Vexed Impressions: Towards a Digital Archive of Broadside Ballad Illustrations

Patricia Fumerton
University of California, Santa Barbara
pfumer@english.ucsb.edu

Carl Stahmer
University of California, Santa Barbara
cstahmer@gmail.com

Kris McAbee
University of Arkansas, Little Rock
kxmcabee@ualr.edu

Megan Palmer Browne
University of California, Santa Barbara
meganpalmerbrowne@gmail.com

The time is ripe to bring cheap art, beloved in its day by the masses, back into the early modern picture, even if that picture needs to be a digital image. Today's increasing scholarly interest in ephemera points us on the road to such a recovery. A notion of the ephemeral was first embraced by New Historicist and Cultural Materialist critics in the 1980s under the guise of the "marginal" or "out-of-the-ordinary" and placed in the service of "high" or court culture.[1] But more recent consideration of ephemeral artefacts recognizes their value as a reflection of the "low" or popular, if also of the crude and impermanent. Still, resistance among art historians has been strong. As art historian Kevin Murphy observes,

> Scholars of early modern culture have been increasingly energetic in mining ephemeral artifacts for insights into political, cultural, social and religious life during the period. At the same time, however, art historians—and particularly historians of the print—have

---

[1] It is ironic that the New Historicism of the 1980s often turned to the curious, the obscure, and the momentary in the service of the cultivated, the high, and the enduring (court politics, canonical literature—including Shakespeare's plays—or esteemed art, such as Holbein's *The Ambassadors* portrait, made even more famous by Stephen Greenblatt's extensive discussion of the painting). See Patricia Fumerton's evaluation of the first phase of New Historicism and her early call for a move away from a single focus on high culture (1999). For Greenblatt's discussion of *The Ambassadors* portrait, see Greenblatt (1980, 17–26).

continued to focus on the work of a few renowned masters and to eschew cheaper and less artistically ambitious works, despite all they have to teach us.[2]

Leading the way for serious study of ephemeral printed art, Murphy, together with Sally O'Driscoll, organized a 2009 conference at the Graduate Center CUNY, "Ephemera: Impermanent Works in the Literary and Visual Culture of the Long Eighteenth Century," March 12–14 (http://web.gc.cuny.edu/dept/ArtHi/eph.pdf). This three-day event brought together renowned curators and scholars of the seventeenth through the nineteenth centuries to engage seriously with such transient artefacts as manuscript drafts, almanacs, advertisements, trade cards, watch papers, bookplates, currency, sheet music, playing cards, comic books, oral songs, and of course, printed broadside ballads. A panel of curators jump-started the event, consisting of Georgia Barnhill, Curator of Graphic Arts at the American Antiquarian Society; Henry Raine, Head of Library Technical Services at the New-York Historical Society; and—what might appear the odd woman out—Patricia Fumerton, Professor of English and Director of the *English Broadside Ballad Archive*, or EBBA, at UCSB (http://ebba.english.ucsb.edu/). While no curator by any traditional stretch of the definition, Fumerton's presence on the panel acknowledged what is perhaps the major facilitator of access to ephemeral artefacts—the Internet.

Online archives, such as the immense *Early English Books Online* (EEBO) (http://eebo.chadwyck.com/home) and *Eighteenth-Century Collections Online* (ECCO) (http://www.gale.cengage.com/DigitalCollections/products/ecco/index.htm), have spawned new awareness of thousands of non-canonical texts and images that might never have otherwise been seen by scholars or the general public (the originals not only in most cases unknown but obscured by being tucked away in boxes or back rooms of often hard-to-access rare book rooms). Even more important in promoting access to ephemera are the more specialized archives determined to bring attention to cultural artefacts either lost among the millions of bits of data of EEBO and ECCO or not yet, and perhaps never to be, digitally archived in those large databases precisely because they are perceived to have only passing value next to works with more name recognition. *The Proceedings of the Old Bailey* (http://www.oldbaileyonline.org/), for instance, is dedicated to making the marginal, in this

---

[2] We are grateful to Dr. Murphy for allowing us to quote his insights, made in email conversation with Patricia Fumerton.

case court records, matter. Such also is the objective of the *English Broadside Ballad Archive* (EBBA) (http://ebba.english.ucsb.edu/).

EBBA's grappling with the challenge of digitally archiving ephemeral art is the subject of this essay, which is written collaboratively by several key members of the EBBA team, including its director, Patricia Fumerton.[3] Funded in large part by the National Endowment for the Humanities, EBBA is dedicated to mounting online all surviving early ballads printed in English, with priority given to black-letter broadsides of the seventeenth century—the heyday of the printed broadside ballad. The single most printed medium in the literary marketplace of seventeenth-century London, broadside ballads (called "broad-sides" because they were printed on one side of a large or "broad" sheet of paper) were a form of mass communication. Tessa Watt (1991) estimates that as early as the late sixteenth century they were possibly printed in the millions,[4] and then sent onto the city's streets or out into the provinces in the packs of peddlers along with other cheap fare. Indeed, one could not travel from point A to point B in London without hearing ballads sung on street corners or seeing them pasted up on posts and walls. Broadside ballads thus touched all levels of society; yet they were decidedly aimed at and embraced by the "low." They were printed on the cheapest paper using recycled, worn woodcuts (in addition to recycled tunes for ready familiarity) so as to be affordable to all but the very poorest of society. They cost on average a mere penny. To increase their allure, ballads towards the end of the sixteenth and beginning of the seventeenth century became increasingly ornamental, with decorative lines and many pictures. People of the lower to middling sort would buy ballads to paste them up on their walls as ornaments. Finally, ballads of this period were sung to simple, well-known tunes (so well-known that just the tune title needed to be printed on the ballad), which also made them more accessible to the less educated. And to make sure they lured people of all tastes, they addressed every possible topic from every possible angle, including the always popular tabloid-like news story. As a medium of mass communication, the importance of broadside ballads can scarcely be overestimated.

---

[3] Patricia Fumerton is Director of EBBA, Carl Stahmer is Associate Director, and Megan Palmer Browne is EBBA Impressions Specialist. Kris McAbee was Assistant Director of EBBA when she mostly wrote her contribution to this piece; on assuming the position of Assistant Professor at the University of Arkansas, Little Rock, in 2010, McAbee became an EBBA consultant.

[4] Watt (1991, 11).a

EBBA's goal is to make these ephemera come alive for modern readers/listeners/viewers in approximations of the ways they resonated for contemporaries in their own time. Our goal is to make broadside ballads fully accessible as texts, songs, cultural records, and art of the period. EBBA thus provides online images of each ballad in high-quality facsimiles as well as "facsimile transcriptions" which preserve the original ballad illustrations while transcribing the unfamiliar font into easily readable modern type. In addition, visitors to the site can find recordings of ballads, background essays that place the ballads in their cultural context, TEI/XML encodings of the ballads, and search functions that allow users easily to find ballads as well as their constituent parts or makers.

The process of building EBBA has been a vigorous scholarly act precisely because it must at all times wrestle with the impermanent and changing nature of the ephemeral artefact that makes it a moving target. This is especially the case in the area of cataloguing and creating search mechanisms for the many illustrations to the ballads. As noted above, these visuals were much beloved by contemporaries but have been much neglected by modern art historians. Indeed, in its treatment of broadside ballad illustrations, about which so little has been written, EBBA has entered unchartered territory. The challenges we face are made more difficult, not easier, by the digital nature of the archive. As with all projects before the digital era that worked with objects in a mediated form (e.g., through photographs or reproductions in books), we are at a necessary remove from the originals. We are thus unable in our digitization of broadsides to distinguish between fine woodcut strokes or to identify with any certainty specific woodblock sources, the originals of which are now mostly lost. The solutions we have found to these problems have often led to more questions than answers, but the fruits of our labors are great in that they allow scholars to appreciate anew early modern cheap print and the manifold cultural issues it reflects, as some sample readings will show. However, even as we fine-tune our cataloguing and search mechanisms of broadside ballad illustrations—or what, more accurately, should be called "impressions," as further explained below—we constantly look forward to new possibilities for expanding access to cheap digitized art as well as to its highbrow cousins.

Most scholars not directly engaged with digital humanities work will be surprised to learn that the technical challenges associated with creating a scholarly digital archive are minor in comparison to the host of theoretical ones presented by the very nature of the artefacts being archived. Creating a digital version of an analogue artefact is, at its root, an act of translation.

A binary image file that uses a coded sequence of ones and zeros to store and deliver directions about how to render, on-screen, a representation of a seventeenth-century broadside ballad is something quite different from the ballad itself.[5] This very difference presents one of the prime benefits of digital scholarship.[6] The migration of the information (textual, visual, material) contained both in and on the paper ballad to its digital form forces the scholar to confront a series of fundamental questions about the nature of the artefact of study—questions that are frequently otherwise elided.[7]

The most significant of these questions is, "What, exactly, are we archiving?" This would seem an obvious question with an obvious answer, but it isn't. When one is forced to look closely at any aesthetic object, it becomes obvious that the bounds of the object itself are not nearly as stable as one would wish. Is the edge of an image the edge of the ink or paint, the edge of the paper or canvas on which it is printed or painted, the edge of the book in which it is bound, or of the framing ornament on the book's page? A long line of scholars, including the likes of Derrida (1994), Barthes (1977), and Foucault (1984), have dealt extensively with this problem at an abstract level, noting the necessity with which any symbolic action, in Foucault's words, "invariably goes beyond its own rules and transgresses its limits" (1984, 102). The printed artefact, as such, stands not as a stable object of study but as what Derrida dubs "a differential network, a fabric of traces referring endlessly to something other than itself" (1994, 84). When one sets out to create a digital representation of a printed text, image, or combination thereof, this problem moves quickly from the realm of the abstract to the material. As Derrida tells us, "[I]f we are to approach a text ... it must have a board, an edge"

---

[5] The fact that reading electronically presents a different reading experience than that of reading from print is much commented on both by scholars and the public at large. One of the best scholarly treatments of this difference remains Raymond Kurzweil's short essay, "The Future of Libraries," in which he details a host of biologic and cognitive bases for the experiential difference between reading a print text in its original print form versus a digital rendition. See Kurzweil (1992).

[6] Lavagnino (1995) still presents one of the most clearly stated treatments of the scholarly advantage of examining a text from outside of its original material form of production—a critical act which frees itself from the interpretive assumptions inherent in the materiality of text, thereby revealing new knowledge. See also Deegan and Tanner (2002), particularly pages 1–57.

[7] See McGann (2001), particularly chapter 2, for a discussion of the limitations of scholarship which attempts to understand the structure of a work of literature from within the confines of its own "bookish" form.

(81), and the digital archivist must, in fact, decide, exactly where the edge of the artefact being digitized lies before it can be scanned, photographed, catalogued, transcribed, etc.

This problem is particularly vexing for EBBA, as broadside ballads are, adopting Derrida's terminology, uniquely edgeless aesthetic artefacts in their original, printed form, consisting of fluid aggregations of sub-objects. Whereas each individual illustration, ornamentation, and textual unit that appears on a broadside ballad can and should be considered an independent aesthetic object in its own right, each must additionally be considered as part of the unified aesthetic composition that is the broadside. Taken as a whole, the form of broadside ballads is relatively standardized.[8] Metal typeset was used to print the text of a ballad (for most of the seventeenth century, in black letter or "gothic" type) onto a coarse, folio or half-folio sheet. The ballad title was typically printed, often in a different font than the text proper, above the ballad text, accompanied by a designation of the tune to which the ballad was to be sung. In addition to the ballad's textual elements, woodcut illustrations were often presented below the title and tune designation. When present, imprint information appeared at the conclusion of the text of the ballad. Finally, a variety of ornamental borders and margins were frequently used to segregate portions of the ballad and to provide an overall, visually appealing aesthetic.

Each of the various constituent elements of the broadside identified above—title, tune, ballad text, illustrations, ornamental dividers, and imprint—is both part of the whole and an independent object of study in its own right. This multiplicity is highlighted by the fact that individual printing blocks and moveable typeset were often used and reused on multiple broadsides in combination with different ballad texts, tune designations, and ornamentation; and, individual vocal melodies, identified by either recognizable tune titles, printed musical score, or both, were likewise reused such that multiple ballads were written and printed to be sung to the same tune. As broadside ballad printing was first and foremost a commercial venture, printers were inclined to get absolutely as much use out of their mechanical means of production as possible in order to minimize cost and maximize profitability. As such, there was a financial and physical trade in woodcuts such that the same cut, or a reproduced version of the cut, was frequently used by multiple printers. Similarly, the reuse of known tunes as the melodic base for multiple ballads facilitated not only the singing of the ballads by consumers, but also,

---

[8] See Rollins (1919, 262).

more importantly, the singing of the ballads by the balladeers who peddled the printed broadside ballads in the city streets. Object reuse and exchange at multiple levels thus improved the economics of the broadside ballad industry.

The broadside ballad is more collage than single aesthetic whole, as noted by Alexandra Franklin (2002, 329) and Fumerton (2002, 501); however, despite the fact that much of the content of an individual broadside (including major portions of the ballad text that appears on it) was likely to be sampled from previous broadsides, the individual broadside was also meant to be aesthetically pleasing when taken as a whole. The rich ornamentation, the frequent depiction of upper-class figures in woodcut illustrations (even in the face of the overall poor quality of the woodcuts themselves), the adoption of ornate, black-letter print on an object whose primary audience (the middling and poor) consisted of many who would have been unable to read it, ornate borders and flourishes—all these features were present primarily as a way of creating an overall visual effect that would entice even the illiterate to purchase the broadside.[9] The broadside ballad, in fact, served as the primary form of ornamental art and aesthetic engagement for the illiterate and semi-literate of the day.

Adding to the aesthetic "edgelessness" of the basic form of the broadside ballad is its provenance. With few exceptions, extant broadside ballads were preserved to the present day by collectors from their period of production, or shortly thereafter, most of whom not only physically collected the broadsides but attempted to organize, catalogue, and preserve them by pasting or otherwise fixing them into album books.[10] EBBA's current holdings include the five volumes of broadsides started by John Selden and completed by Samuel Pepys, and the four volumes (in five album books) started by Robert Harley and augmented by successive owners, including the Earl of Roxburghe. Together, these two collections represent several thousand broadsides; however, in both cases, there is not a one-to-one correlation between single album pages and single broadsides. In both collections, the collectors adopted the curatorial practice of trimming and often cutting the original broadside sheets into their constituent parts and then pasting these parts onto album-book pages. This process frequently involved the removal and/

---

[9] For a fuller discussion of the aesthetic aspects of the broadside ballad, see Fumerton (2002, 498–99).

[10] See Rollins (1919, 262) for a full discussion of the collectors and collections of broadside ballads.

or addition of graphical elements and, sometimes, spatial reorganization of the constituent parts of the broadside. As they became part of these collections the broadsides were recollaged, as it were.

It is tempting to consider this material reorganization of the broadside as an intrusion into its aesthetic authenticity; however, the collected form, in and of itself, represents an aesthetic object worthy of scholarly study for two primary reasons: first, because it provides a window into how readers more contemporary than ourselves understood, organized, and catalogued the broadside ballad, and second, because in most cases the collected form represents the sole access that readers have had to broadside ballads for several hundred years. Each broadside ballad has, seemingly, two forms of incarnation—the broadside itself and the album page—each of which, while deeply connected to the other, has its own material and interpretive history that must be preserved and catalogued.

In confronting these difficulties, it was necessary for EBBA to formulate a theory of Derridian "edgeness" for the broadside ballad that would determine exactly which elements and/or sub-elements relating to an individual broadside ballad would be collected and catalogued. Would we, for example, consider the entire album page as the artefact of study, or would we attempt to digitally reconstitute the original broadside, or independently catalogue sub-elements of the broadside, such as illustrations and ornamentation, etc.? After travelling for some time down various avenues of trial and error along these lines, we settled ultimately on a consciously abstracted theory of the "impression" as the defining aesthetic edge of the archive. In printmaking scholarship, an impression designates any print made from a wood block (Hind 1935).[11] The distinction here is between the block itself (which contains an image on it) and the printed images (impressions) that are created by the block. While not all print elements that appeared on the original broadside were printed by block, the basic concept of the impression as designating a distinct visual element produced by a discrete, interchangeable block, cut, stamp, or typeset arrangement can be applied to all visual elements of a broadside ballad, and has proven a workable scholarly means for identifying the most basic material units that compose each broadside ballad.

This conception of "impression" abstracts the image created by a block (the impression) from the physical block itself. EBBA's method of cataloguing further abstracts this abstraction by completely decoupling the block or typeset used in the printing process from the impressions created. EBBA makes no

---

[11] See also Griffiths (1996, 9–12) and Parshall and Schoch (2005, 2).

claims regarding the actual block/cut or typeset used to create an impression, focusing instead only on the visual image or textual unit as it appears on the page. Each abstracted impression is granted object status in EBBA's cataloguing database, and the reappearance of an impression is tracked across broadside and album book manifestations with no regard paid to the question of whether the exact same block or typeset was actually used to create the impression.[12] This may seem like an unnecessarily subtle, theoretical distinction, but it provides a practical means of defining the edges of the base collection of objects that comprise a particular broadside (a printed poem, a musical score, an image, etc.) and of cataloguing them both independently and as they relate to other visual content on the page without being bound by the materiality of the physical block or typeset used in the printing process. It allows us to note, at the level of database and markup, that "this functions like that" and that "this is like that" without claiming that "this is that."

EBBA's process for cataloguing the pictorial impressions produced by woodcut printing on the broadside sheet provides a good example of the practical advantages offered to both cataloguers and, more importantly, end-users of adopting an abstracted theory of the impression as a general cataloguing principle. The usefulness of any cataloguing function is necessarily dependent upon the quality and consistency of tagging and description across the entire catalogue. For the print history aspect of the ballads (from publishing data to page condition) EBBA has developed rigorous scholarly cataloguing standards based on bibliographical principles and grounded in precedents set by ballad scholars such as Helen Weinstein (1992). Yet precedent systems for the cataloguing of illustrations seem inadequate for the cataloguing of woodcut impressions on ballads. Existing ontologies and systems are insufficient for organizing information about the frequently unsophisticated and degraded black-and-white ballad impressions and making that information searchable through a sophisticated digital Web interface.

EBBA has attempted several means of cataloguing ballad woodcut impressions and ultimately discovered that the most consistent and productive form of digital cataloguing of early modern illustrations is not, ironically, en-

---

[12] Tracking the history and use of specific blocks or cuts would, of course, stand as a useful addition to our catalogue, but such determinations cannot be adequately made given the current state of the forensic technologies that can be applied to extant collections given their, by in large, extremely fragile state. The inclusion of such information in the database would not, however, if it were available, invalidate a more abstract-based cataloguing structure for reasons explained further in the essay.

tirely based on computational cataloguing systems. EBBA has endeavoured to use free-association, cataloguer-generated keywording, longer nested-descriptions to accommodate general and more specific terms, as well as a taxonomic classification system (all of which we discuss in more detail below), and found each of these methods to be inadequate for the cataloguing of woodcut impressions. Yet experimenting with each of these techniques in dealing with thousands of ballads contributed to EBBA's development of a fixed set of fifty standard keyword concepts, a controlled vocabulary specific to the ballads, which are exposed to the user for the purposes of searching on EBBA's advanced search (http://ebba.english.ucsb.edu/search_advanced).

Keyword tagging is frequently the first step towards creating and organizing data about content, and EBBA's initial attempts to capture information about woodcut impressions relied heavily on cataloguer-generated keywords without the use of a structured vocabulary.[13] Keywords can be very reliable for organizing one's own images, since in these cases the user is also the cataloguer, but such is not the case for EBBA. Most users of EBBA are not cataloguers, and because in 2003, at the inception of the archive, social computing as a scholarly practice was on a distant horizon, folksonomic tagging of the woodcut impressions, such as that investigated by *Steve: The Museum Social Tagging Project* (http://steve.museum), was not supportable and would have likely engendered similar difficulties.[14] Hence, at the early stages of cataloguing the Pepys ballads, with which EBBA began, those compiling the information—even though they were early modern scholars—had no way of knowing exactly what sets of terms and concepts would be most relevant for other ballad scholars and users of the site.[15] As pop-cultural, aesthetic,

---

[13] Such ad hoc keywording takes the form of cataloguers listing simple noun forms, of their own choice, to describe the most salient aspects of the image depicted in the woodcut impression. Because EBBA's earliest cataloguers were working from Weinstein's existing catalogue (1992), which was developed specifically for the Pepys ballads but which only lists dimensions for the woodcut impressions, cataloguers generated the initial keywords in conjunction with longer narrative descriptions modelled on the *Blake Archive* (discussed below). The full narrative descriptions quickly became too time-consuming and unwieldy for the first pass of cataloguing, so not all of the woodcut impressions were keyworded in the first pass.

[14] EBBA's in-house keyword cataloguing and folksonomic or collaborative 2.0 tagging in ontology development frequently ran into similar problems: namely spelling, synonymy/homonymy, and mismatching. See Braun et al. (2007).

[15] Studies of search log data of other online archives indicate a lack of correspondence between archives' metadata and the terms that users employ to search has been

and print-historical artefacts covering a long period (primarily 1550–1750), EBBA's ballads potentiate scholarly interests in a variety of fields. How then can cataloguers anticipatively generate keywords that are as varied as the ballads—and the ballad scholars—themselves? They can't. Once keyword information is generated, it epitomizes the dilemma Baudrillard expresses of the information revolution: "Information can tell us everything. It has all the answers. But they are answers to questions we have not asked, and which doubtless don't even arise" (1990, 219).

The issue of providing useful information in EBBA's cataloguing of the wood-cut impressions becomes two-fold: on the one hand, anticipating the user's needs and, on the other, accurately addressing those needs. However, the solution to this problem is singular: providing for both the cataloguer and, subsequently, the user a defined set of keywords. Curtailing the keywords to a standardized list ameliorates the difficulty of, on the one hand, correctly identifying items in crudely rendered impressions and, on the other, assigning the most useful vocabulary to those items. Useful keyword tagging should anticipate precisely those user questions that might arise. Alternatively, limiting the tagging and the search to a standard set of keyword concepts, acknowledges that most questions of users cannot be anticipated, and so, instead, invites specific lines of inquiry.

Without a standard vocabulary from which to catalogue, keyword tagging inevitably becomes inconsistent and, therefore, inadequate for searching purposes. Take, for example, the keyword lists produced, without a standard vocabulary, by two different cataloguers for variant impressions of one of the most common pictures to appear on early modern ballads: a woman with a fan (Figs. 1 and 2).[16]

---

well documented. See Trant (2009) for a fuller review of the intervention of social tagging and folksonomy in this problem.

[16] Variant impressions of this woman holding a large feathered fan appear fifty-four times in the Pepys collection alone.

Figure 1. Woman-with-fan impression from "A goodfellowes complaint against strong beere," Pepys 1.438–439

Figure 2. Woman-with-fan impression from "The faythfull Louers resolution," Pepys 1.256–257

These two impressions are very similar, suggesting that they may both be from the same woodcut block. However, because we have no access to the original woodcut blocks themselves, EBBA cannot know whether the minor variations in the woman's face, the outline of the fan, the shoe on the left, and the top of the farthingale are the result of vagaries in inking or pressing of the same block, or whether they appear because different, nearly identical, woodcut blocks were used, in which case it would be impossible to tell which is the original and which the "copy." To avoid claiming that both impressions were made from the same woodcut block, yet still acknowledge the similarity and relative "sameness" of these two illustrations, EBBA calls such impressions "variants" of each other.[17] Two different cataloguers generated keywords for these nearly identical variants, and both lists include "lady," and "woman" as well as "dress," "feather," "flower," "fan," and "necklace." These keywords seem to cover the central items depicted in the impressions, with some variety to accommodate for synonyms (e.g., "lady" and "woman"). Both cataloguers also include "branch" and "tree," apparently after consultation with each other and some confusion over whether the fan is feathered or a tree branch. Although it is unlikely that the fan is made of tree branches, since feathered fans were the norm for the period, cataloguers cannot be certain of what is either rendered or evoked in this image so their inclusion of "branch" is understandable. Yet this level of granularity in keywords inevitably leads to inaccurate search results: someone looking for images of trees would also get this image. Moreover, only one cataloguer, using her specialized knowledge of fashion of the period, included "wide ruff" and "farthingale" in her list of keywords for one of the impressions. A search run on these keywords would then return only one woodcut impression, errone-

---

[17] The term "variant" describes impressions that depict essentially the same illustration with only minor variations. For example, not all images of a woman holding a fan are variant impressions, since some women holding fans may be illustrated with different fans, hairstyles, dresses, poses, backgrounds, etc. Yet, in instances where impressions seem similar enough to be considered essentially the same or very closely imitated, EBBA groups them as variants by assigning them the same numerical identifier in the mySQL database (this grouping is discussed in more detail below). Such grouping necessitates scholarly calls about what qualifies as similar enough to be a variant. In her catalogue of the Pepys ballads, Weinstein (1992) also makes such scholarly judgments in her appraisal of variant editions of ballads in the collection, marking only those ballads as variant editions that are at least 80 percent similar. As a rule of thumb, EBBA's impression cataloguers followed the same method, grouping variant impressions based on estimations of at least 80 percent similarity.

ously implying that variants of this woodcut impression do not include the more specific fashion elements.

One possible solution to the varied amount of specificity in such catalogue-generated lists of keywords is to increase granularity by grouping general terms with more specific terms. However, such long, nested descriptions—an approach to which EBBA repeatedly returned—only redoubled many of the same problems of shorter keyword lists. Inspired by the success of the *William Blake Archive* (http://www.blakearchive.org/blake/), we imitated the narrative style of their descriptions of Blake's designs, with the hope that capturing a wealth of detail (e.g., "dress or farthingale") would increase the reliability of our searches. However, we quickly discovered that these descriptions tended not only to lead to false-positives (like the example above), they would also balloon to an unwieldy size. Moreover, they suggested a degree of certainty that could not, in fact, always be guaranteed by the frequently crude images. Like the *Blake Archive*, EBBA acknowledges that users can always go to our reproductions of the images themselves to inform their own analysis of the impressions. The *Blake Archive* has also recognized the potential for error in their design descriptions, noting that "many interpretations have been based on weak, partial, or mistaken impressions of what appears in the designs."[18]

EBBA's intention for these narrative descriptions was that they could be useful to non-specialists and beginning scholars, particularly undergraduates, by providing context and pointing out distinctive features that might be lost to an eye unpracticed in reading such images. But as with the more free-form keywording efforts, the sheer number of images made it impossible for a single individual to do the job, again resulting in discrepancies in the descriptions of associated impressions. Further, the idiosyncrasies of the images themselves—some carefully employing conventions of realism and classicism, some flat in perspective and awkward in draftsmanship, some static, some narrative, some solemn, some whimsical—made it difficult for an interdisciplinary team of scholars to agree on a method of logical, systematic description. This meant that the long descriptions, when completed, were uneven in detail and inconsistent in terminology, length, and accuracy. As an attempt to remedy this, a single member of the team (Palmer Browne) went back through all of the descriptions, attempting to bring consistency and accuracy to the archive as a whole. By this time, the richest descrip-

---

[18] See a full description of the *Blake Archive's* methods at http://www.blakearchive. org/blake/public/about/principles/index.html.

tions included detail on costume, architecture, and the like. In an attempt to keep this richness and remain consistent, her retooling of the long descriptions resulted in an excessive glut of detail because standardizing across the impression descriptions required that details addressed in one description be included in all subsequent descriptions to avoid false-positives. Finally, it became apparent to all that such narrative descriptions were neither particularly useful to the non-specialist nor an efficient use of archivists' time, and they were removed from the active version of the database.

The *Blake Archive* seems to have found their narrative descriptions similarly unwieldy and not in strict accordance with users' needs. They have now implemented an image search based solely on a list of 1,039 terms grouped by 8 categories.[19] This latest attempt is similar to the taxonomic structure provided by other image classification systems, such as Iconclass, which hierarchically orders 28,000 image subject terms.[20] Although Iconclass has the valuable asset of being widely available (including online, via the Iconclass Libertas Browser, http://www.iconclass.nl/libertas/ic?style=index.xsl) and is widely used, EBBA has not found its granularity to be manageable or applicable when cataloguing ballad woodcut impressions. The "stock" character of many of these impressions resists attempts to pin down individual subjects, such that cataloguers are at a loss where to begin with such a huge list of terms. Likewise, users have too many points of entry for searching illustrations tagged by so many terms. EBBA's list of fifty keyword concepts, tailored to ballad impressions specifically, streamlines the process for the users. Furthermore, large sets of subject terms, like those used by Iconclass and the *Blake Archive*, do not solve problems of inconsistency, neither among cataloguers (since any cataloguer may choose a different set of foci than another), nor across impressions (since what might be deemed the "subject" of one impression may be faded, warped, or lost in a variant impression).

For example, what happens when the "woman with fan," discussed above, loses her signature item, as she does in Pepys 1.296–297 (Fig. 3)? This impression differs more distinctly from the impressions of women with fans seen in Figures 1 and 2, and is more likely to be from a different woodcut block, but

---

[19] The categories consist of Figure Type (62 terms), Figure Characters (115 terms), Figure Postures and Gestures (253 terms), Figure Clothing and Other Attributes (98 terms), Animal (92 terms), Vegetation (73 terms), Object (294 terms), and Structure (52 terms). See http://www.blakearchive.org/blake/imagesearch.html.

[20] See the official Iconclass website for a fuller description of its components: http://www.iconclass.nl/index.html.

in the absence of certainty and in the face of such striking similarity despite the variations, EBBA considers them all variant impressions. Cataloguers for the impression in Figure 3 would not have reason to include the Iconclass notation 41D262, which is the classification code for "fan."[21] Resultantly, a keyword search for impressions with "fan" as subject would not return this impression. Hence, were EBBA to rely solely on Iconclass for cataloguing the woodcut impressions, we would leave out this notation and would thus fail to associate this woman with her fellow fan-holding variants. Likewise, any cataloguing system based solely on keywording individual impressions over-looks features that fade or break off over time. However, the fan is a salient factor in the other variants of this impression. Though the fan itself may not appear in this particular impression, it is implied by association with the numerous variants in which the fan does appear. Indeed, the fact that the fan is missing is perhaps the most interesting aspect of this impression, but keywording alone, especially through hierarchical systems like Iconclass, does not capture information about subjects that do not appear on the im-pression. EBBA thus needed a cataloguing system that not only treats these impressions as individual objects but that also matches variant impressions in order to bring such noteworthy differences to the fore.

---

[21] The hierarchical nature of Iconclass notations is evinced by the number of charac-ters in the classification code. Each of the six characters represents a level in the hier-archy: 4 Society, Civilization, Culture; 41 material aspects of daily life; 41D fashion, clothing; 41D2 clothes, costume; 41D26 accessories (~ clothing); 41D262 fan.

Figure 3. Woman-with-fan impression from "The Discourse betweene A
Souldier and his Loue," Pepys 1.296–297

To match these variants, EBBA's database includes woodcut impressions
groups. Developed out of our revisitation of the woodcut impression metada-
ta, all variant impressions of similar illustrations—that is, impressions that
may be from either the same, copied, or closely imitated woodcut block—are
assigned to the same group. Thus, in EBBA's improved interface, users do
no need to happen upon the best search term to find any given impression:
they can either choose from a drop-down list of search terms on EBBA's ad-
vanced search or, when viewing any given ballad, they will be able to opt to
see ballads with variants of that ballad's woodcut impressions. For ease of
cataloguing, groups are given descriptive names and, after the initial pass of
grouping, the cataloguing interface, shown in Figure 4, employs a drop-down
menu listing all possible groups, to avoid the creation of duplicate groups.
EBBA is currently in the process of standardizing its drop-down impressions
group list and plans to make it available to users from the advanced search
page. EBBA's improved user interface will also use these groupings in the
database to give users the option (through a button on the citation page)
to see variant woodcut impressions where available. Only through EBBA's
repeated revisiting of the impressions have we been able to gain the intimate
familiarity with them necessary to group the impressions by variants in the
database.

Manage Keywords Associations

- [ ] allegorical figure / scene
- [ ] alphabet letter, decorative
- [ ] animal(s)
- [ ] architecture / buildings
- [ ] beggar / impoverished / tattered clothing
- [ ] child / children / infant
- [ ] classical / mythological
- [ ] courtship / romance
- [ ] currency / numismatic object(s)
- [ ] death / affliction / illness
- [ ] demon / devil
- [x] design: abstract / geometric / floral
- [x] emblem / insignia
- [ ] entertainment / recreation / good fellowship
- [ ] erotic scene
- [ ] family / marriage
- [ ] fashion as subject

- [ ] flower(s) / foliage
- [ ] food / drink
- [ ] heraldry / flag(s)
- [ ] historical figure(s)
- [ ] holiday
- [ ] hunting
- [x] indoor scene
- [x] magic / witchcraft
- [x] man / men
- [ ] map(s)
- [ ] maritime figure(s) / maritime scene
- [x] middle / lower class
- [ ] military figure(s) / military scene
- [ ] monstrosity
- [ ] musical instruments
- [ ] musical notation
- [ ] natural phenomena / force majeure

- [ ] nobility / aristocracy
- [x] occupation / trade
- [ ] outdoor scene
- [ ] pastoral / georgic
- [ ] politics / government
- [ ] portrait
- [ ] punishment / execution / torture
- [ ] race / ethnicity / nationality
- [ ] religious / biblical figure or scene
- [ ] royalty
- [ ] skeleton / corpse
- [x] tool(s)
- [ ] transportation / travel
- [ ] violence / conflict
- [x] weapon
- [ ] woman / women

(Save Keyword Associations)

Manage Ballad Groups:

alchemist sitting at table with globe and dagger

(Save Changes)

Figure 4. Impressions management system with standardized keywords and drop-down menu for groups of variants (for Pepys 4.357, Impression 2)

The granting of object status to each impression in EBBA's cataloging data-base, discussed above, allows us to associate variants of that impression with no regard paid to the question of whether the same block was actually used to create the impression. This type of cataloguing, in which EBBA does not claim that any impression is an "original" or "copy" of any other woodcut, allows a shift of focus to the semiotic relationship between impressions that bear significant similarity. Take, for example, the impressions on Pepys 4.20, "The Swimming Lady": an impression of a man with two bathers perched on the bank of a body of water and a separate impression of a bathing woman (Fig. 5). The break between the two images makes clear that these are two separate impressions. Yet their close placement aligned next to each other suggests that they might be ancestors of a once single woodcut block, now broken in two.[22] This constructed composite invites speculation about print-ing practices that would be very hard to verify in the absence of access to the whole woodcut block, but EBBA's focus on the object status of impressions allows for cataloguing as the pictures appear in the particular instance, as two separate impressions rather than one singular illustration of a man look-ing at a woman. In this way, EBBA's catalogue of the impressions allows for the semiotic association between the two impressions without concretizing assumptions about the origins of the illustration.

Figure 5. Impressions from "The Swimming Lady," Pepys 4.20

---

[22] In fact, in her catalogue of the Pepys ballads, Weinstein identifies each of these two sets of impressions as "two blocks arranged as composite cut," pointing to them as a counter-example of a broken block (1992, xlii).

Two very similar impressions appear on Pepys 4.4, "The Happy Lovers Pas-time," again placed together to form a composite image, a compound il-lustration consisting of two separate but aligned impressions (Fig. 6). The constructed nature of this composite image is evident in comparison of the illustrations from "The Swimming Lady" (Fig. 5) with those on the "Happy Lovers Pastime" (Fig. 6). Subtle differences between the two impressions of the bathing woman on the right (including facial expression, etching marks on the forearm, and leaf-shape of the foliage) suggest that these two impres-sions do not come from the same woodcut block. They, like the numerous women-with-fan impressions discussed above, are variants of each other. That the bathing woman impression does not appear in the Pepys collection in a singular impression that contains as well the man who seems to be gaz-ing at her exemplifies why EBBA identifies these as individual "impressions" as opposed to "woodcuts" (the vernacular shorthand for such illustrations, which is more evocative of the item used to make the illustration than the single instance on the page itself). The variant impressions of the bathing woman are clearly related to each other, but due to their obvious differences they probably would not be linked in the database if EBBA were to attempt to catalogue woodcut blocks.

Figure 6. Impressions from "The Happy Lovers Pastime," Pepys 4.4

The ability to find variants of these impressions becomes especially valuable when the individual parts of the implied composite appear on their own. The impression of the man on the left appears alone, for instance, on Pepys 3.352,

"Loves Lamentable Tragedy." Without the bathing woman seated next to him, the implication of his pose shifts: rather than furtively spying on a woman in a state of undress, the man seems to be turning away from the nude figures behind him as he looks toward the edge of the water (and, indeed, of the very ballad). Yet, even when the bathing woman does not appear as the object of the man's gaze, her connection to him in so many other ballads places her in a semiotic chain with this illustration. For example, she also appears without the gazing man in Roxburghe 4.22, "Love's Unspeakable Passion or Young Man's Answer to the Tender Hearts of London City." The fact that this ballad is in fact a response ballad to "Love's Lamentable Tragedy," where he appears alone, further supports her implicit connection to him—a connection sustained by a search of variant impressions. The bathing woman also emerges on Pepys 3.187, "The Charming Eccho," and on Pepys 3.342, "The Musical Shepherdess," both times without her voyeuristic male counterpart. EBBA's matching of variants provides modern scholars with an experience that early modern ballad consumers were likely to have, since they probably would have seen the bathing woman and the gazing man placed together on other ballads or perhaps even as a single, whole woodcut impression on another text. Such knowledge of the illustration of the bathing woman placed compositely elsewhere as a titillating object of a voyeuristic gaze highlights the erotically charged effect of this half-naked woman in these ballads, drawing a connection between her appeal to the man watching her in the composite image and her appeal to the audience of the ballad itself.

The iconographic significance of some woodcut impressions is so powerful that the message of the ballad text is lost without them. This can be seen not only within and between EBBA's ballads but when EBBA impressions are matched with impressions from other sources, a process which at the moment can only be done on a case-by-case basis. It is to be hoped that, in the future, full integration with other databases will be possible. A poignant example of the benefits of such matching, drawing on EEBO (the *Early English Books Online*) as well as the EBBA database, is the 1612 ballad, "The good Shepheards sorrow for the death of his beloued / Sonne," Pepys 1.352–353.[23] Before discussing how the impressions on this broadside are indispensable to the meaning of the ballad, it is useful to examine the ballad text. The first part of the ballad is spoken by a bereaved father, who laments in the second stanza,

---

[23] Date from STC; Weinstein lists an R. Johnson as the possible author (1992).

> In Sable roabes of night,
> My dayes of joy aparreld bee,
> My sorrow sees no light,
>   my light through sorrowes nothing see,
> And now my sonne his date hath runne,
> And from his Sphere doth goe,
> To endless bed of foulded lead,
>   and who can blame my woe?

This is highly crafted, literary language. The Donne-like punning on son/sun results in a sophisticated planetary metaphor which enhances the already evocative picture of sorrow and night as a rich sable garment. The son/sun has unnaturally and wrenchingly left his sphere; brightness and joy are gone, and only a dull and inescapable "bed of lead" remains. This internal rhyme has the effect of reinforcing the bleakness of the situation. Not only are we reminded of the former brightness and promise of the young man, but a third, unspoken, rhyming word haunts the end of the stanza: "dead." The speaker's simple refrain—"and who can blame my woe?"—both pulls the narrator from his grief for a moment and brings the ballad's audience into the song. This sophisticated bereaved father asks us a direct question; our compassion or condemnation becomes part of the ballad's narrative structure.

The ballad's second part is spoken by a different, unnamed narrator, who consoles the father both by trying to quiet the griever's lament and by acknowledging the heaviness of the loss. This speaker acknowledges that no man "Can well forbeare, / To shed a teare" for the loss of the bright youth. But at the end of the ballad, he offers words of compassion and hope:

> Thy woes I cannot blame,
>   but in thy sorrowes beare a part,
> Yet now to patience frame,
>   and see the salve cures all our smart:
> This bud is dead,
> Is gone, is fled,
>   but in his place doth grow
> A Flower as faire:
> As fresh as rare,
>   and he cures all our woe.

This speaker thus answers the question the father had posed in the first half of the ballad: no one will "blame his woe," not only because the father's own

personal loss is great, but because the speaker himself bears a part in the father's bereavement. In the last line, the sorrow is not, as in the first part of the ballad, "my woe;" nor is it, as in the earlier stanzas of the second part, "your woe." It is "our woe." Here, the second speaker aligns himself with the father and also responds on behalf of the ballad's entire audience: all of us have been affected by this death. The undeniable emotional appeal and the final assertion of hopeful renewal make this ballad compelling, but the insistence that the shepherd's grief should be shared by all is perhaps puzzling to a modern audience until we listen to the story being told by the impressions.

This broadside has three woodcut impressions: the first, a fairly simple cut of a generic king; the second, a highly ornamental picture of a young man in a plumed hat and lace collar; and the third, a portrait of a young man in profile holding a lance (see Fig. 7). The king and the man in the lace collar appear at the top of the first part of the ballad, and the youth with the lance appears at the top of the second part. The impression of the king has not yet been possible to trace or match with other impressions, but his symbolic function (kingship) is clear. The second impression is identifiable as a specific individual: Frederick, future king of Bohemia, who was married to Princess Elizabeth in 1613. A very similar alternate of this impression appears on a broadside announcing the couple's marriage.[24] But it is the third impression that is the key to the story: an intense-looking young man in elaborate armor, hair windblown from the top of his head, holding a lance that cuts horizontally across the top half of the pictorial space, its ends vanishing beyond the edges of the frame (Fig. 8). This, too, is a portrait: the young Prince Henry. The impression is a copy of the top three-quarters of a full-length engraving by Simon Van de Passe; another woodcut impression of the same engraving appears in a 1612 edition of Michael Drayton's *Poly-Olbion*, which is dedicated to the young prince and can be found in the EEBO database.[25] The reason this image is so powerful in connection with the ballad is, of course, that Prince Henry died in November of 1612, at the age of 18, from an illness that is now believed to have been typhoid fever. The fact that the impression indicates definite signs of wear on the woodblock (large breaks in the top and bottom left-hand borders and a wormhole visible in the hilt of the sword Henry wears at his side), along with the existence of the original engraving and at least one other woodblock copy, suggests that this image of Henry was frequently printed and probably widely circulated. It would have born

---

[24] Maxwell (1613); date from STC.

[25] At present, the only way to locate such correspondences between EEBO and EBBA database impressions is by individual scholarship.

almost iconic status. To Londoners in 1612, then, the juxtaposition of the ballad images with its text would have had a clear and moving topical meaning. The Shepherd is James; the lost son is Henry; the new bud is Charles. The contemporary audience is invited to mourn this national loss not only by the unnamed second speaker but by the king himself, ventriloquized through the title's "Shepheard." The shepherd/king/father's tragic loss is emphatically their loss too, and it is clear that the king is woefully grieving indeed. Of course, a ballad whose text claims to speak for the current king might have seemed seditious and in need of censure, but because the speaker is shown to be the king only by way of the impressions, the ballad is free to circulate with impunity, and its audience is invited to mourn alongside James. The unstated purpose of this song, which would have been clear to an audience in 1612, might have been lost without the significant supratext provided by the impressions and the possibility of matching such impressions across early modern media. The provenance of these impressions indicates how the work as a whole functioned as part of the complex iconography of this period.
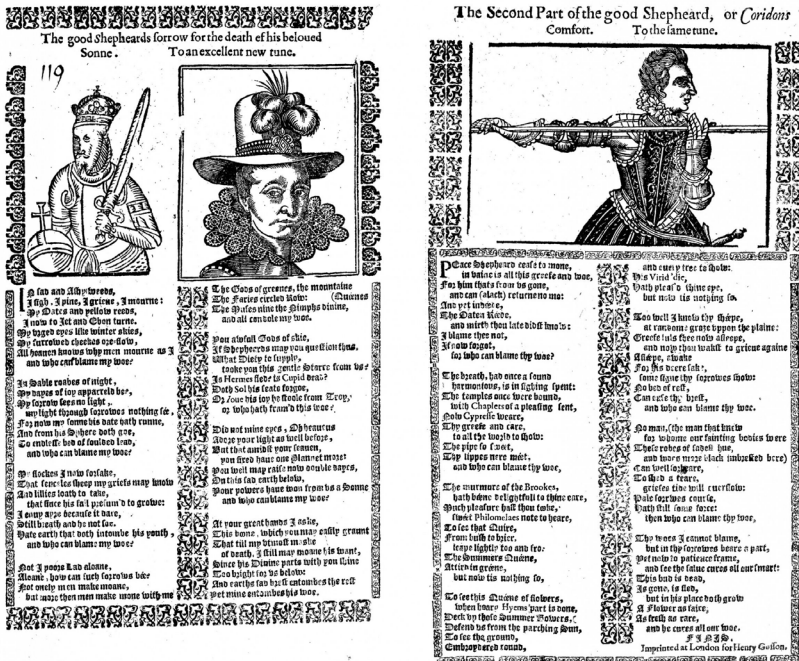

Figure 7: "The Good Shepheardes sorrow for the death of
his beloued Sonne"

Figure 8. Third impression from "The good Shepheards sorrow for the death of his beloued Sonne," Pepys 1.352–353

The process of associating such variant impressions not only within but beyond EBBA's holdings, even as it depends upon new technologies to organize, analyse, and display information, ultimately relies heavily on scholarly expertise. Only an intimate familiarity with the impressions across the thousands of ballads in the archive can produce what is perhaps EBBA's most valuable archival feature: the matching of variant impressions. Consequently, the chief function of EBBA's current technological infrastructure is accessibility: to expose and make useful to a wider audience our scholarship on the seventeenth-century broadside ballad, in all of its rich complexity. For now, the process of building this resource, and especially of making these connections between variant images, must still be done manually. As EBBA looks towards the not too distant horizon, however, new technologies loom which offer the potential to liberate the process of variant recognition from the necessity for pre-existing scholarly knowledge. Whereas to date most image catalogue/search interfaces have relied on image tagging (whether by scholars or the public at large) as a means of organizing and navigating image collections, we have already entered an era where the computer itself can, independently, examine a collection of images and determine which ones are similar to others and in which ways. Research in computer

vision and visual pattern recognition dates back many decades; however, as a result of the United States Department of Homeland Security's desire to develop automated systems for identifying particular individuals on film, an historically unprecedented level of funding has been devoted over the past decade to Artificial Intelligence (AI) research in the area of computer vision. Specifically, advances in the areas of image segmentation and recognition—processes whereby computers are able to examine an image at a binary level, identify the edges of discrete objects that appear in the image, and then compare these objects either with a known database or with objects found in other images—offer important (and unimagined, no doubt, by the Department of Homeland Security) potential for digital archivists.[26] Taking the previously discussed case of a woman holding a fan, for example, we have existing computer models that would be capable of accurately "looking" at every image in the ballad collection and returning a list of all images in the catalogue that contain not only versions of the woman holding a fan, but also images that contain the fan without the woman or the same woman without the fan.

Such potentially automated systems are not the stuff of science fiction. Both the algorithms and the computational code needed to perform this kind of analysis have already been developed and are beginning to seep into the commercial software arena.[27] They have yet, however, to be leveraged by digital archivists. At EBBA, we see great potential in doing just that. Such AI processes would not replace the kind of deep, scholarly engagement that is reflected in EBBA's current tagging system, but would enhance it. We imagine a system whereby EBBA scholars, EBBA end-users, and the computer itself would work as collaborators in an ongoing process of building not only literal but also semiotic webs of association between impressions

---

[26] For more information on Image Segmentation and recognition see the UC Berkeley Computer Vision Group (http://www.eecs.berkeley.edu/Research/Projects/CS/vision/) and MIT's Computer Science and Artificial Intelligence laboratory (CSAIL) (http://www.csail.mit.edu/).

[27] The newly announced "Google Goggles" service (http://www.google.com/mobile/goggles/#landmark) is the most widely known example of the commercial application of this newer technology. Other examples include Attrasoft image recognition search-engine, http://www.attrasoft.com/; TagCow image tagging service, http://www.tagcow.com/; and Mobvis vision technologies and intelligent maps for mobile attentive interfaces in urban scenarios, http://www.mobvis.org/, all of which are early stage commercial ventures in the area of computer-assisted image recognition and comparison.

in the archive. Such a system would, interestingly, simultaneously concretize the user experience by making it easier and faster to find what one is looking for, while at the same time playing more freely with the ephemerality of the archive itself, serving to further destabilize the integrity of the broadside proper by facilitating navigation across impressions according to constantly shifting points of focus rather than scholar-defined hierarchies. Such a digital archive would allow us to have our scholarly cake and eat it too, preserving the ephemeral through an architecture that drives towards destabilization.

One might dub what we foresee through the interaction of machine and human intelligence a "systemized destabilization" which seeks to capture the very essence of the early modern broadside ballad. The printed ballad, as we have seen, was made up of mobile collage-like pieces—changing titles, tunes, texts, ornaments, and woodcut impressions. Each of those component pieces might migrate and mutate as it moved from broadsheet to broadsheet. Though there may well have been an element of arbitrariness to the selection by which such movable parts were assembled by printers on any particular broadside, as we have seen, they together form a potentially self-reflexive whole that could communicate special meaning to audiences in their own time and still speak to scholars who study them today. The illustrations to broadsides are perhaps their most vexing features because we rarely have original woodcuts to prove that one impression is in fact the same as another. This is also why we rely heavily on EBBA scholarly judgments made by the interpretative eye. Even once we enter the age of computer-generated match-ups of impressions or parts of impressions on broadside ballads, the human eye of the experienced scholar must interpret the potential connections identified by the computer. Only the trained scholarly eye can meaningfully read the association of images, as we have offered in this paper in the readings of associated impressions held within the EBBA database as well as between those impressions and other holdings, electronic or not. EBBA's goal is to make a database that can best capture impressions and their variations in a systematic way precisely by incorporating the EBBA scholar in evaluating image variations, and ultimately (indeed, continually) prompting a retooling of the database so as to better associate impressions, in a supportive feedback between human and machine.

BIBLIOGRAPHY

Barthes, Roland. 1977. The death of the author. In *Image, music, text*, trans. Stephen Heath, 142–48. New York: Hill and Wang.

Braun, Simone, et al. 2007. Ontology maturing: A collaborative Web 2.0 approach to ontology engineering. In *Proceedings of the workshop on the collaborative construction of structured knowledge (CKC) at the sixteenth international World Wide Web Conference (WWW 07)*, Banff, Canada.

Baudrillard, Jean. 1990. *Cool memories.* Trans. Chris Turner. London: Verso.

Deegan, Marilyn, and Simon Tanner. 2002. *Digital futures: Strategies for the information age.* New York: Neal-Schuman Publishers.

Derrida, Jacques. 1994. Living on. In *De-construction and criticism*, ed. Harold Bloom et al., 75–176. New York: Continuum.

Early English Books Online (EEBO). 2010. http://eebo.chadwyck.com/home/.

Eighteenth-Century Collections Online (ECCO). 2010. http://www.gale.cengage.com/DigitalCollections/products/ecco.index.htm/.

English Broadside Ballad Archive (EBBA). 2010. http://ebba.english.ucsb.edu/.

Foucault, Michel. 1984. What is an author. In *The Foucault Reader*, ed. Paul Rabinow, 101–20. New York: Pantheon.

Franklin, Alexandra. 2002. The art of illustration in Bodleian Broadside Ballads before 1820. *Bodleian Library Record* 17 (5): 327–52.

Fumerton, Patricia. 1999. Introduction: A new New Historicism. In *Renaissance culture and the everyday*, eds. Patricia Fumerton and Simon Hunt, 1–17. Philadelphia: University of Pennsylvania Press.

———. 2002. Not home: Alehouses, ballads, and the vagrant husband in Early Modern England. *Journal of Medieval and Early Modern Studies* 32 (3): 493–518.

Greenblatt, Stephen. 1980. *Renaissance self-fashioning: From More to Shakespeare.* Chicago: University of Chicago Press.

Griffiths, Antony. 1996. *Prints and printmaking: An introduction to the history and techniques.* Berkeley and Los Angeles: University of California Press.

Hind, Arthur M. 1935. *An introduction to a history of woodcut with a detailed survey of work done in the fifteenth century.* Vol. 1. Repr., New York: Dover Publications, 1963.

Iconclass Libertas edition. 2010. http://www.iconclass.nl/libertas/ic?style=index.xsl/.

Kurzweil, Raymond. 1996. The future of libraries. *Library Journal* 171 (1): 80–82.

Lavagnino, John. 1995. Reading, scholarship, and hypertext. http://www.stg.brown.edu/resources/stg/monographs/rshe.html/.

Maxwell, James. 1613. *The imperiall and princely pedegree of the two most noble and vertuous princes lately married.* London: SIE Allde for Henry Gosson.

McGann, Jerome. 2001. *Radiant textuality: Literature after the World Wide Web.* New York: Palgrave Macmillan.

Parshall, Peter, and Ranier Schoch. 2005. *Origins of European printmaking: Fifteenth-century woodcuts and their public.* New Haven, CT: Yale University Press.

The proceedings of the Old Bailey. 2010. http://www.oldbaileyonline.org/.

Rollins, Hyder E. 1919. The black-letter broadside ballad. *PMLA* 34 (2): 258–339.

Steve: The museum social tagging project. 2008. http://steve.museum/.

Trant, Jennifer. 2009. Studying social tagging and folksonomy: A review and framework. *The Journal of Digital Information* 10 (1): http://journals.tdl.org/jodi/article/view/269/.

Watt, Tessa. 1991. *Cheap print and popular piety, 1550–1640.* Cambridge: Cambridge University Press.

Weinstein, Helen. 1992. *The Pepys Ballads: Catalogue of the Pepys Library at Magdalene College, Cambridge.* Woodbridge: D.S. Brewer.