“The New Machine”: Discovering the Limits of ECCO

Patrick Spedding

This essay explores some of the difficulties in conducting research using such scanned text-bases as Eighteenth Century Collections Online (ECCO), a subject which has not attracted the attention it deserves.1 As almost all scholars of the eighteenth century must now be aware, ECCO is a vast, fully searchable database of hundreds of thousands of eighteenth-century texts in digital facsimile. Described by its publisher as “The most ambitious digitization project ever undertaken,” ECCO now contains 32 million2 pages of text from “more than 138,000 titles (155,000 volumes).”3 Like ProQuest’s Early English Books Online (EEBO), NewsBank-Readex’s Archive of Americana, and Google Books, Gale-Cengage’s ECCO certainly offers “new research opportunities” as touted,4 and has been rightly celebrated as an “almost unimaginably powerful” research tool that we are only just beginning to learn how to use.5

Despite the many joys of “truffle-hunting”6 in this new text-base, many scholars will struggle to find what they are looking for. As I will explain, this is because ECCO’s 32 million pages of text are not a completely representative sample of eighteenth-century publishing; the original pages of eighteenth-century books and pamphlets are not accurately represented within the ECCO text-base; and the search methods open to ECCO users (string-matching) preclude many types of searches. These limitations are illustrated in an account of my research into the history of the

Patrick Spedding, lecturer in English and Associate Director of the Centre for the Book at Monash University, Melbourne, was an Australian Research Council Fellow from 2007–9, during which time he conducted research on the publication and distribution of erotica in Britain in the eighteenth century. His recent publications include “Fanny Hill, Lord Fanny and the Myth of Metonymy,” Studies in Philology 108.1 (Winter 2011): 108–32.

condom and its representation in eighteenth-century texts. Using ECCO, I failed to uncover more than a tiny fraction of the eighteenth-century texts discussing condoms, and most of my ECCO searches failed to produce meaningful results.

While the failure of ECCO may seem unremarkable in this instance—researchers dealing with erotic texts are accustomed to systemic limitations—they do bring into sharp focus the problems that almost all researchers must deal with when using ECCO. My own experience may also suggest ways in which the problems outlined below may, to a certain extent, be overcome—approaches which may not immediately suggest themselves to scholars researching more accessible material.

ECCO AND ITS LIMITS

Implemented in 2003, ECCO is, as stated, a searchable collection of eighteenth-century texts in digital facsimile. It is based on the 1982 Eighteenth Century microfilm series, and on the Eighteenth-Century Short-Title Catalogue (ESTC) begun in 1983. ECCO contains 189,569 printed items from the eighteenth century, which is over half of the 335,000 eighteenth-century items on ESTC. The publishers of ECCO have scanned each of the 16,625 films that make up the Eighteenth Century microfilm series to produce 26 million pages of text. It must be said that these numbers are a little rubbery, and subject to change, but they do give an idea of the scale of this project.

As well as offering a digital facsimile of each page, ECCO has run Optical Character Recognition (OCR) software over these scans to create a digital transcription of the text. Importantly, although these transcriptions are not available to the user, each character thus transcribed has been matched to the appropriate part of the photographic image of each page. This coded linkage allows users to search for a word (or a combination of words), and to call up and see a digital facsimile of the pages where each term appears, with the search words highlighted. Using the Boolean search function, one can, for instance, search for works not by Eliza Haywood, but which include the text “Eliza Haywood” within them. In this way, one can locate copies of Haywood’s works that were sold at auction and references to particular works by Haywood that appear in essays, advice books, and travel narratives.

Before I discuss the particular problems I faced in using ECCO, I will explain some of the general problems confronting its users in general. First, errors in OCR transcriptions of eighteenth-century texts are common, so much so that “the OCR text available for your searches sometimes speaks a language entirely of its own.” Eighteenth-century British printing was often very poor, so errors in transcription may be caused by broken, badly inked, or warped lines of type. There are also problems with the OCR software failing to deal with eccentricities of eighteenth-century type, which includes the long “s,” ligatures, swash capitals, etc. There are also errors that are the result of problems with the original microfilms.

The catalog of problems from which microfilmed texts suffer is lengthy and well rehearsed: omitted pages, poor framing and focus, excessive contrast, poorly lit texts, and texts so tightly bound that they cannot be opened fully when filmed; there are also stray fingerprints, “smudges and stains; scratches; dirt and dust,” and faded images. Although such problems seem to have been more common
in earlier microfilm collections, each makes its contribution to the large pool of OCR errors.

To give an example of the sort of errors that can occur, the word “chide” may be misread in at least seven different ways: “ohide” (where the “c” has been misread as “o”); “ehide” (“c” as “e”); “diide” (“ch” as “di”); “lide” (“h” as “l”); “chlee” (“d” as “cl”); “choid” (“e” as “o”); and “chide” (“e” as “c”). Far more common OCR errors are “beft” for “best” (the long “s” in eighteenth-century texts being almost indistinguishable from an “f”) and “bum” for “burn” (the weight of roman serif fonts being largely in the vertical rather than the horizontal strokes). ECCO “uses proprietary software created . . . to improve OCR accuracy, including the ‘correction’ of old English f/s ligatures and other spelling and character variants.”

Transcription errors may also be overcome to some extent by using the “fuzzy searching” option, which employs an algorithm to gather together common misreadings and mis-scannings of words, as well as variant spellings and forms. I will have more to say about this shortly.

As stated earlier, ECCO’s OCR transcription is not available to the user. The same is true of the OCR transcription generated for the JSTOR text-base of academic journals. In his discussion of JSTOR’s “intolerably corrupt” OCR text, Nicholson Baker suggests that the reason why the user is prevented from scrolling through this naked OCR output is that scholars “might, after a few days, be disturbed by the frequency and strangeness of its mistakes . . . and they might no longer be willing to put their trust in the scholarly integrity of the database.” Baker’s criticism of JSTOR, however, is based on an error rate (with editorial intervention) of just one typo in every two thousand characters. For an indication of how much higher the error rate is when OCR is used on eighteenth-century printing, we need only examine the “plain text” view on Google Books or the “Full Text” view on the Internet Archive, both of which provide naked OCR text.

Here, for example, is the opening sentence of Eliza Haywood’s *Female Spectator* (1744–46) as provided by Google Books and the Internet Archive, followed by the actual text:

T is very much, by the choice we make of subjests for our entertainment, that the refined tall?” diftiuguishes itself” from the vulgar and more grofs : reading it univerfly allowed to be one of the moft. improving, as well at agreeable amufemenits; but then to render it fo, one fhould, among the number of books which ar- perpetually iffluing from the prefs, endeavour to lingle out fuch as promife to be moft conducite to tho(e ends.  

IT is very much- by the choice we make of.” subjr&cs for our entertain- ment, that the refin- ed tuf: uifiguilhes itfelf from the vulgar and more’grofs. Reading is univerfly allowed” to be one of the molt im- proving as well as agree- able amufemenits; but. then to render it fo, one fhould, among the number of books which are perpetually iffluing from the prefs, endeavour to finglc out fuch as promife to be moll conducite to thofe ends.

It is very much, by the choice we make of subjects for our entertainment, that the refined taste distinguishes itself from the vulgar and more gross: reading is universally allowed to be one of the most improving, as well as agreeable amusements; but then to render it so, one should, among the
number of books which are perpetually issuing from the press, endeavour
to single out such as promise to be most conducive to those ends. 21

The two OCR-captured texts average over 150 typos per 2,000 characters, 22 a
high enough error rate to render parts of the text completely unintelligible. It is
not clear how typical this error rate is, and how much it declines with editorial
intervention, 23 but again the scale of the problem is clear. 24 Consequently, the claim
that OCR errors “may occasionally result in incorrect character capture, which
may affect some [ECCO] full-text search results,” seems wildly, even heroically,
optimistic. 25 It should also now be clear why the fuzzy search option on ECCO is
of limited usefulness. While it seems able to resolve “prexy” and “press” or “molt”
and “most,” it does not stand a chance against “fubjr&cs,” “t:ut:” or “mofr.” And
even “Low” level fuzzy searching tends to vastly increase false returns.

Part of the problem with the OCR-captured texts in text-bases such as
ECCO is that they are based on microfilm collections that were scanned at only
300 dots per inch. 26 As Baker explains, 27 600 dots per inch is now standard—this
is what JSTOR uses 28 —because the higher the definition in a digital image, the
easier it is to distinguish font features and the more accurate the OCR capture.
Far, far better than scanning a 35mm negative at higher resolution, however, is to
rephotograph the original using a high definition digital camera. As Anne Kenney
of JSTOR explains, “The closer you are to the original, the better the quality”; working
with originals not only “produces higher quality results” it is also “con-
siderably cheaper,” 29 reducing the time spent in scanning (and rescanning) existing
microfilm frames at higher resolution, manipulating the images, 30 and editing the
text captured. 31

There are a number of reasons other than cost for why publishers of
text-bases such as ECCO rely on microfilm series rather than undertaking fresh
photography. Contrary to what library administrators and technologists pre-
dicted in the 1980s and 1990s, microfilm to digital conversion is not “relatively
straightforward,” and the primary cost is not in “selecting the book, handling it,
and turning the pages.” 32 And while such groups as the Technology Assessment
Advisory Committee predicted that this would be a straightforward process, others,
like the Council on Library Resources, believed that “the wealth of film” they were
accumulating offered commercial opportunities that would be multiplied by digital
conversion. 33 Baker sees the comments made by representatives of these organiza-
tions as evidence of a “long-term plan to stock the sparkling digital pond with
film-hatchery trout.” 34 Whether or not there ever was such an “ill-conceived” plan,
the owners of microfilm libraries had every reason to believe that digital conversion
would indeed be relatively straightforward, and sought out partner-publishers for
projects such as ECCO as soon as the technology made them practicable. Whether
they would have been better advised to undertake fresh photography is now moot.

The second general problem with ECCO is that while ESTC may be based
on two thousand public and private libraries worldwide, the Eighteenth Century
microfilm series is based on books from only a tiny fraction of that number—al-
most certainly less than twenty libraries, and rarely anywhere other than the British
Library, the Bodleian, Harvard, and the Huntington. 35 Occasionally, copies from
these libraries are imperfect, misbound, or otherwise unsatisfactory, yet better cop-
ies at other libraries seem to be rarely, if ever, filmed. Also, the Eighteenth Century
microfilm series is not a random—and therefore randomly representative—selection of items from ESTC. Texts have been selected for filming on the basis of criteria that are rarely mentioned, but which include ease of access for filming (initially, items at the British Library) and the desire to avoid duplication of texts. That is, by the desire to get the biggest bang for Gale’s buck.

There may also be commercial considerations at work. Although I have not conducted a systematic search for items from the British Library’s “Private Case” (its collection of erotic material), it seems that little of that collection is on the Eighteenth Century microfilm series, and the material that has been included has only been quite recently added. Consequently, much of this archive is missing from ECCO. The reason for this may be that much Private Case material was, as late as 1989, not represented on ESTC, but it may also be because the entire Private Case was microfilmed by Adam Matthew Publications in 2003 and issued under the title Sex and Sexuality 1640–1940. That is, the eighteenth-century material in the Private Case may have been withheld from the Eighteenth Century microfilm series (and consequently ECCO) to ensure the profitability of Sex and Sexuality. Similar, and similarly hidden, criteria seem to affect other text-bases, such as EEBO and Google Books.

**USING ECCO TO LOCATE CONDOMS**

It is now time to see how these general considerations have an impact on the “cultural tillage” undertaken on ECCO by a scholar examining the history of the condom and its representation.

Gabriel Fallopius invented linen sheaths in 1564, and condoms survive from ca. 1647, but the first recorded use of the word “condom” in English is not until 1705. In 1708 a poem was published with the subtitle “A Word or Two in Praise of Condoms”; by the 1730s numerous poems had been written in praise of condoms; and by the 1750s they had also appeared in a number of artworks. Thereafter, they feature in lengthy prose satires, in the private journals of William Byrd and James Boswell, and in the public spats between rival condom manufacturers. Condoms also feature in medical literature, first appearing in 1713 in The Symptoms, Nature, Cause, and Cure of a Gonorrhoea, by the appropriately named William Cockburn.

I became interested in the subject of condoms in the early eighteenth century when I was selecting texts for the two sets of Eighteenth-Century British Erotica that Alexander Pettit and I edited for Pickering and Chatto in 2002 and 2004. I wanted the ten volumes of these collections to contain the most outrageous, the rarest, and the most interesting erotica of the eighteenth century. I perused a number of themes in the texts I had selected, some of which are more obvious than others; there is an entire volume of gay and lesbian material, and another devoted to geographical and botanical erotica. I also managed to include among the one hundred items in that series almost every early text that discusses condoms.

Reading the texts I selected for Eighteenth-Century British Erotica, one discovers that eighteenth-century condoms were made from fish, sheep, or pig gut. They are described by Thomas Stretzer as “very commodious . . . [being] made of an extraordinary fine thin Substance, and contrived so as to be all of one Piece,
and without a Seam, only about the Bottom it is generally bound round with a scarlet Ribbon for Ornament.”

Brothels apparently had “Setts of these Machines by them, which they give to their Customers for Use; and these having been often used by Persons sorely infected, the Venom is never carefully wash’d off, but sticks close to the Inside of them.”

Given the importance of condoms as a form of contraception, and the role they play today in preventing the spread of disease, it is surprising that more has not been written about them during that period. It doesn’t take long to read every article and book on the subject. And doing so doesn’t leave a very clear impression of how common condoms were, how expensive or effective they were, or even what they looked like. Having gathered together a number of eighteenth-century references to condoms from the secondary literature, I wanted to find more. ECCO seemed to offer the perfect method for finding every remaining reference to condoms in the eighteenth century. But anyone who searches ECCO for texts that mention condoms by looking for citations for the word “condom” will immediately encounter two problems. The first is: How do you spell “condom”?

In the 1705 citation I mentioned above, the spelling is “quondam”; in 1706 it is “condom”; in 1708 and 1713, “condon”; in 1717 and 1737, “condum”; and in 1748 and 1753, “cundum.” This last spelling seems to have become the standard for the rest of the eighteenth century. In 1718, 1721, and 1724 the spelling remains unclear because the word was printed with dashes, as “c—m.” In 1716, 1729, 1741, and 1744 condoms, however spelled, are referred to as “The New Machine” or “machines”; in 1723 White Kennett’s “Condom, A Poem” was retitled “Armour: A Poem”; in 1726 the word “preservative” is used; and in the 1760s Boswell refers to “sheaths” or “armour.” In 1740 Stretzer refers to condoms circuitously as the “Cloathing worn in Merryland”; other writers describe them as “Lamb’s bladders” (1748), a “scabbard” (1763), or “commodities” (1773).

The dashing of “condom,” and the nine alternative words used for the same object, are testament to the discomfort various writers (or printers) felt at using the word. Writers and publishers in the eighteenth century used a number of techniques to avoid prosecution for obscenity. Here we see two of them in action: the use of metaphor and the dashing out (or ellipsis) of words that might cause offense. The clearest evidence that some type of discomfort is on display here comes from the change of title to Kennett’s poem. Stretzer informs us that “the Poem had its title [at first] from the subject it celebrates; but even Mr Curril thought this much too Gross, and in a second Edition, thought fit to change it for the more modest Title of Armour.”

With nine different words—and five spellings of just one of these words—to choose from, the would-be user of ECCO has a considerable problem when facing the very first search screen: What does one type?

If we put this question aside for one moment and conduct a Basic Search (full-text) for “condom” we get 536 “hits” (individual texts on ECCO that have been identified as having one or more pages containing the word “condom”). Looking at these results, we soon discover that there are literally hundreds of false or “junk” hits. The reason for this is that “Condom” is a city in southwestern France in the department of Gers, and since the city was a bishopric from 1317 to
1792, it is also the name of twenty-eight bishops, many of whom either wrote or were written about.\textsuperscript{51} It is not easy to remove these false-hits from the search for "condom." But after a certain amount of experimentation, I managed to avoid most of the geographical and biographical false-hits by using the Boolean options on the Advanced Search page to exclude texts containing "geography," "cathedral," "bishop," and "Popery." Many of the remaining 118 hits are texts in Latin or French, which can be easily removed by narrowing the search to books in English on the Advanced Search page. This further reduces the number of hits to thirty-one. Examining each of these texts in turn, we discover no genuine example of "condom." Instead, we find residual examples of geographical and biographical false-hits, "Condom" used as the surname for fictional characters, OCR errors (for "condemm"),\textsuperscript{52} and errors in identifying words broken by line-endings.\textsuperscript{53}

If we search for "cundum," the spelling favored in the eighteenth century, we obtain even more false-hits: 1,151 of them. In this case many of the false-hits are the result of ECCO identifying only part of a hyphenated Latin word—"se-/cundum"—as a complete word. Narrowing the search to books in English reduces the number of hits to 542, but this approach is not as helpful as one might expect because Latin was very frequently employed in books in English, in notes, titles, and text. Latinate words are also quite common in English. If the Boolean function is used to exclude very common Latin words (after some experimentation, "est" and "quod" were found to be the best candidates),\textsuperscript{54} the resulting hits can be examined individually. Among the thirty-four remaining texts there is only one genuine find hidden among residual examples of English texts with Latin titles, notes, and text, and this text is one with which I was already very familiar. Indeed, it is one of the most frequently reprinted condom-texts of the eighteenth century: Kennett's "Condom, a Poem" (1723).\textsuperscript{55}

A similar process of elimination may be used with the remaining spellings for "condom," each equally unproductive: "condum" (78 hits) uncovers many works in Latin, which, once excluded (60 hits), includes numerous false-hits for "conduct"; "condon" (342 hits), if limited to English works (296 hits), includes numerous false-hits for "conduct" and the name "Condon"; "quondam" (8,622 hits!) can be reduced slightly if limited to English works (6,701 hits), and further reduced by excluding common Latin words (2,110 hits). But since "quondam" was frequently used in English texts to mean "former" (as in "my quondam friend"), there is no way to reduce the remaining hits to a manageable number.\textsuperscript{56}

Searching for passages where the word "condom" itself has been replaced by periphrasis is equally unproductive. Words such as "machine," "armour," "scabbard," "clothing," "commodities," appear in such a wide variety of contexts that it is pointless to look for them. (I tried, but after many hours had to admit defeat.) Some of the remaining words, such as "preservative," "sheath," and "bladder," have proven no easier to find than "condom." This is, after all, the function of periphrasis. Printers substituted common and innocuous words for taboo words as a form of camouflage: they didn't want their publications to stand out. They wanted these passages, in particular, to be invisible to guardians of public morality. It is not clear how well they succeeded in this aim,\textsuperscript{57} but they certainly succeed in making their texts invisible to modern users of ECCO and other text-bases.
Even if it were possible, however, to construct a perfectly balanced Boolean search, with a series of limitations excluding all of the texts referring to “Condom” (the place and the person), or all of the texts including a hyphenated “secundum,” or references to “quondam friends,” it is likely that by doing so we would exclude many texts that contain discussions of condoms. After all, it is possible that a Bishop of Condom railed against condoms, or that the bishop was invoked in a discussion of them, or that the texts I was hoping to identify by searching ECCO contain snippets of Latin or references to the southwest of France.

**ALTERNATIVE METHODS OF FINDING TEXTS**

Having been stymied in my search for new material that mentions condoms—using any of the many alternate spellings or circumlocutions—by the impossibility of disambiguating58 genuine and false hits on ECCO, I tried searching for texts that mention venereal diseases by name (e.g., syphilis and gonorrhoea), or the symptoms of venereal diseases (e.g., shankers, chordee, or buboes),59 or for references to the writers who have discussed venereal diseases and condoms (e.g., Fallopeus, Astruc, and Cockburn).

This approach is certainly more successful, but the results are for the most part still disappointing, since almost all the writers who mention venereal diseases and medical authorities are medical writers themselves. In addition, these medical works are already very well known, because examining medical authorities for discussions of contraceptives is the sort of research one can conduct fairly easily without ECCO in a well-supplied medical library such as the Wellcome Institute’s. And since these searches already have been conducted, ECCO offers the researcher very little that is new, by which I mean very little material that is not already mentioned by Norman E. Himes, Peter Fryer, Angus McLaren, and others.

This is not to say that ECCO is of no use to a scholar, because the small numbers of new items that these searches do uncover are very interesting. I will give only one example of an item found conducting one of these context-searches in order to balance, somewhat, the unremittingly negative account thus far.50 This four-paragraph passage clearly demonstrates why direct searches are bound to fail on ECCO and why searching for terms that occur in peripheral text is more likely to be successful. The passage that was located is from the *Genuine Memoirs of the Late Celebrated Jane D******s* (1761). Jane Douglas (a.k.a. “Mother Douglas” or “Empress of the Bawds”) was a very well-known figure during her life, appearing in a number of books and in a painting by William Hogarth. She even has her own entry on *Wikipedia*. The *Genuine Memoirs* was published shortly after Douglas’s death in 1761. The first paragraph introduces the subject of condoms with a humorous anecdote:

A new waiter soon came to supply his [the old waiter’s] place, but, not being long come out of the country, he was not perfectly acquainted with all the customs of such houses; so he forgot to bring with him, [that] which is looked upon as very essential, both in the bordelles of Paris, and in the bawdy-houses of London. The reader will readily guess that I mean certain machines, commonly called ———, which to the great honour of our countrymen, who have so eminently distinguished themselves in the
arts and sciences, were invented by a native of Great Britain. A gentleman one day waiting for this useful implement, the waiter ran to the S—r and borrowed one. Whilst he was below in the kitchen, waiting for some warm water, the gentleman growing impatient, called downstairs, which old Jenny hearing, was provoked at the waiters delay; and called out, in a voice that might be heard all over the house, G—d confound you, for a lazy son of a b—h, why do you not bring up the ——; do you think the gentleman’s —— can stand for ever!\textsuperscript{51}

Note that condoms are referred to as “certain machines” or “useful implement,” but are just as frequently dashed altogether (along with the words “yard” and “prick”). And while the reader may “readily guess” the author’s meaning, ECCO not only can’t guess, it offers no way of searching for such meaning-laden dashes.

The second anecdote, which followings the above, is even more instructive. It is intended as a warning:

[A gentleman] entered farther into conversation with mademoiselle; and not been satisfied with conversation merely, he all on a sudden bethought himself of a ———, which was immensely [sic, for “immediately”] brought. The ——— being brought, Mademoiselle, who had been used to such implements at Paris, where they are greatly in vogue, dipt it in warm water, and having put it on her self, we leave the reader to guess what followed. The consequences of this interview however were such as the gentleman never once expected.

He soon afterwards found himself p—d in the most shocking manner imaginable; and having unfortunately fallen into the hands of an unskilful surgeon, he lost the part which he thought so well secured by the instrument above-mention’d. It was cut off inch by inch, and his groin being covered over with buboes, he one day, in the height of misery, took a knife and cut and gash’d himself in a most terrible manner. In a short time after he died a sad example of the fatality of that machine, called a ———; and tis to be hoped our readers will take warning by his fate, and not place too much confidence in such weak armour. Certain it is, that though this machine sometimes preserves from a slight infection, it is but a week [sic, for “weak”] defence against a virulent P—x. This the reader may be fully satisfied of, if he consults Dr. Astruck’s learned treatise upon the venereal disease.\textsuperscript{52}

In this passage condoms are referred to as an “implement” (twice), “machine” (twice), or “armour”, but also—once again—the word is dashed out altogether (three times). Both passages contain the combination of circumlocutions and dashing that makes them invisible to ECCO. It is only because this second anecdote contains the words “buboes,” “Dr. Astruck,” and “venereal disease” that it could be located by ECCO. Neither the medical terms nor the medical authorities are integral to the anecdote and could be easily omitted. If these terms had not been mentioned (or dashed, as “poxed” has been) it is quite likely that I would not have found this text at all.\textsuperscript{53}

CONCLUSION

While any researcher working on ECCO, EEBO, Google Print, and other text-bases will encounter some of the problems I outline above, those working
specifically on sexual material—material containing words that were only rarely or reluctantly printed, words that were dashed, omitted, or replaced with innocuous and commonplace words—will inevitably encounter most or all of the problems I have outlined. For this reason, most broad-scale searches for erotic material will fail; or, at least, so few items will be found, and so many works will have to be excluded from the searches conducted, that no researcher using these text-bases can be sure of having conducted a full and effective survey.

Even scholars working on commonplace eighteenth-century texts will encounter difficulties based on the selection of texts represented on ECCO, the multistep conversion of those texts from hard copy to digital images and then to searchable text, and the difficulty of string-matching within an “intolerably corrupt” text-base. Although, as I have shown, there are ways to circumvent some of the difficulties of searching within ECCO, the most important limitations for the general user are structural and can only be overcome by its publisher.
APPENDIX: A CHRONOLOGY OF EIGHTEENTH-CENTURY REFERENCES TO CONDOMS

[1705] John Campbell, 2nd Duke of Argyll and 1st Duke of Greenwich, is reported, when entering the Scottish Parliament, as having “brought along with him a certaine instrument called a Quondam, qth occasioned ye debauching of a great number of ladies of qualitie, and oy [other] young gentlewomen.” Campbell had been in London during the winter of 1704–5 and probably obtained his condoms there.

1706 John Hamilton, Lord Belhaven, A Scots Answer to a British Vision (London, 1706), ll. 42–75: “The Sirenge and Condom / Come both in Request / While virtuous Quondam is treated in Jest.”

1708 Almonds for Parrots: Or, A Soft Answer to a Scurrilous Satyr, Call’d St. James’s Park. With a Word or Two in Praise of Condoms (London, 1708), 8: “O matchless Condon! thou’st secur’d thy Fame / To last as long as Condon is a Name. / Such mighty Things are by thy Influence done, / Thou ha’st the foremost of this Age out-run.”

1713 William Cockburn, The Symptoms, Nature, Cause, and Cure of a Gonorrhoea (London, 1713), 181: “in spite of both their Inventions, the late Condon has more universally prevail’d, tho’ with no small Damage to the Satisfaction.”


1717 Daniel Turner, Syphilis. A Practical Dissertation (London, 1717), 73–74: “The condom being the best, if not the only Preservative our Libertines have found out at present.”

1718 William Byrd [of Virginia], The London Diary 1717-1721 and Other Writings, ed. Louis B. Wright and Marion Tinling (New York: Oxford Univ. Press, 1958), 136: “and from thence went with Sir Wilfred Lawson to the Three Tuns where we supped and I ate some fricasseed chicken. There were two whores, with one of which two of the company lay in condoms, but I did nothing but went home about two.”

1721 Richard Morley, The Life of the Late Celebrated Mrs. Elizabeth Wisbourn (London, [1721]), 42: “Item, to his G— the D— of — a Gross of right Dutch C—ms, newly imported from Holland by Mr. M—ez the Jew.”

1723 White Kennett’s Condom, a Poem (London, 1723) and “Armour: A Poem” (London, 1723) do not survive. The poem was reprinted in Cupid’s Metamorphoses or, Love in All Shapes. Being the Second and Last Volume of the Poetical Works of Mr. William Pattison (London, 1728), 306–7: “Hear, and attend: In Armour’s mighty Praise / I sing, for sure ’tis worthy of a
“Happy the Man, who in his Pocket keeps, / Whether with Green or Scarlet Ribband bound, / A well made C——— He, nor dreads the Ills / Of Shankers or Cordee, or Buboes Dire!”

Daniel Turner, _Syphilis. A Practical Dissertation_, 2nd ed. (London, 1724), 83–84: “Dr. Sharp, as well as the Wolverhampton Surgeon, with two or three others behind the Curtain, stand Candidates with Dr. C———n, for the Glory of the Invention.”

Lord Hervey sent Henry Fox “a dozen preservatives from Claps and impediments to procreation, which at the rate of two doses a week I have computed will be physic enough for You whilst you stay in the Country.”

Joseph Cam, _A Practical Treatise: Or, Second Thoughts on the Consequences of the Venereal Disease_, 3rd ed. (London, 1729), 53: “it is not unusual for these vile Houses to have Setts of these Machines by them, which they give to their Customers for Use; and these having been often used by Persons sorely infected, the Venom is never carefully wash’d off, but sticks close to the Inside of them, and upon Friction it is warmed and put in Motion, and gives the unwary Combatant the very Disease he is endeavouring to avoid.”

William Hogarth, “A Scene in a Garret”: a chalk sketch of a 1730 painting that was to evolve into the third plate of _A Harlot’s Progress_. On a table in this sketch are a condom, quack medicines, and a syringe.

Jean Astruc, _A Treatise of the Venereal Disease_, 2 vols. (London, 1737), 1: 299: “I am inform’d that of late years the Debauchees of England, that set no bounds to their meretricious amours, make use of a little bag, made of a thin bladder without a seam, in the shape of a sheath, which they call a condom, with this they arm the penis, that they may be preserv’d safe from the dangers of an engagement whose consequences are always doubtful.”

“Horace’s Integer Vitæ &c . . . by Mr Rowe,” in _The Potent Ally_ (London, 1741): “The Man, Dear Friend, who wears a C—m, / May scour the Hundreds round at random.” If Nicholas Rowe wrote this poem, it must pre-date his death on 6 December 1718.

Thomas Stretser, _A New Description of Merryland_ (London, 1741), ch. 3: “But this dangerous Heat of the Climate, with all its dreadful Concomitants, is not so very terrible, but it may be guarded against by taking proper Precautions, and People might venture into it without much Hazard, even at the worst Seasons, and in the most unhealthy Provinces; they need no more to avoid the Danger, but be careful always to wear the proper Cloathing, of which they have a Sort that is very commodious, and peculiarly adapted to this Country; it is made of an extraordinary fine thin Substance, and contrived so as to be all of one Piece, and without a Seam, only about the Bottom it is generally bound round with a scarlet Ribbon for Ornament.
This Cloathing has been found so useful, that a modern Bard thought fit to write a Poem in its Commendation, and has most elegantly celebrated its praises in Blank Verse."

1741 Thomas Stretser, *Merryland Displayed* (London, 1741), 31–32: "The Poem he refers to ... is a little piece wrote several Years ago in Praise of the Machine, contrived by a certain Gentleman. As the Engine took its Name from the Inventor, so the Poem had its title (at first) from the subject it celebrates; but even Mr Curll thought this much too Gross, and in a second Edition, thought fit to change it for the more modest Title of Armour."


1748 John Profily, *An Easy and Exact Method of Curing the Venereal Disease* (London, 1748), 79: "some have made such Difficulty of this Doctrine of Preservatives, particularly Dr. Astruc, that they even disallow the Safety of a Cundum, or Lamb's Bladder."

1749 Charles Mosley, *The Tar's Triumph, or Bawdy-House Battery*, a satirical engraving depicting a drawer full of condoms being thrown out of the window of a brothel.

1753 Earl of Haddington, *Forty Select Poems* ([London?], 1753), 26: "When hoping to find out a plot, / Get heaps of cundums to their lot."

1762 James Boswell, *Boswell's London Journal 1762–1763*, 124–25 [25 November 1762]: "I picked up a girl in the Strand; went into a court with intention to enjoy her in armour. But she had none"; ibid., 298 [31 March 1763]: "At night I strolled into the Park and took the first whore I met, whom I without many words copulated with free from danger, being safely sheathed."

1763 Georges Arnaud de Ronsil, *A Plain and Easy Method of Curing the Disorders of the Bladder and Urethra*, 2nd ed. (London, 1769), 15: "Cundum: is a kind of sheath or scabbard made of a very thin skin found in certain fish."

1773 "Account of the Panthecon Masquerade on Wednesday Evening," *Middlesex Journal Or, Universal Evening-Post*, 13 May 1773, 2c: "Mother Phillips, with a parcel of advertisements, denoting her modest commodities, and the place of their sale."

NOTES


7. To take a single example, very few of the primary sources for information on condom use in the eighteenth century contain any entry in their indexes that would enable a researcher to locate such information. The Yale Editions of the Private Papers of James Boswell are, perhaps, the most prominent example; no discussion of condoms is complete without a reference to events covered by Boswell’s London Journal, but the index to the London Journal contains no entry for condoms, contraceptives, prophylaxis, prostitution, venereal disease, etc. (James Boswell, Boswell’s London Journal 1762–1763, ed. Frederick A. Pottle [London: Heinemann, 1951]).


10. As of 26 April 2007 the number of microfilm reels of The Eighteenth Century that had been released was 16,625; the total number of titles on these reels is 189,569 (information provided by Katri Russick, Thomson Gale, Australia and New Zealand, in a private email). This number increased to at least 17,828 microfilm reels—the number received and catalogued by Monash University—by 1 November 2010.

11. For an example of how valuable such information can be, see my “Measuring the Success of Haywood’s Female Spectator (1744–46),” in Fair Philosopher: Eliza Haywood and The Female Spectator, ed. Lynn Marie Do Newman (Lewisburg, PA: Bucknell Univ. Press, 2006), 212–42.


18. JSTOR claims that its “files are on average 99.5% accurate.” See “Digitization Standards”; Baker, Double Fold, 71.


21. This transcript follows accidents of the 1755 edition in punctuation, capitalization, etc.

22. The first passage has 33 errors in a passage 432 characters in length; the second has 35 in 430, allowing for differences in punctuation of the originals. The total of 68 errors among 862 characters equates to 157 typos per 2,000 characters.

23. The ECCO help file explains, “For every digitized page of data, eight specific items are sampled for accuracy and correctness. Each page is visually scanned for glaring errors or omissions. Every 20th page is read in its entirety.” See “Data Digitization.”

24. According to James May, the search facility on Gale’s Burney Newspapers Collection (a.k.a. 17th and 18th Century Burney Collection Newspapers) “has repeatedly been shown to miss at least half of the material” represented in the text-base. See May, “Accessing the Inclusiveness of Searches in the Online Burney Newspapers Collection,” The Eighteenth-Century Intelligencer, n.s., 23, no. 2 (2009), 33–34.


26. Ibid.


28. “JSTOR by the Numbers.”

29. Qtd. in Baker, Double Fold, 247. The garbled texts on Google Books and the Internet Archive quoted above are derived from original editions, suggesting that fresh photography will not overcome all difficulties.

30. James May gives many examples of page images on ECCO that are distorted relative to their original proportions, a distortion which is at least partly the result of the “digital clean-up” ECCO undertakes “as we scan the microfilm.” See May, “Accessing Inclusiveness,” 27 (quoting Scott Dawson of Gale).


32. Ibid., 245, citing Stuart Lynn’s 1992 claim of “only a small increment of the original cost”; and 241, citing Michael Lesk’s 1990 claim of “relatively straightforward.”

33. Ibid., 181, citing Warren Haas, president of the Council on Library Resources.

34. Ibid., 183.

35. ECCO 2 seems to have more contributing institutions. These are, “listed in order of contribution, ranging from the British Library at 25% to UCLA less than 1%: British Library; Oxford University (Bodleian); National Library of Scotland; Cambridge University; Library of Congress; Boston Public Library; National Library of Ireland; University of Texas; University of London; Trinity College (Dublin); Kansas University; Trinity College (Hartford, CT); National Library of Wales; University of California, Los Angeles.” See “Eighteenth Century Collections Online (ECCO) Frequently Asked Questions,” accessed 22 May 2009, http://www.gale.cengage.co.uk/controls/library.aspx?fileID=923.

36. May observes that first and early editions are favored and that later reprints are “understandably de-emphasized.” As a consequence, fewer Irish, Scottish, and American editions are represented on ECCO, which considerably reduces its value for the study of the book trade outside of London. See James May, “Some Problems in ECCO (and ESTC),” The Eighteenth-Century Intelligencer, n.s., 23, no. 1 (2009): 28.

37. The Checklist of Eighteenth-Century Erotica I am presently compiling records reproductions in facsimile and on microfilm. No Private Case material seems to have been included in the first eight
thousand reels of the Eighteenth Century microfilm series, and a disproportionately small amount seems to have been included since.

38. P. J. Atkins, “The Covent Garden Ladies,” Factotum 30 (December 1989): 10: “The long arm of ESTC does not yet seem to have reached every corner of the British Library. The notorious ‘Private Case’ has several ‘sensitive’ eighteenth century items which do not appear to have been recorded.”

39. Google Books contains only a single copy of Memoirs of a Woman of Pleasure (1748–49), under the title Fanny Hill, but ten of Samuel Richardson’s Pamela (1741), two of which are translations into French and Spanish. The Fanny Hill edition is from 2007; the editions of Pamela range from 1741 to 1914. The absence of Cleland’s novel is probably the result of the rarity of out-of-copyright editions, but the eleventh edition of Pamela is not significantly more common than the first edition of Memoirs of a Woman of Pleasure (six versus five copies on ESTC), and the 1741 Catalan translation of Pamela is probably significantly rarer than both of them. Consequently, it is not really clear why no pre-2007 copies of such a frequently reprinted erotic text are on Google Books; but the precise reason is less important than the absence itself, along with the fact that the criteria determining exclusion are not immediately apparent.

40. Baker, Double Fold, 244.

41. For more information on the material referred to in this paragraph, see the appendix.


43. The pun is only visual; Cockburn is pronounced “co-burn.”


45. That is, erotic texts based on extended metaphors, such as woman-as-landscape or penis-as-plant. For more information on this subject, see Darby Lewes, Nudes From Nowhere: Utopian Sexual Landscapes (Lanham, MA: Rowman & Littlefield, 2000).


49. For more information on the material referred to in this paragraph, see the appendix.

50. Thomas Stretser, Merryland Displayed: Or, Plagiarism, Ignorance, and Impudence, Detected. Being Observations upon a Pamphlet Intituled A New Description of Merryland (Bath: Printed for the Author, and sold by J. Leake, 1741), 32.


52. Only one of the seven OCR misreadings of “chide” mentioned above (“chicle”) is a genuine word, suggesting perhaps that ECCO is unlikely to misread one genuine word for another. As this and the following examples indicate, this sort of OCR misidentification is, in fact, relatively common.
In one example, on a two-column page, the “con-” that appears at the end of a line in column B had been joined to the “denn” that appears at the start of the following line of column A to create a “con/denn”-for-“condem” OCR error.

The problem is selecting Latin words that will not also remove most, or many, of the English works.


John Cleland produced a censored version of his Memoirs of a Woman of Pleasure—a text that contained no “rude words” to begin with—under the title Memoirs of Fanny Hill. This text was, nevertheless, immediately prosecuted.


A shanker (now spelled “chancre”) is a venerable wart; a chordee (or “cordee”) is an inflammation of the urethra; and a buboe is a swollen lymph node in the groin.

I hope that the remaining examples—and much else—will appear in a book-length study under the title Skins: The Condom before Goodeyar and Hancock.


Ibid., 112–14.

There are two Advanced Search options on ECCO that facilitate context searching. These are the two proximity operators: “W” (for “within”) and “N” (“near”). In each case, the proximity operator is used to designate the proximity of two words. For example, “cundum W3 machine” and “cundum N3 machine” search for instances where the second term either follows within three words of the first, or appears within three words before or after it. For all of the reasons set out above—the poor quality of the OCR text, varied spelling of “condom,” difficulty of disambiguating homonyms, frequency with which key words are avoided, dashed, or haphazardly employed—the results of such searches are also disappointing.

“Looking for Dr. Condom,” 1–2, 59 n. 7, citing Letters From and To Charles Kirkpatrick Sharpe, Esq., ed. Alexander Allardyce (London: William Blackwood and Sons, 1888), 2: 472. This passage is taken from a transcript of a “memoranda” made by James Maidment that was sent to Sharpe on 2 May 1834 along with page proofs. The proofs are of The Argyle Papers, ed. James Maidment (Edinburgh: Thomas G. Stevenson, 1834), 6, in which the memoranda is titled “Notices Relative to the Argyle Family, from The MS. Genealogical Collections of Robert Myln.” The date of this memorandum is unclear and the original of this document has not been cited in over 170 years. However, Robert Myln’s papers—held at the National Library of Scotland and the Edinburgh University Library—include a large collection of political satires and lampoons of the late seventeenth and early eighteenth centuries, transcribed and annotated by Myln. See Chernaik Warren, “Robert Myln (1643–1747),” in Oxford Dictionary of National Biography (2004), accessed 1 March 2009, http://www.oxforddnb.com/view/article/19700.


This snippet of news is reprinted in The London Evening-Post, 13 May 1773, 1c, and—according to Frederick George Stephens—The Town and Country Magazine 5 (1773), 265. See Stephens, Catalogue of Political and Personal Satires Preserved in the Department of Prints and Drawings in the British Museum, vol. 5,1771–1783 (London: Printed by Order of the Trustee, 1935), 139 n. 2 (no. 5171).