

UN-EDITING AND NON-EDITIONS: THE DEATH
OF DISTANCE, THE NOTION OF NAVIGATION, AND
NEW ACTS OF EDITING IN THE ELECTRONIC MEDIUM

Abstract: The logical and pragmatic outcome of social theories of editing, as has been suggested, is editions that take into account the materiality of the text to such a degree that they can exist only immaterially, in the electronic realm. This paper explores a juncture, one at which the accumulation of textual archival materials associated with social theories of editing meet their natural home in the electronic scholarly edition, and one at which large collections of materials in electronic form meet their equivalent in the world of the ever-growing body of scholarship, available in electronic form, that is associated with the primary materials that lie at the heart of the textual scholar's concerns. With the electronic medium embraced editorially, the next major concern to be addressed by those interested in the edition, especially those exemplary textual scholars who have invested significant effort accumulating digital archival material, is the proper navigation of that material.

The recent convergence of social theories of editing and the rise of the electronic medium has had a significant impact on the scholarly edition, to be sure. While it is unlikely that editors ever fully forgot that "the material forms of books, the non-verbal elements of typographic notations within them, the very disposition of the space itself, have an expressive function in conveying meaning",¹ literary studies was re-awakened to such significance by figures such as McKenzie and McGann in the mid-1980s² – and re-awakened at a time when efficient and affordable methods to store and disseminate such conveyers of meaning were coming into being. Such methods, tied to the rise of accessible computing beginning at approximately the same time, have brought about

¹ D. F. McKenzie, *Bibliography and the Sociology of Text*, The Panizzi Lectures 1985 (London: The British Library, 1986) 8.

² See Jerome McGann, *A Critique of Modern Textual Criticism* (Chicago: U of Chicago P, 1983) and *The Textual Condition* (Princeton: Princeton UP, 1991) among others.

significant change in the field of textual studies – perhaps most noticeably, as discussed by Schreibman, in the role of the textual scholar for the past decade; “the release from the spatial restrictions of the codex form”, Schreibman notes, “has profoundly changed the focus of the textual scholar’s work. Throughout the 1990s, rather than synthesising, the textual scholar accumulated.”³ In addition to acknowledging the value of the electronic medium to editing and the edition, the recognition given to the products of such accumulation confirms critical recognition of the process of ‘unediting’ and an increased attention to the ‘materiality’ of the texts that are the objects of our consideration.⁴

Perfectly adaptable to, and properly enabling of, social theories of editing, the electronic medium has brought us closer to the textual objects of our contemplation, even though we remain at the same physical distance from them. Like other enabling communicative and representative technologies that came before it, the electronic medium has brought about a “death of distance” – a notion, as discussed by Paul Delany, that comes from a world made smaller by travel and communication systems, one in which we have “the ability to do more things without being physically present at the point of impact”.⁵ The textual scholar, accumulating an archive of textual materials, does so for those materials to be, in turn, re-presented to those who are interested in those materials. More and more, though, it is not only primary materials, textual witnesses for example, that are being accumulated and re-presented. The death of distance applies to primary materials, the

³ Susan Schreibman, “Computer-Mediated Texts and Textuality: Theory and Practice”, *A New Computer-Assisted Literary Criticism?*, ed. R. G. Siemens, spec. issue of *Computers and the Humanities*, forthcoming.

⁴ See Leah S. Marcus, *Unediting the Renaissance* (London: Routledge, 1996) 4–5 and *passim* and Randall McLeod, “UNEditing Shak-speare”, *Substance* 33.4 (1982): 26–55 for the possibilities associated with the term *unediting*; on *materiality*, see Margareta de Grazia and Peter Stallybrass, “The Materiality of the Shakespearean Text”, *Shakespeare Quarterly* 44 (1993): 255–283 as well as Kathryn Sutherland, “Revised Relations? Material Text, Immaterial Text, and the Electronic Environment”, *Text* 11 (1998): 17–30.

⁵ Paul Delany, “Virtual Universities and the Death of Distance”, *Text Technology* 7.3 (1997): 49–64, at 50.

direct objects of our contemplation, as well as to the objects that have the potential to inform further our contemplation.⁶

As a field that is at its heart concerned with evidence of communicative acts, to textual scholarship the observation of technology bringing about the death of distance may not be especially significant, for acceptance of such an observation is implicit to the discipline. Indeed, forms of writing, the scribe, and the printing press brought about 'deaths' of distance as well. And, further, one might say that much of the traditional work of the textual scholar – especially that concerned with the presentation of a text and representation of its variant versions – works towards a death of distance in itself, for the production of information associated with a scholarly edition (an extensive textual collation, for example) allows those who use that edition to accomplish much without requiring a physical presence at the various places that might house those materials represented in that edition. Diminishing distance as it does, such representation serves us well – for different reasons, certainly, than those materials presented in electronic editions based on extensively-accumulated materials, but such representation serves us well nonetheless.

One of the reasons that such representation serves us well is that we understand the tradition out of which that material has come; thus, we understand, almost intuitively, the end-product of the traditional scholarly edition in its codex form: how material is presented, what the scope of that material is, how that material is being related to us and, internally, how the material presented by the edition relates to itself and, further, to those materials beyond those directly presented (secondary texts, perhaps). This is not so, yet, for the scholarly edition in the electronic medium; at the moment, our understanding of these things as they relate to the scholarly electronic edition is just being formed.

My paper, the opening thoughts of which I have entitled "Un-Editing and Non-Editions", attempts to explore this critical junc-

⁶ For example, we welcome editions such as *Arden Shakespeare CD-ROM*, Chaucer's *Wife of Bath's Prologue*, and others of the same kind because of their ability to include, in ways that are not possible in print editions, a significant body of materials that assist in informing us about matters related to the works those materials intend to illuminate.

ture, one at which the accumulation of textual archival materials associated with social theories of editing meet their natural home in the electronic scholarly edition, and one at which such large collections of materials in electronic form meet their equivalent in the world of secondary materials, the ever-growing body of scholarship, available in electronic form, that is associated with the primary materials that lie at the heart of the textual scholar's concerns.

The logical and pragmatic outcome of social theories of editing, as has been suggested, is editions that take into account the materiality of the text to such a degree that they can exist only immaterially, in the electronic realm. Once the electronic medium is embraced editorially, the next major concern to be addressed by those interested in the edition, especially those exemplary textual scholars who have invested significant effort accumulating digital archival material, is the proper navigation of that material.

Shakespearean apparatus? Explicit textual structures and the implicit navigation of accumulated knowledge⁷

Associating the concerns of the humanist with issues of technology, Northrop Frye commented over a decade ago that

three of the most seminal mechanical inventions ever devised, the alphabet, the printing press, and the book, have been in humanist hands for centuries. The prestige of humanists in the past came largely from the fact that they lived in a far more efficient technological world than most of their contemporaries.⁸

⁷ I wish to thank the Killam Trust, and the University of Alberta, for its generous support during the time in which this article was written; "Shakespearean Apparatus" appears here with the kind permission of the editors of *TEXT*. Versions of this paper were pre-printed in *Surfaces* 8 (1999): 106, 1-34 <<http://www.pum.umontreal.ca/revues/surfaces/vol8/siemens.pdf>> and presented at the MLA Committee for Scholarly Edition's "Creation and Use of Electronic Editions" panel at the meeting of the Modern Language Association, San Francisco (28 December 1998); this paper also draws upon some material from earlier conference presentations.

⁸ Northrop Frye, "Literary and Mechanical Models", *Research in Humanities Computing 1: Select Papers from the ALLC/ACH Conference*, ed. Ian Lancashire (Oxford: Clarendon, 1991) 3-13, at 7f.

The technologies to which Frye draws attention – the alphabet, the printing press, and the book – are, notably, associated foremostly with textual culture; his comments, which were presented as a keynote address at the 1989 joint international conference of the *Association for Computers and the Humanities* and the *Association for Literary & Linguistic Computing*, would contextualize that conference's consideration of comparatively recent computing technology with relation to its more established predecessors. While acknowledging that text and the machinery involved in its creation, manipulation, and dissemination have had a firm place at the centre of the humanistic identity, one of the main points of Frye's address is found in an argument that is directly associated with what is often acknowledged to be the source for the idea of *hypertext*: this is Vannevar Bush's "As We May Think", in its expression of the idea of "building a trail of many items" through textual materials.⁹

⁹ Vannevar Bush, "As We May Think", online repr. from *Atlantic Monthly* 176 (July 1945): 101–108 <<http://www.isg.sfu.ca/~duchier/misc/vbush>>. During World War II, Bush was Director of the Office of Scientific Research and Development in the United States. Writing in the July 1945 issue of *Atlantic Monthly*, he outlined concerns about the increasing difficulty of managing the growing body of scientific knowledge. He states:

There is a growing mountain of research. But there is increased evidence that we are being bogged down today as specialization extends . . . Professionally our methods of transmitting and reviewing the results of research are generations old and by now are totally inadequate for their purpose . . . The difficulty seems to be, not so much that we publish unduly in view of the extent and variety of present-day interests, but rather that publication has been extended far beyond our present ability to make real use of the record. The summation of human experience is being expanded at a prodigious rate, and the means we use for threading through the consequent maze to the momentarily important item is the same as was used in the days of square-rigged ships.

His proposed solution is the oft-discussed memex,

a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory . . . [which operates by] associative indexing, the basic idea of which is a provision whereby any item may be caused at will to select immediately and automatically another.

In his explanation of how this device would operate, he outlines that individuals build "a trail of many items" that tie together related documents.

Bush's discussion of the problems – specifically that of management – associated with the gross accumulation of scientific knowledge is re-articulated by Frye in a discussion of the *Wissenschaft* period of humanistic knowledge accumulation; on this period, Frye (1991) comments:

its great scholars amassed an awesome amount of information. Its imaginative model was the assembly line, to which each scholar 'contributed' something, except that the aim was not to produce a finite object like a motor car, but an indefinitely expanding body of knowledge. (4)

The problems associated with *Wissenschaft*-era accumulation have been more recently elaborated in the terms of the *new humanist* by Bill Winder, who concludes that our own period, the neo-*Wissenschaft* era, "brings with it ... issues of retrieval and reuse", noting that the challenge for us is to be "as efficient at retrieving the information we produce as we are at stockpiling it"; we are to do so with the assistance of the computer, the "humanist's machine".¹⁰

My intention in tracing such a development – Frye's thoughts on the technologies of humanism and on *Wissenschaft*-era accumulation, Bush's earlier comments on much the same as well as the idea of hypertext, and Winder's argument about the new humanist's role and our own neo-*Wissenschaft* era – is to suggest an appropriate context for the concerns of this paper, a paper in which I tread a path others have walked before. The frame of reference for my paper is *text*, and the textual edition, with a promise in my title of discussing the navigation of textual structures and, presumably, hypertext. Within this frame of reference, it is especially important to note the appropriateness of the specifically-humanistic context into which Frye and Winder relocate the challenge presented by the more scientifically-oriented Bush. This is appropriate not only because of the way in which hypertextual theory has, in recent years, seen assimilation into a common humanistic understanding of what

¹⁰ William Winder, "Textpert Systems", *Scholarly Discourse and Computing Technology: Perspectives on Pedagogy, Research, and Dissemination in the Humanities*, ed. R. G. Siemens and William Winder, spec. issue of *Text Technology* 6.3 (1996): 159–166 at 164 f. and also in *Computing in the Humanities Working Papers* (April 1997) <<http://www.epas.utoronto.ca/epc/chwp/winder2/>>.

it is one means by *text*,¹¹ this is so, also, because of the way in which a new humanistic understanding of text – and the textual edition¹² – contributes, firstly, to a notion of hypertext that has evolved significantly since its early articulation by Bush and, secondly, to the problem of information management and navigation that was articulated some fifty years ago by Bush, and has been re-articulated since by Frye and Winder, among others, with regard to the materials that lie at the heart of humanistic pursuits. Lastly, my title's reference to "Shakespearean apparatus" is intended to narrow that

¹¹ Oft-cited in reference to this are *Hypertext Hypermedia and Literary Studies*, ed. Paul Delany and George P. Landow (Cambridge, MA: MIT P, 1991) and *The Digital Word: Text-Based Computing in the Humanities*, ed. Paul Delany and George P. Landow (Cambridge, MA: MIT P, 1993); George P. Landow, *Hypertext: The Convergence of Contemporary Critical Theory and Technology* (Baltimore: Johns Hopkins UP, 1992) and *Hyper / Text / Theory*, ed. George P. Landow (Baltimore: Johns Hopkins UP, 1994); Ted Nelson, "A New Home for the Mind", *Datamation [PlugIn]* 41.1 (1995) <<http://www.datamation.com.PlugIn/issues/1995-Jan-15/xanadu.html>>, rpt. from *Datamation* (March 1982): 169–180; and Christopher Keep, Tim McLaughlin and robin [sic.], *The Electronic Labyrinth* (Charlottesville: U of Virginia P, 1995) <<http://jefferson.village.virginia.edu/elab/elab.html>> (as a primer on hypertext), among others.

¹² In the context of some humanities computing techniques, Paul Fortier, "Babies, Bathwater and the Study of Literature", *Computers and the Humanities* 27 (1993–4): 375–385, notes that it is text that is at the heart of concerns in literary studies. On hypertext and scholarly editions, see Landow, "Hypertext" and "Footnotes, Endnotes, and the Experience of Reading Hypertext", <<http://www.stg.brown.edu/projects/hypertext/landow/vp/reading.html>>, George P. Landow, *The Digital Word and Digital Image – The Electronic Text* <<http://www.stg.brown.edu/projects/hypertext/landow/vp/etext.html>>; Charles B. Faulhaber, "Textual Criticism in the 21st Century", *Romance Philology* 45 (1991): 123–148; Jerome McGann, "The Rationale of HyperText", *Text* 9 (1996): 11–32 <<http://jefferson.village.virginia.edu/public/jjm2f/rationale.html>>; John Lavagnino, "Reading, Scholarship, and Hypertext Editions", *Text* 8 (1996): 109–123, rpt. *The Journal of Electronic Publishing* 3.1 (1997) <<http://www.press.umich.edu:80/jep/03-01/reading.html>>; R. G. Siemens, "Disparate Structures, Electronic and Otherwise: Conceptions of Textual Organisation in the Electronic Medium, with Reference to Editions of Shakespeare and the Internet", *The Internet Shakespeare: Opportunities in a New Medium*, ed. Michael Best, spec. issue 2 of *Early Modern Literary Studies* 3.3 (1998) 6.1–29 <<http://purl.oclc.org/emls/03-3/siemshak.html>>; and the articles in *The Literary Text in the Digital Age*, ed. Richard J. Finneran (Ann Arbor: U of Michigan P, 1996) among others.

focus slightly, gesturing toward the process of scholarly annotation – a process which has, for a generation of humanists interested in electronic textuality, become a touchstone for hypertext's incorporation into the electronic scholarly edition – and, specifically, gesturing to annotation as it might apply to the examples on which I rely in this paper drawn from the work of Shakespeare.

*What We Already Do: Presenting and Annotating the Text
of Shakespeare's Sonnet 138*

Perhaps the best way to begin is with a practical example, one taken from Shakespeare's *Sonnets*, and one with which many may already be familiar: "When my love swears that she is made of truth" (number 138).

A good print edition's rendering of Sonnet 138, taken from G. B. Evans' recent edition (101), is given in Figure 1.1. There is much that is familiar – and, to my mind, much that is reassuring – about such a presentation. We understand, in looking at an example such as this, that the text has been modernised and regularised. We also understand the ways that the various parts of the text – the sonnet and its textual apparatus and annotations – interrelate with one another.

For one used to working with such an edition regularly, the reading eye moves seemingly in a natural manner (should one wish it to) between the lines of verse and the lines of textual commentary. Seeing that there are no accidental variants listed, one presumes that only substantive variants are being treated; using the information given, related versions of the sonnet can be reconstructed. And, noting that there is nothing by way of gloss and interpretive notes on the page, the trained reader may also, without thinking much about it, use a finger or bookmark for easy passage to the commentary's assumed place later in the book (256–257; see Figure 1.2). A note in that commentary, I should add, discusses the mutual association of sonnets 138 and 144 through their printing in *The Passionate Pilgrim* (1599) and directs us to it. It also directs us to other texts, primary and secondary materials, that can inform our reading of the sonnet. Fingers or bookmarks may hold places in the book, and the eye and mind may move about, working from place to place – text, textual apparatus, and

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When my love swears that she is made of truth,
I do believe her, though I know she lies,
That she might think me some untutored youth,
Unlearned in the world's false subtleties.

4

Thus vainly thinking that she thinks me young,
Although she knows my days are past the best,
Simply I credit her false-speaking tongue:
On both sides thus is simple truth suppressed.

8

But wherefore says she not she is unjust?
And wherefore say not I that I am old?
O love's best habit is in seeming trust,
And age in love loves not t'have years told.

12

Therefore I lie with her, and she with me,
And in our faults by lies we flattered be.

Sonnet 137

1 fool, Love; Malone; foole love, Q; fool, love, Tucker 2 behold; Gildon²; behold Q 3 see; Gildon; see: Q 5 eyes; Gildon¹, Capell; eyes Q 11 this is not; Sewell¹; this is not Q; quoted, Tucker (after Capell) 12 face; Gildon²; face, Q 13 erred; Gildon (err'd); erred Q 14 transferred; Gildon (transferr'd); transferred Q

Sonnet 138

138] A variant version of this sonnet was printed in *The Passionate Pilgrim* (1599), the text of which (from the 1612 edition) was reprinted by Benson through Evans (except *Line 1*) 4 Unlearned... subtleties; Q (subtleties); Unskillful... forgeries *'Passionate Pilgrim'* 6 she... are; Q; I know my yeeres be *'Passionate Pilgrim'*; I know my yerces are Folger MS. 207.7 7 Simply I; Q; I smiling *'Passionate Pilgrim'* 7 false-speaking; Sewell¹, Capell; false speaking Q 8 On... suppressed; Q; Outfacing faults in love, with loves ill rest *'Passionate Pilgrim'* 9 she... unjust; Q; my love that she is young *'Passionate Pilgrim'* 11 habit is in; Q; habit's in a *'Passionate Pilgrim'* (111 edn, 1599); habite is a *'Passionate Pilgrim'* (2nd edn, 1599); Gildon 11 seeming trust; Q; soothing tongue *'Passionate Pilgrim'*; smoothinge tongue Folger MS. 207.7, Gildon 12 t'have; Q; to have *'Passionate Pilgrim'* 13 I... she; Q; I'll lye with Loue, and loue *'Passionate Pilgrim'* 14 And... flattered; Q; Since that our faultes in loue thus smother'd *'Passionate Pilgrim'*; Since y' o' faults in loue thus smothered Folger MS. 207.7 14 flattered; Capell (flatter'd); flattered Q

Figure 1.1: Sonnet 138 and Textual Apparatus (ed. G. B. Evans)

commentary – associating each with each, but always with the text of the sonnet as the main point of interest; other materials are encountered in relation to it, and those that are encountered are present because of their ability to illuminate the sonnet.¹³

¹³ Should one wish another style of presentation, or the presentation of different text-related materials, one would use another style of edition: say, variorum (with a more conservative presentation and, likely, a wider textual collation, with a history of pertinent criticism; see Rollins' edition: William Shakespeare, *The Sonnets*, 2 vols. (New Variorum Edition), ed. Hyder E. Rollins (Philadelphia, London: Lippincott, 1944) 1: 353–355; later, this is seen in Figures 3.1, 3.2, and 3.3, or diplomatic/documentary (transcription or facsimile, or both, with notes and commentary off the page; see Booth's edition: William Shakespeare, *Shakespeare's Sonnets*, ed. Stephen Booth (New Haven, London: Yale UP, 1977) 118–119, 476–481).

(taking 'plague' as a figurative term describing the kind of woman revealed in lines 3-12).

14 they i.e. 'heart and eyes' (13).

14 transferred (1) handed over (as captives to); (2) shifted (in so far as a proper focus on 'things right true' (13) is concerned).

Sonnet 138

A variant version of 138 (and 144) was printed in *The Passionate Pilgrim* (first edn, 1599; second edn, 1599; third edn, enlarged, 1612), a small collection of twenty poems published by William Jaggard and described as being 'By W. Shakespeare.' (only five poems are otherwise vouched for as being by Shakespeare and another five are almost certainly by other hands). The rather extensive textual variants between Q (1609) and *The Passionate Pilgrim* (see collation) are generally thought of as resulting from Shakespeare's revision, the *Passionate Pilgrim* text probably representing an earlier version. A manuscript copy (Folger MS. 207.1.7, fol. 197r), dating from about 1630 to 1640 and closely related to the *Passionate Pilgrim* text, offers three variants (see collation, lines 6, 11, 14).

1 my love i.e. my beloved, my mistress.

1 made A pun may perhaps be heard on made/maid (Booth).

1 truth faithfulness, constancy.

2 lies For the possible sexual equivocation in 'lies', see 13 n. below. The sonnet turns on 'lies': being lied to and lying to oneself.

3 That (I believe her) so that.

3 might may.

3 untutored simple, unsophisticated. According to OED 'untutored' is a Shakespearean coinage (see 2116 3.2.213 and *Rape of Lucrece*, dedication).

4 Unlearned in Ignorant of, unskilled in. Compare *Passionate Pilgrim*, 'Unskillful in' and 'untutored' (3).

4 false subtleties deceitful guiles, tricks, cunning. Compare *Passionate Pilgrim*, 'forgeries'.

5 vainly (1) foolishly; (2) conceitedly, out of vanity.

6 my days... best i.e. physically, sexually, I am no longer young.

7 Simply (1) Foolishly, weakly; (2) Without condition, absolutely.

7 tongue Note that the rhyme 'young/tongue' is repeated in *The Passionate Pilgrim* in lines 9 and 11, an indication perhaps that the *Passionate Pilgrim* version is an earlier unrevised draft (see 46.13-14 n.).

8 On both sides thus In this way on either side (i.e. by you and me).

8 simple truth suppressed plain, unmix'd truth (1) overpowered, defeated, (2) undisclosed, (3) denied.

9 But wherefore... unjust But why does she not admit that she is (1) unfaithful, (2) full of deceit, (3) dishonest (i.e. not 'honest' = chaste). 'unjust' looks back to lines 1-2; in *Passionate Pilgrim*, line 9 introduces a different twist - that the woman concerned is herself 'not young' (see collation).

11 love's best... trust love's most effective (1) artifice, guile, (2) settled practice, policy lies in giving the appearance of faith or constancy ('seeming trust', with possibly a play on 'seeming' = seemly). The effectiveness of this 'policy' in love is illustrated by lines 1-2. *The Passionate Pilgrim* substitutes 'in a soothing tongue' for Q's 'in seeming trust', a reading that even more obviously looks back to lines 1-2.

12 age in love i.e. older persons who fall in, or are infatuated by, love (like the poet who claims 'I am old' (10)). Lines 11 and 12, though generalised, have, respectively, immediate reference to the woman involved and the poet.

12 I have years Almost all editors substitute *Passionate Pilgrim*'s 'to have' for Q's 'I have'; Q's reading, however, throws emphasis on 'years' (taken as disyllabic) where, I think, it properly belongs.

12 told (1) counted; (2) recounted, reported.

13 I lie... me (1) I lie to her and she lies to me; (2) we indulge in sexual intercourse with each other. Dekker devotes some eight pages in *The Seven deadly Sins of London* (1606), '2. Lying', to ringing the same changes on 'lie'.

14 in our faults through our (1) defects, failings, (2) offences.

14 flattered be are (1) deceived, beguiled, (2) gratified, pleased (even though improperly). *The Passionate Pilgrim*'s reading of the line (see collation), by substituting 'smother'd' for 'flattered', limits the meaning to (1). Compare Ovid, *Amoris* II, xi, 53-4 (as translated by Marlowe): 'He thinks all true, though it be feigned matter. / Mine owne desires why should my selfe not flatter?'

Sonnet 139

Sonnet 139 reflects a sonnet convention: the lover pretends to find a justification or excuse (see lines 9-12) for his mistress's unkindness. It has been compared with Sidney, *Astrophil and Stella* (1591), 48.

1 call not me i.e. do not ask me.

1 justify (1) acquit you of; (2) defend as right and proper; (3) approve of. Suggested perhaps by 'she is unjust' (138.9); neither word occurs elsewhere in the Sonnets.

1 wrong The 'wrong' and 'unkindness' (2) refer not to the conventional 'coldness' of a desired mistress but to the unfaithfulness of the poet's mistress in loving 'elsewhere' (5) and in,

Figure 1.2: Commentary to Sonnet 138 (ed. G. B. Evans)

Such ideas about visually 'navigating' an edition are commonplace, and my conclusion regarding those ideas is equally so. Because we are familiar with the type of display (text, apparatus, and commentary) used by Evans, we already understand the ways in which such editions associate related texts and textual materials; moreover, we understand these ways to the extent that they are seemingly intuitive.

Formalising Associations in the Electronic Medium

It is that intuition on which most of us draw when we approach the scholarly edition in the electronic medium – an artifact that is increasingly being referred to as the hypertextual edition or the electronic edition. Before turning to a discussion of the electronic edition, though, let us consider one further aspect of the print edition. In the print edition, the idea of the “trail of many items” upon which Bush pontificated is implicit, it is understood to exist, and rarely needs explicit articulation. While we regard such association of one thing and the next as something that can be navigated intuitively on the page or across several pages, and while in our familiarity we regard the structures through which we navigate to be implicit, a trail is clearly and explicitly there. That trail is established by the editor, based on materials left us by the author and others, and is presented to us in a familiar, accepted manner.

What we typically do now when we bring such a text into the electronic medium – that is, when we do it as professionals with attention to scholarly standards – is to formalise, to make explicit, the seemingly intuitive relation of one thing and the next; we build, hypertextually, that trail of many items of which Bush spoke. This is a relatively straightforward procedure, wherein (over one or more electronic documents) materials associated with the central text are presented, and the individually-associated bits of information are hypertextually linked. As many of us know, passages for which there are variant readings or annotations are, in a hypertextual edition, marked in such a way that the reader knows that selecting that textual passage (with a mouse, pointing and clicking) will lead to a display of variant readings or annotations; such passages would be associated, again typically, by lines of code in the electronic text that set out exactly that, if a certain piece of marked data is selected, another piece of specifically-demarcated data will be displayed. By way of example, in our text of Sonnet 138 the following relationship of materials that are presented in the print edition would be formalised by hypertextual links:

Text (l. 14): And in our faults by lies we flattered be.

Marked text (as per Evans' edition):¹⁴ And in our faults by lies we flattered

Linked to (textual apparatus):

Q; Since that our faultes in loue thus smother'd *'Passionate Pilgrim'*;
Since y^e o^r faults in loue thus smothered *Folger MS. 2071.7*

The relation of the text to materials in the commentary operate in a similar fashion, as follows:

Text (l. 14): And in our faults by lies we flattered be.

Marked text (as per Evans' edition): flattered be

Linked to (commentary [Evans' ed. 256-7]):

are (1) deceived, beguiled, (2) gratified, pleased (even though improperly). *The Passionate Pilgrim's* reading of the line (see collation), by substituting 'smother'd' for 'flattered', limits the meaning to (1). Compare Ovid, *Amores* II, xi, 53-4 (as translated by Marlowe): 'He thinke all true, though it be feigned matter. / Mine owne desires why should my selfe not flatter?'

Selecting a passage of marked text would lead us from that text to its linked apparatus and/or commentary, much as our mind, and fingers might work together with the print edition itself.

While no such electronic adaptation of Evans' edition exists, many hypertextual editions are as straightforward, and as useful, as this; such is the case with the electronic prototype of the New Variorum Shakespeare Edition¹⁵ and the editions proposed by the Internet Shakespeare Editions project.¹⁶ Other editions, with such

¹⁴ This represents the expansion of Evans' abbreviation for the phrase "And ... flattered".

¹⁵ Demonstrated at the 1999 meeting of the Modern Language Association on the panel "The New Variorum Shakespeare in the Electronic Medium" (and throughout the conference; see Gregory Crane et al., "The New Variorum Shakespeare in the Electronic Medium", A panel at the Modern Language Association meeting, Chicago [December 29, 1999]; the electronic prototype of the New Variorum Shakespeare Edition follows this path, making excellent use of straightforward hypertextual linking to render navigable its large and complex body of text-related materials.

¹⁶ See Michael Best, "Foreword", *The Internet Shakespeare: Opportunities in a New Medium*, ed. Michael Best, spec. issue 2 of *Early Modern Literary Studies* 3.3 (1998) 1.1-4 <<http://purl.oclc.org/emls/03-3/foreword.html>>, "A Mazèd World: Connecting, Selecting and Internetting Shakespeare Performances", presented at the 1999 meeting of the Shakespeare Association of America, rpt. online <<http://web.uvic.ca/shakespeare/Annex/Articles/SAA1999/index.html>>, and his *The Internet Shakespeare*; and Internet Shakespeare Editions, gen. ed. Michael Best, University of Victoria <<http://web.uvic.ca/shakespeare/>>.

building blocks, employ more sophisticated user interfaces. Such is the case with the electronic formalising of associated textual materials by *The Arden Shakespeare CD-ROM*, as depicted in Figure 2.1. Sonnet 138, in the *Arden* default view, is rendered via a system that employs several windows to present text, apparatus, and commentary, simultaneously. Each component is related by textual demarcation such that when the reader moves about in the text (by using the scroll bar, arrow keys, and so on) the apparatus and commentary will follow, always displaying materials relating to that which is seen in the window housing the central text. Simultaneous display such as this removes the necessity of some visible hypertextual links and active pointing-and-clicking on the reader's part, but the text itself, as well as the accompanying commentary and list of variants, is encoded (or marked-up) with indications of place (like line numbering) such that it can facilitate this style of interaction with the text; that is, a trail of some sort is still there, allowing the reader to navigate the materials of the edition.

Considering 'Inclusivity' – Print and Electronic

When we bring such a text to the electronic medium, we typically do something else as well: we participate – or at least desire to participate – in a trend towards including more related materials, a trend towards what is often called greater 'inclusivity'. Directly associated with the flexibility and economics of storage in that medium as compared to print, when we bring a text to the computer we tend to wish to provide more than is provided in print editions, we tend naturally to move towards being more comprehensive: linking with a collection of textual and critical materials, providing fuller commentary, and so forth.¹⁷ This tendency ensures that an electronic edition, again typically, will contain a number of linked associations covering material beyond

¹⁷ For fuller discussion of this specifically, situated in annotation, see Claire Lamont, "Annotating a Text: Literary Theory and Electronic Hypertext", *Electronic Text: Investigations in Method and Theory*, ed. Kathryn Sutherland (Oxford: Clarendon, 1997) 47–66.

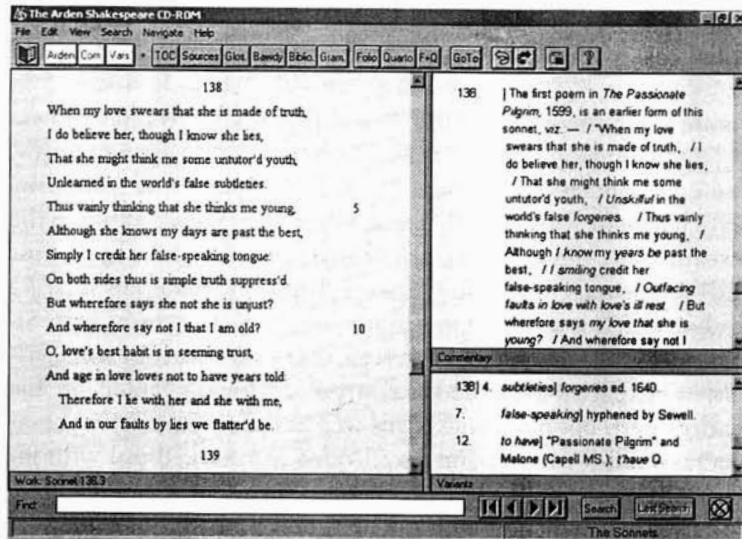


Figure 2.1: Sonnet 138, Variants and Commentary (*The Arden Shakespeare CD-ROM*)

what one might expect in a print edition. Looking outside editions of Shakespeare, for a moment, one might consider exemplary editing projects such as the edition by Peter Robinson et al. of Chaucer's *Wife of Bath's Prologue*, which contains transcriptions of all pre-1500 witnesses of that work (and their glosses), an exhaustive collection of digitised images of the same, a lemmatised database of all word forms, hypertext-facilitated interaction allowing the navigation of these materials, and more.¹⁸ Thinking more specifically of Shakespeare, and his Sonnet 138, we may consider again that version provided by *The Arden Shakespeare CD-ROM* which, for all its texts, provides extensive textual witnesses in digital facsimile form, draws upon the complete body of materials (introduction, commentary, and textual notes) associated with its second series editions, and also includes a number of

¹⁸ Consider, also, the exemplary work of those associated with *The William Blake Archive*, ed. Morris Eaves, Robert Essick, and Joseph Viscomi, University of Virginia <<http://jefferson.village.virginia.edu/blake/>>, and its own broad-based inclusion of materials, textual and non-textual alike.

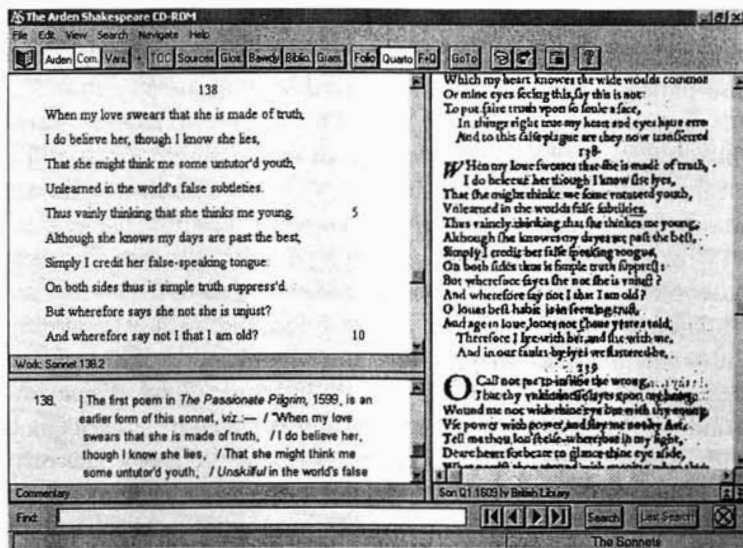


Figure 2.2: Sonnet 138, Commentary and Facsimile (*The Arden Shakespeare CD-ROM*)

scholarly works helpful to the student and reader of Shakespeare.¹⁹ (Of several views of the text and text-related materials that are possible via this edition's delivery software and interface, two are seen in Figures 2.1 and 2.2.)

Given this trend toward further inclusivity, those faced with the pragmatics of editing in the electronic medium might ask this question: where does such inclusivity of materials related to the edition end? One answer to this question is that inclusivity ends

¹⁹ Among these scholarly works are Geoffrey Bullough, *Narrative and Dramatic Sources of Shakespeare*, 8 vols. (New York: Columbia UP, 1957–75); David Bevington, *Shakespeare* (Arlington Heights, IL: AHM Publishers, 1978); Edwin Abbott, *A Shakespearean Grammar: An Attempt to Illustrate Some of the Differences Between Elizabethan and Modern English* (London: MacMillan, 1888); Charles T. Onions, *A Shakespeare Glossary*, rev. Robert D. Eagleson (Oxford: Clarendon, 1986); and Eric Partridge, *Shakespeare's Bawdy: A Literary and Psychological Essay, and a Comprehensive Glossary* (London: Routledge, 1947). A further discussion of this edition can be found in my "Review of the *Arden Shakespeare CD-ROM: Texts and Sources for Shakespeare Studies*", *Early Modern Literary Studies* 4.2 (1998): 28.1–10 <http://purl.oclc.org/emls/04-2/rev_siem.html>.

with a choice made by the individual editor, who could only be expected to have so much breadth and depth of knowledge, time, and patience, for a project. Expressed in a recent paper, such a conclusion was reached after one editor's desire to include everything was quelled by the realisation of what including everything meant in terms of editorial labours – with reference also to the act of relating everything properly to everything else.²⁰

While I think all editors have sympathies with this view, another answer must also be considered. Bush, as noted earlier, articulated a model of scholarly production and an idea regarding the navigation of the increasingly-un navigable body of knowledge that was being produced; as well, building on Frye's argument, Winder has articulated the need for humanists to be as concerned with navigating that body of knowledge, as it relates to their own discipline, as they are with producing it. For each, their notion of inclusivity is something that is total – and quite in keeping with the frame of reference for materials in the electronic medium provided by early hypertext guru Ted Nelson.²¹ The hypertextual world envisioned by Nelson involves an inclusivity that ends only with all the related matter to be found in the medium,²² here, each

²⁰ See Bruce Graver, "This Is Not a Hypertext: Scholarly Annotation and the Electronic Medium", *Profession* (1998): 172–178, whose argument was presented and well-received, before publication, at the 1997 Modern Language Association conference.

²¹ Ted Nelson is credited with having coined the term "hypertext" in the mid-1960s. See his "New Home" and his *Literary Machines* (Swarthmore, PA: self-published, 1981, rpt. Watertown, MA: Eastgate Systems, 1993) and others; also, see Keep et al., *Electronic Labyrinth* <<http://jefferson.village.virginia.edu/elab/hfl0155.html>>.

²² 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 the past century's library cataloguing movements. More specific to my example of Shakespeare's work is the range of materials that Louis Marder would, ideally, have appear in a definitive edition; he 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.

individual work is a small part of a much larger whole, a whole united by topic and clearly connected by hypertextual associations that link related materials. As one of the most prominent literary hypertextual theorists of the past two decades has noted, the "Nelsonian vision ... ultimately requires all texts to be linked together in a universal web or docuverse".²³ While all materials extant in electronic form will not, of course, relate directly to one another (nor will they be generated by a single individual), the work of the individual will take its place as part of a much larger whole – a whole made up of individual components that have specific points of interrelationship (sometimes called *nodes*), and a whole that can be navigated with reference to those points.

For scholarly editions in the print medium, the challenge of inclusivity has resulted in the gathering and presenting, in a useful and condensed form, as much material as relates reasonably to a text, given a specific context. The best example of inclusivity in the print medium is the variorum model, with its extensive survey of text, scholarship and criticism. Our understanding of the scope that such editions are felt to hold is well-expressed by Hyder E. Rollins, editor of the 1944, two-volume variorum edition of Shakespeare's *Sonnets*; he notes, in his preface to that edition, that "To read all, or nearly all, the 'literature' under which Shakespeare's sonnets are submerged is a wearisome task that, at least up to the date 1942, should not have to be repeated" (v).²⁴ This

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 ...

John Lavagnino "Thoughts on a 'Definitive' Edition of Shakespeare: Is it Possible?", *The Shakespeare Newsletter* 32 (Winter, 1982): 27–29, at 29.

²³ George P. Landow, "Hypertext, Scholarly Annotation, and the Electronic Edition", presented on the panel "Hypertext Editions: Theory and Practice" at the Joint International Conference of the *Association for Computers and the Humanities* and the *Association for Literary & Linguistic Computing*, Bergen, Norway (June 27, 1997) <<http://gonzo.hd.uib.no/allc-ach96/Panels/Finneran/Landow.html>>.

²⁴ Consider, in addition to this, Cyrus Hoy's general comments on the role the variorum editor plays in selecting materials that are made navigable

138

When my loue sweares that she is made of truth,
 I do beleue her though I know she lyes,
 That she might thinke me some vntuterd youth, 3
 Vnlearned in the worlds false subtilties.
 Thus vainely thinking that she thinkes me young,
 Although she knowes my dayes are past the best, 6
 Simply I credit her false speaking tongue,
 On both sides thus is simple truth supprest:
 But wherefore sayes she not she is vniust? 9
 And wherefore say not I that I am old?
 O loues best habit is in seeming trust,
 And age in loue, loues not t'haue yeares told. 12
 Therefore I lye with her, and she with me,
 And in our faults by lyes we flattered be.

Printed from the 1612 P. P. version by Ben., Gild.-Evans.

4. Vnlearned...subtilties] Vnskilful forgeries P. P., Ben., Gild.-Evans.

6. she knowes my dayes are] I know my yeares be P. P., Ben., Gild.-Evans.

7. Simply I] *I smiling P. P., Ben., Gild.-Evans.

false speaking] Hyphened by Sew.¹, Mal.+.

8.] *Outfacing faults in loue, with loues ill rest. P. P., Ben., Gild.-Evans.

9. she not...vniust] *my loue that she is young P. P., Ben., Gild.-Evans.

11. habit is in] habit's in a P. P. (1599 [1st ed.]). habit is a P. P. (1599 [2d ed.], 1612), Ben., Gild.-Evans.

seeming trust] soothing tongue P. P., Ben. smoothing Tongue Gild.-Evans.

12. t'] Lint., Bull. to P. P. and the rest.

13. I...her...she] I le...Loue...loue P. P., Ben., Gild.-Evans.

14.] Since that our faulles in loue thus smother'd be. P. P., Ben., Gild.-Evans.

A version of 138 appeared as sonnet 1 in the P. P., the first edition of which apparently belongs to the year 1599. The unique, fragmentary copy of that edition was issued in a collotype facsimile by ADAMS late in 1939. All the sonnet commentators and editors up to 1940 have been familiar only with the second (1599) and third (1612) editions of the P. P. In the first edition the sonnet runs thus:

When my Loue sweares that she is made of truth,
 I do beleue her (though I know she lies)
 That she might thinke me some vntutor'd youth,
 Vnskilful in the worlds false forgeries.
 Thus vainly thinking that she thinkes me young,
 Although I know my yeares be past the best:

Figure 3.1: Sonnet 138, Textual Apparatus and Commentary I (ed. H. E. Rollins)

task should not have to be repeated because the variorum edition provides the apparatus necessary for the navigation of those materials up to the date of the edition's preparation. In examining Rollins's edition, one notes that – above and beyond presenting a text, a collation, and commentary along the lines of what Evans offers – Rollins provides a select critical/scholarly survey for each sonnet, and a commentary geared towards the expression of earlier engagements of the piece (see Figures 3.1, 3.2 and 3.3).

Like with the model provided by Evans, the way in which one navigates a variorum edition can be similarly duplicated in electronic hypertextual structures,²⁵ the difference between the variorum and Evans' edition chiefly being the organisation that each brings to the types of material each presents. The variorum, by cataloguing and building on previous scholarship in an overt way as it does, brings an organisation to that material that allows one to navigate the related scholarship in addition to the text and its immediate commentary. The editorial labours involved – the “wearisome task” that Rollins referred to – are not light.

Nor are such labours light when we attempt to make explicit, in an electronic edition, the sorts of organisational patterns we find in the print variorum model. Moreover, when we accept inclusivity as it is defined in the electronic medium, it becomes apparent that, in addition to the concerns associated simply with getting the material into the proper form, there is the further concern of relating that complex body of material to other pertinent materials available in electronic form. Given the scope of inclusivity native to the electronic medium, the materials will likely seem too many, and the process impossibly time consuming.

Recognising pragmatic limitations – of editorial labour, budgets, the deployment of symbolic capital in academe – and also

by the variorum edition: “The sheer bulk of secondary material that has been occasioned by virtually all of Shakespeare's plays during the last 350 years should make it clear why any successful variorum commentator must be endowed with a capacity for discriminating selection.” (“Cum Notis Variorum: The Role of a Variorum Editor”, *The Shakespeare Newsletter* 44.1 [1994]: 7).

²⁵ Again, consider the electronic prototype of the New Variorum Shakespeare (Crane et al. 1999).

I smiling, credite her false speaking tounge,
 Outfacing faults in loue, with loues ill rest.
 But wherefore sayes my loue that she is young?
 And wherefore say not I, that I am old:
 O, Loues best habit's in a soothing tounge,
 And Age in loue, loues not to haue yeares told.
 Therefore I'll lye with Loue, and loue with me,
 Since that our faultes in loue thus smother'd be.

—A copy of 138, based upon Benson's text, is in Folger MS. 2071.7, fol. 197^r.—BENSON (ed. 1640) and all the editions based on him followed the text of the 1612 P. P. See the introduction to 144.—CONRAD (*Archiv*, 1879, LXI, 410) argues that the P. P. version is a garbled copy of the original sonnet, itself not published till 1609.—VON MAUNTZ (Sh.'s *Gedichte*, 1894, p. 295), believing that the dark woman sonnets are alluded to in Nashe's *Pierce Penniless*, 1592, keeps the P. P. version as the better. Nashe, he says, indicates that both poet and mistress were along in years; and the Q version loses the realism of the other.—BEECHING (ed. 1904): It is interesting to have so clear an example of Shakespeare's rewriting. . . . The amended copy [138] gets rid of the difficult conclusion to line 8, and also of the new idea in line 9, which interferes with the statement of the two faults in the octave.—STOPES (ed. 1904): [The variations in the P. P. text] may be errors in Jaggard's piracy, alterations made afterwards by the poet, or errors in the 1609 edition.—LEE (P. P., 1905, pp. 22 f.): [The P. P. in 138 and 144] seems to have presented an earlier recension of the text than figured in . . . [Q]. The poet's second thoughts do not seem to have been always better than his first. [He seems to think the P. P. text about as good as that of 138.]—LUCE (*Sh. the Man*, 1913, p. 17): 138 and 144 . . . are amended versions of the same sonnets in the *Passionate Pilgrim*. . . . The changes in . . . [Q] are improvements such as Shakespeare alone would make.—POOLER (ed. 1918): [The P. P. version] is an earlier form of this sonnet. [In his note to the former he calls 138 "clearer and more consistent."]—TUCKER (ed. 1924, p. xiv): [In the Q version of 138] there had almost certainly taken place a deliberate variation of the language in order to suit different circumstances. In the one application the woman is false in nature and the man false only in the statement of his age; in the other both alike are misrepresenting their respective years. [In his annotations Tucker, calling 138 an "insignificant piece, leading up to the faulty equivocal 'lie with' in l. 13," says of the two versions: "These variations cannot be the result of any mere misreading, since no manuscript could be so grossly illegible. Nor are they likely to be due to defective memory, since each version is apt for its own purposes. So far as expression goes, the version of 1609 is superior."]—BROOKE (ed. 1936): [The P. P. poem is] printed from a corrupted text which gives correctly only lines 1-3, 5, 10, and 12. Some one has attempted to reconstruct the sonnet from faulty memory, and in so doing has ruined the sense. It is absurd to speak [as Lee spoke] of the *Passionate Pilgrim* version as 'an earlier recension.'

ERNST VOEGE (*Mittelbarkeit . . . in der Lyrik*, 1932, p. 121) cites 138 as an example of the characterizing-narrative style of Sh.'s sonneteering: in contrast to Petrarch this sonnet has its own specifically Germanic note, which one feels in the pensiveness and the psychology which pitilessly reveals and analyzes.

Figure 3.2: Sonnet 138, Textual Apparatus and Commentary II (ed. H. E. Rollins)

138]

SHAKESPEARE'S SONNETS

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1. truth] See 54.2 n.
- 2.] TRAVERSI (*Approach to Sh.*, 1938, pp. 44 f.): A line like . . . [this] calls for an exactitude of thinking and feeling that a modern reader does not readily associate with emotional intensity. It is a type of poetry which justifies ambiguity, because its subtlety is balanced by its content, because it is able to gather the divergent possibilities of a single situation into the unifying framework of a realized convention.
- 3.] I. e. in order that, or so that, she might (or may) think, etc. "His credulity," says TUCKER (ed. 1924), "would be some evidence of his 'youth.'"
- 6.] DOWDEN (*P. P.*, 1883, p. vii): I am inclined to believe that the earlier [*P. P.*] and later [*Q*] readings are both those of the author of the sonnet. . . . Neither version is an entire success. . . . The logic of the sonnet requires something of both versions—"Although *I know she knows* my years are past the best."—TUCKER (ed. 1924): At the date of the first publication (1599) Shakespeare was 35. [Many other persons have commented on this fact, some with astonishment; but even today thirty-five is still regarded as "past the best" for love. See also 22.1 n.]
7. Simply] SCHMIDT (1875): Unconditionally, absolutely.—POOLER (ed. 1918): In my (assumed) simplicity.—NEILSON and HILL (ed. 1942): Foolishly.
- 8, 9.] PORTER (ed. 1912, p. 274): The humorousness of the 1609 lines [when compared to those of the *P. P.*] in blaming her for a lack of truth in which the Poet shares, certifies to their superior accuracy.
- 8-14.] DOWDEN (*P. P.*, 1883, p. vii): "My love" . . . [in the *P. P.*] not only asserts her truth when she is really false, but also asserts her youth (her youth being past); evidently the balance of the composition (as well as the courtesy of a sonneteer) requires that there should be one lie on each side, and that the lady's lie should be an assertion of fidelity, the man's lie an implied assertion of his youth. And so it was worked out in . . . [*Q*].
9. unjust] SCHMIDT (1875): Used of faithlessness in love.
- 11.] SCHMIDT (1874) defines *habit*: Appearance, deportment.—TUCKER (ed. 1924): Love looks best (wears its best dress, or makes itself most attractive) where there is all the semblance (or pretence) of truth.—In the *Q* change to *seeming trust* from the *soothing tongue* of the *P. P.*, says WOLFGANG SCHMIDT (*Anglia*, 1938, LXII, 299), is expressed the torture of the poet, who must act contrary to truth and reason.
12. told] I. e. counted. See 30.10 n. and *untold* at 136.9.
- 14.] TUCKER (ed. 1924): In regard to our respective defects we are flattered by reciprocal pretence of belief.

Figure 3.3: Sonnet 138, Textual Apparatus and Commentary III (ed. H. E. Rollins)

recognising the valuable and important nature of the information provided in print editions, variorum and otherwise, we might consider directing our editorial efforts to the electronic re-production (the re-purposing, the recycling) of print-based editions in the electronic medium with a conception of inclusivity and associa-

tion-of-textual-materials drawn from the variorum of the print medium. In effect, this would involve formalising with hypertextual links the associations that, in print, we understand intuitively and, thus, making more explicit and more immediately navigable the paths over which past editors have pored. As well, we might consider the duplication of this model in new, non-print-based variorum-like electronic editions; such a path has been recommended before, and with good justification.²⁶

To proceed in this manner, however, may well be to accept something less than the medium promises to allow and something less than will be expected of editions in the future. As excellent contributions to scholarship as variorum editions are, they are objects that attempt to represent or fix, at a single moment in time, the work of an unfixed, ever-evolving – and thus dynamic – scholarly community engaged in, as Frye and Winder note, the process of stockpiling scholarship. Electronic editions must also do this; moreover, electronic editions that live up to the potential and our expectations of the medium, especially in terms of the inclusivity and navigability that it allows, must be able to engage the breadth and depth, and change, of the community working on the materials they represent. That is, electronic editions must also be *dynamic*, they must be able to allow us to navigate their contents in familiar and effective ways, and also must be able to reflect and draw upon the growing, evolving, and unfixed stockpile of scholarship that relates to the matter of the editions.²⁷

²⁶ See Landow 1997, Crane 1999 and others.

²⁷ As well, literature on the subject suggests that they must reflect the 'archive' model of the electronic scholarly edition that McGann 1996 has recently championed. See also Charles L. Ross, "The Electronic Text and the Death of the Critical Edition", *The Literary Text in the Digital Age*, ed. Richard J. Finneran (Ann Arbor: U of Michigan P, 1996) 225–232; Peter S. Donaldson, "Digital Archive as Expanded Text: Shakespeare and Electronic Textuality", *Electronic Text: Investigations in Method and Theory*, ed. Kathryn Sutherland (Oxford: Clarendon, 1997) 173–198; and Peter M.W. Robinson, "New Directions in Critical Editing", in Sutherland 1997, 145–172, and the "operative paradigm for the hypertext document", which is the "electronic library" – in which "the reader encounters multiple points of authority, unexpected juxtapositions, and frequent occasions for making choices" (Landow, "Footnotes").

Explicit Structures and Implicit Relations in all Text

Elsewhere, I have discussed two dominant perspectives on the electronic scholarly edition: one, called the *dynamic text*, consists of an electronic text and advanced textual analysis software and presents, in essence, a text that "indexe[s] and concord[s] itself, allowing the reader to interact with it in a dynamic fashion";²⁸ the other, called the *hypertextual edition*,

exploits the ability of hypertextual organisation 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.²⁹

I have also urged that these two perspectives on the electronic scholarly edition should be united in practice, so that the reader of such an edition could take advantage of both dynamic interaction with the text *and* its related materials, and also reap the benefits of the fixed hypertextual links that typify the standard relation of materials we find in a scholarly edition.

In this paper, I wish to suggest the possibility that the level of interaction one can enjoy with an electronic edition itself, if facilitated in the style of the dynamic text, can replace much of the interaction that one typically has with a text's accompanying materials via explicit hypertextual links in a hypertextual edition. That is, I wish to assert that the principles of interaction allowed by a dynamic text are transferrable to the realm of textual apparatus and commentary, and well beyond into all materials in the medium that relate to the matter of the edition at hand. Indeed, the ideas associated with a text that indexes and concords itself are portable to the idea of an edition (perhaps best called a *dynamic edition*) that has the ability, in effect, to annotate itself and provide its own apparatus – an electronic edition that employs sophisticated software to automate the process of formalising the associations we

²⁸ See Siemens 1998, 9 ("Disparate Structures"); such a text of the *Sonnets* is provided by Ian Lancashire and Hardy Cook, eds., *Shakespeare's Sonnets* (Toronto: CHASS, 1998). <<http://library.utoronto.ca/www/utel/ret/shakespeare/1609inti.html>>, also in Lancashire et al., *Using TACT with Electronic Texts: A Guide to Text-Analysis Computing Tools* (New York: MLA, 1996) 242–243.

²⁹ Faulhaber 1991, 134 ff.

take for granted in editions akin to Evans' presentation of Sonnet 138 and that assists in the navigation of scholarship in ways akin to Rollins' variorum presentation of the same sonnet.

Such an edition embraces notions of inclusivity and navigation suitable to its medium (as articulated by Bush, Frye, Winder and Nelson); such an edition also requires that a significant amount of related scholarly material is available in electronic form. While much of this material is not yet available, what has been called the "interoperable digital library" – part of the emerging Global Information Infrastructure – is envisioned to provide much of this, and work on it progresses, albeit slowly.³⁰ A number of critics have argued that World Wide Web is, essentially, already this,³¹ though it will be some time yet before materials available on the World Wide Web will reach a state of development such that they will be able to have as prominent a place in scholarship as that accorded a research library; that said, this day will come.

What does exist today is the ability to manage and to navigate in a dynamic fashion those elements that are related to our electronic scholarly editions. This navigation is rooted in humanistic assumptions of the relations that exist within and among texts; it rises out of an accepted understanding of intertextuality. A hypertext, which in its best definition is a "multisequentially read text",³² embraces such an understanding, and implementations of all hypertextual structures rely on the fact that one instance of textual (or non-textual) material has association with other instances; in short, hypertextual structures rely on the fact that intertextuality exists.³³

³⁰ See Edward A. Fox, "Images of Digital Libraries", keynote address for *NORDINFO Conference: Digital Transfer of Images*, Helsinki, Finland (Nov. 10–11, 1994), available at <<http://fox.cs.vt.edu/NORDINFO.txt>>, and his extensive references; also *Universities, Languages, and the Global Information Infrastructure*, ed. Paul Delany, spec. issue of *Text Technology* 7.3 (1997).

³¹ See, for example, Landow, "Footnotes".

³² As per Landow.

³³ See Janet Verbyla, "Unlinking the Link", *ACM Computing Surveys* 31.4 (December 1999) <http://www.cs.brown.edu/memex/ACM_Hypertext_Testbed/papers/61.html>, who presents the accepted view that a link "represents some relationship (semantics) between the source and the destination", and explores other useful aspects of the hypertextual link.

Returning to my example, textual witnesses of Sonnet 138 relate to one another because of their similar textual makeup; while they are unique and individual text instances, we associate them because of their makeup, their content. Much of the material contained in Evans' gloss on Sonnet 138 also relates to that sonnet because of its own makeup – definitions that assist in our understanding of the text of the sonnet, explanations, notes of relations with other texts, and so forth. So, too, with the scholarly discussions that bear on Sonnet 138 as catalogued and presented in Rollins' edition. All these things relate to one another – and, specifically, to the text of Sonnet 138 – because of the nature of their textual content; they have intertextual relations, and they participate in a common network of associations that, in this case, centre on Sonnet 138.³⁴

Intertextual relations – and, more specifically, the *extent* of intertextual relations – have historically been very difficult to establish; however, this difficulty is diminishing, especially as textual analysis and retrieval evolves in areas having to do with the relationship of content within and among texts. These relations are most straightforwardly established in the electronic medium by giving close attention to the resonance of explicit structures within the text, among words and phrases (sometimes referred to as “semantic patterns”). This attention is word-centred, but not simply so; the ability to track resonating structures relies on the computer's power and potential in determining document content and, more specifically, word-oriented-context.³⁵ Success in tracking intertextual associations lies in the computer's ability to fol-

³⁴ I recognise that my argument here is limited to textual data, but also note that developments in electronic data processing (optical character recognition, say, for graphics representing text) and advances in processing textual meta-data that accompanies non-textual data suggest that much non-textual data that one might typically find related to scholarly editions may eventually, through computing processes, be treated textually.

³⁵ The work of Ian Lancashire, and of Don Foster, is exemplary in the way it draws upon the significance of these resonating textual structures: Donald W. Foster, “A Romance of Electronic Scholarship; with the True and Lamentable Tragedies of *Hamlet, Prince of Denmark*. Part 1: The Words”, *The Internet Shakespeare: Opportunities in a New Medium*, ed. Michael Best, spec. issue 2 of *Early Modern Literary Studies* 3.3 (1998): 5.1–42 <<http://purl.oclc.org/emls/03-3/fostshak.html>>; for Lancashire, cf. the bibliography p. 463 below.

low a word or phrase and its own associations by determining and evaluating a context (large and small alike) for that word or phrase and, then, comparing it and its context against other similar instances within and beyond a single text.

To pursue this, we must here look beyond the parameters that typically define the field of literary studies; a brief glance can reveal much that is beneficial. The realm of computer indexing and language processing teaches us much about our ability to track such structures automatically. When tracked, these textual structures themselves are capable of operating with machine facilitation in ways akin to hypertextual links.³⁶ Automatically-generated associations between textual materials can function as do links between textual structures; the structures themselves, in short, act as hypertextual-like nodes – those same instances of text or markers of textual instances, as noted earlier, that editors might manually demarcate for readers to follow by pointing and clicking. Phrases such as “conceptual-based navigation” are used to describe the act of organising and sorting through large bodies of textual data with this method and ones similar to it.

While our understanding of the mechanics of intertextuality rooted in structures extant in all texts is still evolving, a current understanding of these dynamics urges a growing affinity between linking (based on the principles of, say, editor-determined associ-

³⁶ While the progress in this area outpaces scholarly publication mechanisms, at the time of writing one might refer, for example, to work, among others, by James Allan, “Automatic Hypertext Link Typing”, *Proceedings of Hypertext '96* (New York: ACM, 1996) 42–52; Glenda Browne, “Automatic Indexing and Abstracting”, *Library Automated Systems Information Exchange* 27 (1996): 58–65 <<http://www.zeta.org.au/~aussi/browneg.htm>>; Stephen J. Green, “Lexical Semantics and Automatic Hypertext Construction”, *ACM Computing Surveys* 31.4 (December 1999) <http://www.cs.brown.edu/memex/ACM_HypertextTestbed/papers/48.html>; Dwight Walker “Web Indexing: An Exercise in Hypertext Navigation”, *Library Automated Systems Information Exchange* 27 (1996): 50–58 <<http://www.zeta.org.au/~aussi/walkerd.html>>; Ross Wilkinson and Alan F. Smeaton, “Automatic Link Generation”, *ACM Computing Surveys* 31.4 (December 1999) <http://www.cs.brown.edu/memex/ACM_HypertextTestbed/papers/53.html>; and Kyoji Hirata et al., “Content-oriented Integration in Hypermedia Systems”, *Proceedings of Hypertext '96* (New York: ACM, 1996) 11–21.

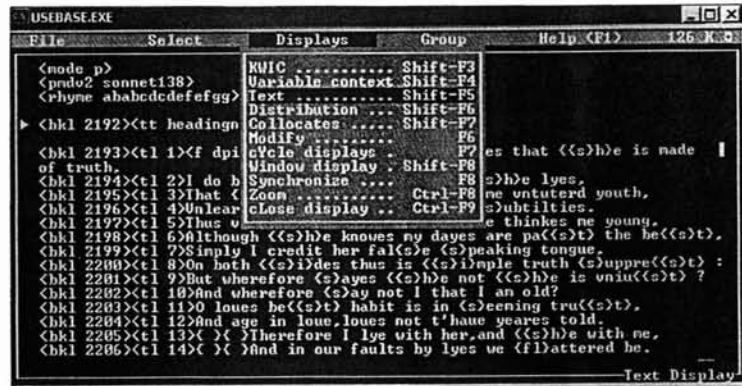


Figure 4.2: Dynamic Text of Sonnet 138: Possible Displays (ed. Lancashire/Cook)

speares Sonnets, prepared for *Text Analysis Computing Tools (TACT)*, a work that contains the text of the *Sonnets*, alone, in an encoded format. A view of this dynamic text is seen, with its encoding visible, in Figure 4.1.³⁸ Other possible views, or displays, of the text – key-word-in-context (KWIC), variable context, distribution, and collocate (see Figure 4.2) – are functions of the dynamic text's ability to index and concord itself.³⁹ Of note is also

³⁸ This text is, as displayed, unsuitable for easy reading, but well-suited for the purpose of computer-assisted analysis; it is a transcription, containing no textual apparatus, nor commentary, but including a running line number reference (the "bkl" tag), line numbering within the sonnet (the "tl" tag), some meta-textual information (in the "mode", "pmdv2", "rhyme", and "tt" tags), and typeface encoding – all meanings of which are outlined in the materials that accompany the edition. See *Shake-speares Sonnets* (Lancashire et al. 1996, 242–243), as well as Ian Lancashire, *RET Encoding Guidelines* [online in] *Renaissance Electronic Texts* (Toronto: Centre for Computing in the Humanities, 1994) <<http://www.library.utoronto.ca/utel/ret/guidelines/guidelines0.html>>.

³⁹ For full details of the capabilities of *TACT*, see Lancashire et al. 1996; for papers outlining further the capabilities and possibilities of this software programme, see *A TACT Exemplar*, ed. T. R. Wooldridge, CCH Working Papers 1 (Toronto: Centre for Computing in the Humanities, 1991) rpt. *Computing in the Humanities Working Papers* 1996 <<http://www.epas.utoronto.ca/epc/chwp/>>; and, further, under the heading of *TACT* in *Computing and the Humanities Working Papers* at <<http://www.chass.utoronto.ca/epc/chwp/titles.html#tact>>.

that the tagging does not suggest the relationships that exist between items of text, as it would if this work were to incorporate explicit hypertextual linking; these relationships are generated by the software itself and recorded in the textual database it generates and employs.

Much like those using the interface to the *English Poetry Full-Text Database* or the *Oxford English Dictionary*, readers of this dynamic text wishing to know more about aspects of any word or phrase of Sonnet 138 would select that word or phrase (perhaps using a formula that would ensure that any derivatives of its lemmatised form were retrieved) and would perform a query that would ultimately yield results that would, in turn, provide a very good sense of how that word or phrase functioned within the corpus delimited by the dynamic text (in this case, limited to the text of the *Sonnets* the edition presents).⁴⁰ The difference between standard text-retrieval interaction and the interaction allowed by a dynamic text is best seen in one of several possible *TACT* displays, the collocate display (see Figure 4.3), where a reader can select words that have an algorithmically-determined significance to the word or phrase selected in the query, and use that word or phrase as the basis for their navigation of the entire dynamic text of the *Sonnets*. To navigate via the collocate display, one selects textual instances determined by algorithm to have significance to the original query, and then manipulates other possible displays of the text in order to gather information about those textual instances: reading instances (via the text, key-word-in-context, and variable context displays), examining the distribution of those instances across the full corpus (via the distribution display), and then exploring other significant instances.

In short, by selecting a text string (a word or phrase) and performing an action on it (available via the collocate display, and its associated algorithmic process), the reader of this dynamic text is able to navigate a body of material containing instances related to the selected text string. The text initially-selected, thus, acts as a starting-point for the exploration of similar instances, facilitated

⁴⁰ See Lancashire et al. 1996 for a discussion of text selection (52 f.) and viewing across displays (72 ff.); for the collocate display specifically, and its associated processes, see 79 ff.

Collocates	Sel. Node	Collocate Freq	Type Freq	Z-score
dyans	1	1	1	2.887
espied	1	1	1	2.887
exceed	1	1	1	2.887
'expence	1	1	1	2.887
falsenesse	1	1	1	2.887
fanine	1	1	1	2.887
fanisht	1	1	1	2.887
fanosed	1	1	1	2.887
faours	1	1	1	2.887
feauer	1	1	1	2.887
feuell	1	1	1	2.887
fiend	1	1	1	2.887
finger	1	1	1	2.887
fioate	1	1	1	2.887
floued	1	1	1	2.887
flud	1	1	1	2.887
fo	1	1	1	2.887
foild	1	1	1	2.887
folded	1	1	1	2.887

Figure 4.3: Dynamic Text of Sonnet 138: Collocate Display (ed. Lancashire/Cook)

by software such that all similar instances may appear to behave as if hypertextually associated – but with no explicitly-inserted links relating one instance and the next; the ‘nodes’ and corresponding ‘links’ are set out by the makeup of the text itself.

The dynamic text of *Shakespeare's Sonnets* provides a good, if controlled, example; that said, this specific dynamic text incorporates the material of the *Sonnets* alone. A dynamic edition would be able to associate a much wider range of materials. In keeping with the nature of inclusivity for editions suggested by the electronic medium, we can imagine drawing in useful materials well beyond that contained in the base text of the *Sonnets* themselves – up to, and including, all materials relating in some manner to Shakespeare and his time that were available in electronic form. Taking into account the text of the *Sonnets* alone with such navigation, treatment of materials in this manner is manageable, but the introduction of a larger context for navigation brings with it problems well-known to most who have attempted to use text-analysis and text-retrieval in conjunction with their literary studies work: too much information is generated, and much of what is generated may well have little pertinence to the work being carried out. Even very sophisticated text-retrieval processes will return impertinent results and, thus, cannot alone be employed, wholly untempered, for the purposes of annotation – at least if we

are to think of annotation in the electronic medium like we think of it in the print medium. Perhaps, like notions of inclusivity in print and electronic editions, in the electronic medium we must consider annotation in a new sense as well, less something provided and managed by an editor through painstaking scholarship, and more something generated through systems that attempt to duplicate the process of the exemplary editor-annotator and allow the reader to participate in the process of annotation through those systems.

Taking this into account, a proper dynamic edition would best operate under the same principles as outlined in the above example, but might also take into account aspects of the reader-as-annotator. The reader, selecting a word or phrase from a text via an intuitive interface, would initiate an algorithmic process such that a complex search of all pertinent electronic materials was carried out. Some additional processing could be carried out in advance by the reader, perhaps structuring results to display and be handled in such a way so as to duplicate current print-based edition types, perhaps also limiting results on the basis of numbers, on the basis of returns from certain specified electronic resources, on the basis of returns from certain types of resources, on the basis of meta-data information, and so on. Pertinence, set out by the algorithm, could also play a role in organising the display of the materials returned by those processes.

While my example of the way in which a dynamic edition might operate is more speculative than I would like, it draws on what is available to us today via our own fields and via those that, ultimately, provide tools and techniques that are useful to our pursuits.

A number of sage and valid concerns might here be raised, among them the fact that there is no replacement for painstaking scholarship; that the resources necessary to serve electronic editions are not yet available online; that the data returned by text analysis and retrieval software common today is often overwhelming and misleading; that even very sophisticated text retrieval software has difficulty with processes, such as word sense disambiguation, that are necessary to annotation and the generation of an apparatus; and that most readers are not ready for the sort of responsibility that such an edition would place on them.

These are true concerns, all. Even so, if developments and progress in the recent past are any indication, we can count on the passage of time to bring with it increased on-line content related to our fields of inquiry, just as we can count on it to bring increasingly advanced and useful ways of dealing with that content as it relates to the scholarly edition; so, too, can we count on the edition's reader to become increasingly 'technologised'⁴¹ and to be able to interact with the matter of editions in increasingly sophisticated ways. Moreover, while there is no replacement for painstaking scholarship (and so may this always be this case) via the availability of such scholarship in electronic form, its benefits will also be available to those who will wish to navigate, in the manner outlined above, materials related to textual editions.

Shakespearean Apparatus?

Given that today we can count on increasingly-reliable dynamic interaction with textual materials with the assistance of automated processes, we might – to return to concerns expressed in my introduction – optimistically consider the act of building a trail of many items through our accumulated knowledge to be a process that is largely already completed, but completed in a way much different than what was envisioned by Bush and a good number of his successors. The trails that Bush felt to associate one thing and the next, the intertextual relations that we formalise today largely through explicit hypertextual linking, are available to us in a more implicit form, in the texts we wish to associate with one another and via the structures that exist within the texts themselves.

As this relates to editing, rather than relying on an individual, and exemplary, editor – an Evans, or a Rollins, or a good many of those who may read this paper – to build that trail and to formalise the relations that exist between materials in standard scholarly editions, we might examine further the implications of recent developments in textual computing; and, exploring the potential

⁴¹ See William Paulson, "Computers, Minds, and Texts: Preliminary Reflections", *New Literary History* 20 (1989): 291–304, at 296.

of the humanist's machine, we might consider relying instead upon those who originated the very texts that make up the body of materials related to an edition as defined by the electronic medium's conception of inclusivity. We might, as editors, consider creating a type of edition in which we set out only the base text, and encourage our readers to use that text, and the explicit textual structures found within it (in conjunction with software to make the edition dynamic), as a guide to related materials that exist beyond the text itself.⁴² The "Shakespearean apparatus" I gesture towards in my title thus may, potentially, be nothing at all, and yet it has the potential to be everything in the medium that has relation to a specific instance of Shakespeare's own work.

While this is an approach that some may find unfamiliar, and questionable in its implications, such is the groundwork for the scholarly electronic edition that does much to deal with Wissenschaft-era accumulation, and does much to address issues that currently face the new humanist concerned with the management, retrieval, and re-use of scholarly materials. With computer facilitation, this edition operates in a truly dynamic fashion: it annotates itself and fashions its own apparatus, it automates the process of formalising the associations we take for granted in editions akin to Evans' presentation of Sonnet 138, and it assists in the navigation of scholarship in ways akin to Rollins' variorum presentation of the same sonnet. Moreover, this edition does so in an environment typified by an ever-growing and ever-evolving body of scholarship.

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⁴² My suggestion is intentionally more optimistic than what has been suggested by Landow (1997); in a paper of several years ago, he asks of the hypertextual edition, "What becomes of the concept and practice of scholarly annotation?" and concludes:

Clearly, linking by itself isn't enough, and neither is text retrieval. At first glance, it might seem that one could solve many issues of scholarly annotation in an electronic environment by using sophisticated text retrieval ... [But] ... one cannot automate textual annotation. Text retrieval, however valuable, by itself can't do it all.