed. *Scholarly Editing: A Guide to Research*. New York: Modern Language Association, 1995.
 - HUMANIST. <E-Mail: humanist@lists.princeton.edu>. <URL: <http://www.princeton.edu/~mccarty/humanist/humanist.html>>.
 - Internet Shakespeare Editions. Michael Best, gen. ed. <URL: <http://web.uvic.ca/shakespeare/>>.
 - Keep, Christopher, Tim McLaughlin, and robin. *The Electronic Labyrinth*. Charlottesville: U of Virginia, 1995. <URL: <http://jefferson.village.virginia.edu/elab/elab.html>>.
 - Lancashire, D. Ian. "Working with Texts." Paper delivered at the IBM Academic Computing Conference, Anaheim, 23 June 1989. Noted in *Faulhaber* (128, 135).
 - ---. "Computer-Assisted Critical Analysis: A Case Study of Margaret Atwood's *Handmaid's Tale*." 293-318 in Paul Delany and George P. Landow, eds. *The Digital Word: Text-Based Computing in the Humanities*. Cambridge, MA: MIT P, 1993.
 - ---. *RET Encoding Guidelines*. From *Renaissance Electronic Texts*. <URL: <http://library.utoronto.ca/www/utel/ret/guidelines0.html>>.
 - ---. "Uttering and Editing: Computational Text Analysis and Cognitive Studies in Authorship." *Texte: Revue de Critique et de Theorie Litteraire* 13/14 (1993): 173-218.
 - ---. "Early Books, RET Encoding Guidelines, and the Trouble with SGML." Paper delivered at the *Electric Scriptorium: Approaches to the Electronic Imaging, Transcription, Editing and Analysis of Medieval Manuscript Texts*, University of Calgary, Alberta, 11 November 1995. <URL: <http://www.ucalgary.ca/~scriptor/papers/lanc.html>>.
 - ---. "The Public Domain Shakespeare." Paper delivered at the Modern Language Association, New York, 29 December 1992. <URL: <http://library.utoronto.ca/www/utel/ret/mla1292.html>>.
 - ---, ed. *Early Modern English Dictionaries Database*. <URL: <http://www.chass.utoronto.ca:8080/english/emed/patterweb.html>>.
 - ---, et al., eds. *Using TACT with Electronic Texts: A Guide to Text-Analysis Computing Tools*. New York: Modern Language Association, 1996. [The software alone is available at <URL: <http://www.chass.utoronto.ca/cch/tact.html>>.]
 - Lavagnino, John. "Reading, Scholarship, and Hypertext Editions." Forthcoming in *TEXT: Transactions of the Society for Textual Scholarship* 8 (1996): 109-24. Rpt. *The Journal of Electronic Publishing* 3.1 (September, 1997). <URL: <http://www.press.umich.edu:80/jep/03-01/reading.html>>.
 - Marder, Louis. "Thoughts on a 'Definitive' Edition of Shakespeare: Is it Possible?" *The Shakespeare Newsletter* 32 (Winter, 1982): 27, 29.
 - McGann, Jerome. *A Critique of Modern Textual Criticism*. Chicago: U of Chicago P, 1983.

- ---. "The Rationale of Hypertext." <URL: <http://jefferson.village.virginia.edu/public/jjm2f/rationale.html>>.
- McKenzie, D. F. *Bibliography and the Sociology of Texts*. [The Panizzi Lectures 1985]. London: British Library, 1986.
- *Michigan Early Modern English Materials*. Compiled by Richard W. Bailey, Jay L. Robinson, James W. Downer, with Patricia V. Lehman. Charlottesville: U of Virginia Library, 1994. <URL: <http://www.hti.umich.edu/dict/memem.html>>. [Printed guide: Richard Bailey, et al. *Michigan Early Modern English Materials*. Ann Arbor: Xerox University Microfilms, 1975.]
- *Micro-OCP*. Oxford: Oxford Electronic Publishing, 1989.
- Modern Language Association of America Committee on Scholarly Editions. "Guidelines for Electronic Scholarly Editions [Draft]." [Accessed 10 September 1997, and earlier.] <URL: <http://sunsite.berkeley.edu/MLA/guidelines.html>>.
- Munro, John, et al., eds. *The Shakespeare Allusion-book: A Collection of Allusions to Shakespeare from 1591-1700*. Oxford: Oxford UP, 1932.
- Nelson, Ted. "A New Home for the Mind?" *Datamation [PlugIn]* 41.1 (1995). <URL: <http://www.datamation.com/PlugIn/issues/1995-Jan-15/xanadu.html>>.
- Neuman, Michael. "The Very Pulse of the Machine: Three Trends Toward Improvement in Electronic Versions of Humanities Texts." *Computers and the Humanities* 25 (1991): 363-75.
- *Nota Bene*. New York: Dragonfly Software, 1989.
- Onions, Charles T. *A Shakespeare Glossary*. Robert D. Eagleson, rev. Oxford: Clarendon P, 1986.
- Partridge, Eric. *Shakespeare's Bawdy: A Literary and Psychological Essay, and a Comprehensive Glossary*. London: Routledge, 1947.
- Potter, Roseanne, ed. *Literary Computing and Literary Criticism: Theoretical and Practical Essays on Theme and Rhetoric*. Philadelphia: U of Pennsylvania P, 1989.
- *Renaissance Electronic Texts*. Ian Lancashire, gen. ed. Toronto: Centre for Computing in the Humanities and Social Sciences. <URL: <http://library.utoronto.ca/www/utel/ret/ret.html>>.
- Ross, Charles L. "The Electronic Text and the Death of the Critical Edition." 225-32 in Richard J. Finneran, ed. *The Literary Text in the Digital Age*. Ann Arbor: U of Michigan P, 1996.
- Shakespeare, William. *The Complete Works of William Shakespeare*. [The Complete Moby[tm] Shakespeare.] Jeremy Hylton, et al. <URL: <http://the-tech.mit.edu/Shakespeare/index.html>>.
- ---. *Macbeth*. A.R. Braunmuller, ed.; David S. Rhodes, intr. and commentary; Michael E. Cohen, prod. New York: Voyager, 1994.
- ---. *Othello*. Oliver Parker, dir. (Video; 124 mins.) Los Angeles: Castle Rock Entertainment, 1995.
- ---. *Richard II*. Peter Ure, ed. and intr. [5th ed.] London: Methuen, 1961.
- ---. *The Riverside Shakespeare*. G.B. Evans, ed. Boston: Houghton Mifflin, 1974.
- ---. *Twelfth Night, Or what you will*. In Lancashire, et al., eds. *Using TACT with Electronic Texts: A Guide to Text-Analysis Computing Tools*. /Br_ir_lt/Engl_lit/1500_599/Shakes_w/Tn/Tn-nrp.txt (file).
- ---. *William Shakespeare: The Complete Works*. Stanley Wells and Gary Taylor, gen. eds. Oxford: Oxford UP, 1986.
- ---. *William Shakespeare: The Complete Works, Electronic Edition*. Oxford: Oxford Electronic Publishing, 1988.
- ---. *WordCruncher Bookshelf Shakespeare*. Orem, UT: Electronic Text Corporation, 1988.

- *SHAKSPER Electronic Conference*. Hardy Cook, ed. <E-mail: SHAKSPER@WS.BowieState.edu>. [Internet archive available via the *Interactive EMLS* section of *Early Modern Literary Studies*.]
- Shillingsburg, Peter. "General Principles for Electronic Scholarly Editions." Discussion paper distributed at the MLA meeting in Toronto, December 1993. [See *HUMANIST* 8.0153.]
- Siemens, R.G. "Lemmatization and Parsing with TACT Preprocessing Programs." *Computing in the Humanities Working Papers* A.1 (1996) <URL: <http://www.epas.utoronto.ca:8080/epc/chwp/siemens2/>>.
- ---. "A New Humanism? Toward a Reconsideration of the Ideals and Pragmatics Shaping Electronic Scholarly Publication in the Arts Today." 167-81 in R.G. Siemens and W. Winder, eds. *Scholarly Discourse and Computing Technology: Perspectives on Pedagogy, Research, and Dissemination in the Humanities*. [A special issue of] *Text Technology* 6.3 (1996) and *Computing in the Humanities Working Papers* B.33 (1997) <URL: <http://www.epas.utoronto.ca:8080/epc/chwp/siemens3/>>.
- ---. "The New Scholarly Edition in the Academic Marketplace: A Speculation on the Future of Computer-Assisted Literary Criticism." *Text Technology* 6.1 (1996): 35-50.
- ---. "Disparate Structures, Electronic and Otherwise: 'Nebulous' Approaches to Textual Content in Electronic Editions of Shakespeare." Presented on the panel "The Internet Shakespeare: Opportunities in a New Medium" of "Technologising the Humanities / Humanitising the Technologies," a joint session of the *Association of Canadian College and University Teachers of English* and the *Consortium for Computers in the Humanities* at the 1997 *Learned Societies Conferences*, Memorial University, St. John's, Nfld., 1 June 1997.
- ---. "'A worlde of wordes': Conceptions of Textual Organisation in the Electronic Medium, or, The Dynamic Text as Hypertext." Presented on the panel "Theories of Meaning and the Electronic Text" at the Joint International Conference of the *Association for Computers and the Humanities* and the *Association for Literary & Linguistic Computing*, Queen's University, Kingston, 6 June 1997.
- Siemon, James. "'Word Itself against Word': Close Reading after Voloshinov." 226-58 in Russ McDonald, ed. *Shakespeare Reread: The Texts in New Contexts*. Ithaca: Cornell UP, 1994.
- Sperberg-McQueen, C.M., and Lou Burnard, eds. *Guidelines for Electronic Text Encoding and Interchange (TEI P3)*. 2 vols. Chicago, Oxford: Text Encoding Initiative, 1994. [Also available, "TEI Guidelines for Electronic Text Encoding and Interchange (P3)," <URL: <http://www.hti.umich.edu/docs/TEI/>>.
- Steele, Kenneth B. "'The Whole Wealth of thy Wit in an Instant': TACT and the Explicit Structures of Shakespeare's Plays". 15-35 in T.R. Wooldridge, ed. *A TACT Exemplar*. [Centre for Computing in the Humanities Working Papers 1]. Toronto: Centre for Computing in the Humanities, 1991. Rptd. *Computing in the Humanities Working Papers* B.2 (May 1996). <URL: <http://www.epas.utoronto.ca:8080/epc/chwp/steele/>>.
- Tanselle, G. Thomas. "Significance of Primary Records: Introduction." *Profession* 95 (1995): 29-32.
- Udall, Nicholas. *Ralph Roister Doister*. 423-68 in Joseph Quincy Adams, ed. *Chief Pre-Shakespearean Dramas*. [Boston:] Houghton Mifflin, 1952.
- University of Virginia Electronic Text Centre. <URL: <http://etext.lib.virginia.edu/uvaonline.html>>.
- *Versions of King Lear*. Pennsylvania: Furness Shakespeare Library, U of Pennsylvania. <URL: <http://www.library.upenn.edu/etext/furness/>>.
- Werstine, Paul. "Editing After the End of Editing." *Shakespeare Studies* 24 (1996): 47-54.

- ---. "Shakespeare." 253-82 in D.C. Greetham, ed. *Scholarly Editing: A Guide to Research*. New York: Modern Language Association, 1995.
- *WordCruncher*. Orem, UT: Electronic Text Corporation, 1988.
- Woudhuysen, H.R. "Editions and Textual Studies." *Shakespeare Survey* 48 (1995): 268-87.
- ---. "Editions and Textual Studies." *Shakespeare Survey* 45 (1993): 193-204.

[http://asgard.humn.arts.ualberta.ca/emls/EMLS_footer.html]

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