for I did but seal once to a thing and I was never mine own man since

2 Henry VI 4.2.76

I.

In Shakespeare’s 2 Henry VI, Jack Cade responds affirmatively to his fellow rebel’s suggestion that they ‘kill all the lawyers’ by offering a metamorphic emblem of materiality and historicity:

Is not this a lamentable thing that the skin of an innocent lamb should be made parchment, that parchment, being scribbled o’er, should undo a man? Some say the bee stings, but I say, ’tis the bee’s wax, for I did but seal once to a thing and I was never mine own man since (4.2.72-6).

Creatures and the things they make or become are bound in a process of continual displacement. Jack himself is displaced by a past act of ‘seal[ing] once to a thing’. The past act, moreover, is unfinished, for it is one in which the making of a mark on some thing obligates the actor to a stipulated future. The ‘thing’ and the man thus cross into each other in the unfolding of time.¹ In a recent essay, Julian Yates argues that the ‘skin

¹ I quote from the Arden edition, King Henry VI, Part 2, ed. by Ronald Knowles (Surrey: Thomas Nelson and Sons, 1999). The crossing is explicit in the textual history of the speech: parchment acquires motive force when the quarto’s line, ‘Why ist not a miserable thing that of the skin of an innocent lamb should parchment be made,& then with a little blotting over with ink, a man should undo himselfe’ becomes the
of an innocent lamb’ Cade invokes at the beginning of his speech is a moment of figural excess that opens the play toward consideration of ‘an understanding of historical process that regards interventions in the writing machine or the figural life of “things” as the most potentially important or durable form of political action’. If the innocent-lamb-become-parchment-become-the-social-relations-of-property-and-privation traces one pathway in the writing machine, the indictment of Lord Say later in the Cade sequence traces another: ‘thou has caused printing to be used, and, contrary to the king, his crown and his dignity, thou has built a paper mill (4.7.28-30). The reference to the paper mill is an obvious anachronism in the representational frame of the play, especially pointed in relation to the play’s writing and first performances, conventionally dated between 1590 and 1592. In 1588/89 a man named John Spilman, a goldsmith and the Queen’s jeweller, established – by royal patent – what paper historians regard as the first viable white paper mill in England. Paper is, on the one hand, a ghostly figure in the play – call it the future of parchment. On the other hand, paper is actually present onstage as a prop in one or more pieces of stage business and the play’s first audiences would have understood the Cade sequence’s extended engagement with questions of literacy as much in relation to paper as to parchment.

I am interested here in the materiality of paper and how it is registered in a small archive of texts and documents from the end of the sixteenth and beginning of the seventeenth centuries in England, an archive which includes the Cade sequence and its notice of paper manufacture. By the late sixteenth century paper was unremarkable in western Europe, thoroughly integrated into the writing practices of administration, education and communication, widely circulated in sheets of printed materials – decorative papers and prints as well as broadsides, pamphlets, small and large books. It was well established as an industry – regionally dispersed in the manufacture of coarse or brown paper and concentrated in that of white paper. Parchment continued in use, of folio’s ‘Is this not a lamentable thing that the skin of an innocent lamb should be made parchment. That parchment, being scribbled over, should undo a man’.

3 John Tate owned a paper mill at the end of the fifteenth century; it was visited by Henry VII and its paper was acknowledged in a colophon printed by Wynkyn de Worde in 1495. The mill ceased operation before Tate’s death in 1507. Thomas Gresham built a mill on his estate at Osterly in 1575; I discuss it below. Spilman’s mill operated for some fifty years, though not always producing white paper.
course, perhaps more so in England than elsewhere, given the abundance and importance of sheep to the economy. The small archive that made and makes paper visible in England is also unremarkable in some ways, for its various contents and comments could be matched by similar material, locally varied, across western Europe from the fourteenth to the eighteenth centuries. But because England came late to significant paper manufacture, the turn of the century archive affords an unusually compact and multidimensional perspective on a mature industry and the social understanding of paper. In England in the 1580s paper became visible because most paper, and all the white paper—that is, paper used for writing and printing—was imported, primarily from France or the Low Countries. The archive opens with proposals to establish domestic white paper manufacture put forward by members of the book trades; their overview is emphatically material, concerned with the means of production and the distribution of finished product. The absence of a significant domestic paper manufacture afforded, perhaps paradoxically, precisely the conditions under which it was possible to imagine the social relations of paper.

From the perspective of the early modern (print) book trade paper was important because it was the largest single expense in a given edition, a capital outlay on which the return might be deferred for years. For a large book project, the cost of paper might be more than the investment in press and type required to set up a shop. So paper was one of the factors giving rise to a separation between publishing and printing interests in the trade. The other significant factor was intellectual property rights. By the 1580s much of the steady work of the trade was locked up in patents, or monopolies, on the right to print certain classes of books granted to well-placed Stationers by the Crown. There was open conflict in the trade and a royal commission of investigation was appointed to sort out the issues. The first documents about paper appear in the context of turmoil in the trade. In 1585, Richard Tottel, a founding member of the Stationers Company and the holder of the patent on law books, petitioned the Privy Council for...
support in an effort to establish a paper mill. Because the white paper for scribal and print production was all imported, Tottel frames his request as a matter of national interest. Explaining why paper production hasn’t been successful in England, Tottel blames the French who buy up all the English rags and flood the market with paper sold at a loss. Versions of Tottel’s balance of trade argument become a consistent thread in petitions for protection of a nascent paper industry through the seventeenth century. It’s easy to see why. The export of rags is a doubled drain on the balance of trade, for England first imports French linen and then French paper, paying twice for value added by French manufacture.

There is no evidence that Tottel’s petition was granted. The next year, another petition complicates the case Tottel had made. It argues against a grant of monopoly to any private individual, presenting instead the case for a corporation of papermakers. The costs of establishing a paper mill and acquiring the skilled (foreign) knowledge to run it will exhaust the resources of a private man, the argument runs, before manufacture can be successfully established. The problem, however, arises not from limited venture capital, but from the concurrent activity of merchants, both English and foreign, who make their living from importing paper and flood the market with paper sold at a loss so as not to lose control of the trade. The petition is quite emphatic on this point: ‘by the malice of the merchant, as well englishe and strangers, all good attemptes are overthrown’. The ‘malice of the merchants’ is that they ‘[envy] the device and [prefer] their private gayne’ to the good that would come to England from domestic manufacture. Notice that ‘private’ interests enter the argument in two ways: in the main argument, they need to be protected from wasted expenditure by the shared risk of a corporation, and, later, almost as an afterthought, the private interests of merchants are the cause of the predicted failure of private manufacture. Monopoly is not the issue, for the petition itself seeks various forms of monopoly. What motivates the petition is the tension or conflict between mercantile or finance capital and productive capital, and the argument for a corporate monopoly positions itself on the side of productive capital. And it does so by attending carefully to the national interest already articulated in the balance of trade argument. Asking for rulings that would prohibit the export of rags and require that all English books be printed on English paper, the petition claims that

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domestic paper production would employ seven to eight thousand ‘natural subjects of this realm’ and that, were a domestic linen trade also to be established, thousands would be set to work and ‘in time would ware out all vagabouns and Rogges’.

There is no evidence that this second petition was granted. In 1588/89, however, the Queen’s Jeweller, John Spilman, received a patent granting him exclusive control over the making of white paper in England for 10 years.\(^{10}\) It included the right to license the manufacture of any kind of paper, including pre-existing enterprises making brown paper, and provisions giving him control over the rag trade, including the exclusive right to collect rags and a prohibition on their export. Though evidence survives of other papermakers running afoul of the licensing provisions of Spilman’s patent, issues involved in the rag trade proved to be the most contentious.\(^{11}\) Even in a case where a mill had been constructed without a license, Spilman’s complaint emphasizes the encroachment on rag collection and particularly a threat to the supply of the ‘finest stuff’ required for white, as opposed to brown, paper. In 1597 Spilman’s patent was renewed for 14 years, giving him even greater control over the rag trade by including extensive rights of search and seizure.\(^{12}\)

For some 450 years western European paper was manufactured from recycled hemp, linen and cotton rags. From a strictly industrial perspective, the rag trade issue is one of an adequate supply of the materials for production. Rags were the circulating capital of a manufacture that also required fixed capital investment (mill and equipment), control over natural resources (a steady supply of clean water of sufficient flow) and skilled labour.\(^{13}\) As we’ve seen from the petitions prior to Spilman’s grant, the rag trade also

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I have also consulted two early modern accounts of papermaking as an enterprise: a chapter from Giovanni Domenico Peri’s I Frutti d’Albaro (Genoa, 1651) discussed and translated by Conor Fahy in ‘Paper Making in Seventeenth-Century Genoa: The Account of Giovanni Domenico Peri (1651)’, *Studies*
figures in arguments about the balance of trade and the importance of value-added products in domestic manufacture. And, it figures in more general arguments about the domestic social economy. Among those who protested Spilman’s monopoly on the rag trade were the Aldermen of London who alleged that it ‘offer[ed] wrong to the charters of the city by authorizing great numbers of poor people, especially girls and vagrant women, to collect rags’ and thereby weakened ‘the discipline of the city’ and deprived them of the potential to employ their own poor and direct the revenue toward their own establishments, such as Bridewell. Here we see the particulars of the earlier claim that the corporate organization of the rag trade would be a boon to domestic policy, for the rag trade not only gathered up the otherwise useless remnants of clothing, household, and maritime textiles, but also organized the population rendered ‘idle’ by the economic displacements of the sixteenth century. And here we can begin to see the accumulation of symbolic meaning around paper manufacture.

Left over from a chain of use, rags are themselves waste products, but waste that could become a source of renewed value. Under an export regime, collecting rags affords a pittance for the poor and a small profit for the exporting merchant, but there is no further benefit to the domestic economy. Conversely, collected and used within England, rags exemplify an imagined cycle of sufficiency in which the exhaustion of (certain) commodities begets their reincarnation as new commodities and sets off a chain of remuneration that begins with rag collection and includes the labour of manufacture, distribution, and secondary manufacture (as in the book trade or the making of decorated papers, or playing cards, etc). And such reborn commodities may well reenter the cycle of production at the end of the useful life of any given incarnation. But such a cycle of sufficiency did not exist in early modern England. Rather, as the case of the rag trade suggests, its absence makes the rag and paper trade a site for the projection of a desired English wholeness and self-renewal. As I noted earlier, the monopoly eventually granted to John Spilman gave him not only the

in Bibliography 56 (2003/2004), 243-59; and Joseph Jérôme de Lalande, The Art of Paper Making [Art de faire le papier] (1761, translated by Richard Atkinson (Kilmurry, Ireland: The Ashling Press, 1976). Neither man was directly involved in the trade. Lalande was a member of the French Academy, an astronomer, and Peri was a Genoese business man. Genoa was, at the time, a major center of European white paper production. A century later, Lalande describes a still traditional industry on the cusp of large changes: the Hollander beater had already been introduced; wove paper was being made in England; and the continuous papermaking machine was to follow within a few decades. See also Leonard N. Rosenband’s discussion and analysis of the Montgolfier archive which details the operation of a very large concern in the later eighteenth century in Papermaking in Eighteenth-Century France (Baltimore: The Johns Hopkins University Press, 2000).

exclusive right to make white paper, but also control over all aspects of paper manufacture in England, including the rag trade. I’ll come back to the curiosity of the fact that a goldsmith rather than one of the petitioners with a more obvious interest in the manufacture of white paper got the patent.

II.

Spilman’s mill is described in a 1588 poem of 350 lines by Thomas Churchyard, a writer, soldier and attaché to various court officials. ‘A Discription and playne Discourse of Paper’ begins by framing paper production hyperbolically as a wealth-creating ‘art’ comparable to mining or mercantile adventuring, but more valuable than any other art, activity or innovation because paper subtends and supports all those other activities and ‘great workes’. It distinguishes paper from parchment by paper’s capacity for dispersion:

Though parchment duer a greater time and space,
Yet can it not put paper out of place:
For paper, still, from man to man doth go,
When parchment comes in few men’s hands you knowe.

Dispersed, paper acquires a kind of agency:

It [paper] flies from friend and foe in letter wise,
And serves a state and kingdome sundry wayes;
It makes great winde where never dust doth rise,
And bredes some stormes in smoothest summer dayes.
It telles of warre, and peace, as things fall out,
And brings, by time, ten thousand things about.

15 Thomas Churchyard, A sparke of friendship and warme good will (London, 1588; STC 2nd ed. 5257). ‘A Discription and playne Discourse of Paper’ is announced on the title page and forms about half of the pamphlet. A digital surrogate can be found in Early English Books Online (EEBO) and copies located by consulting The English Short Title Catalogue (ESTC) online. It is reprinted in John Nichols, The Progresses and Public Processions of Queen Elizabeth, 3 vols. (1788-1823), II, 592-602 and John Nichols’s The Progresses and Public Processions of Queen Elizabeth I, 5 vols., ed. by Elizabeth Goldring, Faith Eales, Elizabeth Clarke, and Jayne Elisabeth Archer (Oxford: Oxford University Press, 2014), III, pp. 395-415.
The lines are also part of the poem’s hyperbolic strain, a disruption in the ‘playne discourse of paper’ rather than its purpose, for there is no attempt to reconcile paper as support with paper as actor. In describing paper as an active medium, an actant in Bruno Latour’s sense, the poem suggests the material force of paper as it participates in and structures the conditions of sociality. Churchyard is no Latour avant la lettre; the poem’s hyperbole arises in the gap between what the poem purports to represent (the mill, its circumstances and its operation) and what it registers (paper’s increasing ubiquity). Yet the hyperbolic claims – that men are ‘with paper fed’ or that paper passes repeatedly ‘from hand to head’ – uncannily capture the crossing between the human actors and the things they make.

Another moment in Churchyard’s poem registers the complexity of paper’s imbrication in a domestic and European economy in which paper cannot be separated from a matrix that pits country against country and classes or class-fractions against each other.

And though his name be Spill-man by degree,  
Yet Help-man, now, he shall be calde by mee.

Six hundred men are set at worke by him,  
...Who may boast they are with paper fed.  
Strange is that foode, yet straunger made the same,  
Spill-man, Help-man, so rightly him call the same:  
Far greater help, I gesse, he cannot give,  
Than by his helpe to make poore folke to live.

The mill would have directly employed, at most, perhaps 20 men, and the initial workforce of skilled labour was imported from Germany. In any case, even as the lines make a claim that Spilman’s stranger status is mitigated by the benefits he brings, they call attention to the possibility that it might be otherwise. Does Spilman spill men, or help them? Could he give ‘far greater help?’ What ‘strange food’ is paper? The poem attempts to resolve these moments of disruption indirectly, by means of an extended metaphor that compares paper to man:

16 In The Art of Papermaking Lalande describes a working assemblage of five or six men per vat, depending on whether the master also performed one of the operations. Each vat also required unskilled supporting labour - men or women to sort the rags, for example. Hills remarks that Churchyard exaggerates and suggests each vat required about ten men. Most mills were one vat; a two vat mill was a substantial enterprise. See also Conor Fahy, ‘Paper Making in Seventeenth Century Genoa: The Account of Giovanni Domenico Peri (1651)’.
Of drosse and rags, that serves no other meane,  
And fowle bad shreds, comes paper white and cleane.  
And even so, the baddest people may  
Become good folke, if they will bide the stamp.

Man’s secret faults, and foule defects of minde,  
Must be reformde, like raggs in a paper-mill,  
When hammer help hath changde his canckered kinde,  
And clensde the heart from spots and former ill.  
A second shape, and forme full fresh and new,  
He doth receive, in nature, grace, and hiew;  
When water-streams hath washt him over quite,  
Then man becomes, like paper, faire and white.

‘Lo heere how man to paper is comparde, / That readie is to take both stamp and print,’  
the poem concludes, as if the metaphoric crossover were a simple matter. Paper will bear human stamp and print as man will bear God’s. But if, as both the occasion of the poem and its disruptive moments suggest, paper production has the potential to reform the domestic economy, then man is readied to bear the ‘stamp and print’ of (proto)industrial production, of paper in its capacity to ‘bring ten thousand things about’.

The question of paper’s implication in matters of reformation, or national order and disorder, is similarly registered in Shakespeare’s 2 Henry VI. In Act 4, the artisan-rebels capture Lord Say, a member of the King’s council, whom they accuse of having ‘sold the towns in France’ and inordinately taxing the populace (4.7.17). The more specific indictment refers to Spilman’s mill:

Thou hast most traitorously corrupted the youth of the realm in erecting a grammar school: and whereas, before, our forefathers had no other book, but the score and the tally, thou has caused printing to be used, and, contrary to the king, his crown, and his dignity, thou hast built a paper mill. (4.7.25-30)

What is at stake in the indictment of Lord Say is the status of literacy; Cade’s speech goes on to address the literacy-determined fate of the poor called before the Justices of the Peace whom Say has appointed; they die because they cannot read. A few scenes earlier a parish clerk is hung with pen and inkhorn about his neck. Alleged to be one who can ‘cast accompts’, ‘make obligations and write court hand’, he is sentenced to
death upon confessing that he can indeed write his name. If the clerk scene establishes the rebels’ hostility to literacy (and numeracy), it also raises the question of why the play replays that hostility in the scene with Lord Say.  

The poor clerk of Chatham only gets to speak his name, Emmanuel, and attest to an aspirational quality in the sign of his literacy: ‘Sir, I thank God that I have been so well brought up that I can write my name’ (4.2.92-93). There’s no reason to doubt that he has the other literate competencies of which the rebels accuse him, but the logic of his execution assumes a far greater agency than he can be imagined to have possessed, however enabling the exercise or transfer of his skills might have been for himself or those on whose behalf he exercised them. As Roger Chartier observes, ‘Emmanuel’, translated, means ‘God be with us,’ a formulaic phrase in legal documents, the linguistic operation thus enabling the slide from person to object in the metonymic representation of the writing system. We might also note that the town or parish on whose behalf the clerk writes is the ham or home of ‘chat,’ or perhaps, ‘chart’. The clerk of Chatham scene emblematically stages a writing regime in which thing and human repeatedly cross over, acting for, or standing for each other, or being made to do so.

The indictment of Lord Say explicitly rehearses issues of literacy from the perspective of a system rather than an individual possessed of certain skills. (His name, like the clerk’s, puns the mixed medial environment, offering a match to the grotesque of Jack’s mouth as Parliament of England.) Not only is Lord Say a member of the ruling elite, one who sends letters ‘that serve a state and kingdome in sundry ways’, to quote Churchyard, but he is also positioned as a ‘mover’ in the sequence grammar schools-printing-paper mill. Lord Say might be imagined to operate at the level of policy (in the modern sense of the term); he is in a position to cause significant things to happen, as he himself notes: ‘Great men have reaching hands’ (4.7.73). The indictment accusing him specifically of founding grammar schools, printing, and a paper mill curiously substitutes its detail for that implied by the position the historical Lord Say occupied as warden of the Cinque Ports, overseer and beneficiary of significant domestic as well as

17 Curiously unremarked in the textual scholarship on 2 Henry VI is the fact that the lamb-parchment-seal speech I discuss in the opening of this essay is not merely revised between quarto and folio, but also moved. In the quarto it appears just before Lord Say is captured and brought to Cade; in the folio it appears just before the clerk is brought to the rebels.


19 The place name is unstable in the textual history: the first quarto has ‘Chattam’ [Chatham]; the first folio ‘Chartham;’ and the second folio ‘Chatham’. ‘Chart’ offers an alternative punning allusion, for the chart is a paper form. See OED, chart, n1, etymology.
import/export trade. The substitution is all the more interesting because it replaces known and clear circumstances of networked power with an equally clear but spurious series of foundational acts attributed to Lord Say. Grammar schools-printing-paper mill is not really a sequence; it is a cycle in which each moment feeds and feeds on the others, a cycle ‘with paper fed’, a writing machine. The substitution is a layering of writing machine and mercantile activity that, intentionally or not, indicates their historical colocation. As Lothar Muller remarks (speaking of Genoese white paper in the sixteenth century), the money invested in paper mills and equipment ‘had been earned through business practices dependent on paper as a medium for storage and transmission’. 20 Spilman’s mill might be considered in this capitalist entrepreneurial light, an investment of existing wealth in a productive enterprise likely to be profitable given his royal protection and his connection to skilled labor on the continent. The lease of the manor on which his mills were located may well have afforded other income from the land and, in any case, was eventually converted to a freehold.

III.

The whiteness of paper was both a material variable, arising from elements of its production, the texture of the sheet and the uniformity of its thickness, and an optical variable, arising from light refraction on the finished sheet. Few users would have noticed unless the paper resisted the moves of pen or the absorption of ink and those who cared about such things would have chosen and prepared their stock accordingly. The trope of paper’s whiteness pays no attention to these variables, instead figuring a sheet of new white paper as a blank surface awaiting inscription. In a 550 line poem called Paper’s Complaint (1610/11), John Davies of Hereford ventriloquizes paper as a female body whose soul laments the inscription on her surface:

Though I (immaculate) be white as Snow,
(Which virgin Hue mine Innocence doth show)
Yet these remorseless Monsters on me piles
A massy-heape of blockish senseles Stiles;
That I ne wot (Got wot) which of the twaine
Doth most torment me, heavy Shame, or Paine.

Davies’s paper is a victim of ‘paper-spoylers’, of a proliferation in literate production that, paper complains, betrays ‘Humane wisdomes height’. Paper’s Complaint is a survey of (degraded) literary production, naming and alluding to specific writers and texts as well as condemning genres and formats.\(^{21}\) The gendered erotic charge of the blank page is a steady back-beat. But Davies also writes from a particular position in the writing machine, for he was Oxford-educated and a writing master to highly placed courtly families. At stake for Davies is the literary and cultural value paper bears and the poem’s concern is that literary value is cheapened or lost by proliferation. The solution the poem envisions is a withholding of production: ‘spare your Writings toile… And when ye have aspired above your Sires, / Then write, a Gods-name, fill my Reames and Quires’.

For Davies paper signifies bookishness, and the value it bears is a cultural patrimony to be carefully guarded. Far from unique in its argument, Paper’s Complaint is distinguished from other efforts to circumscribe and protect cultural capital only by what might be characterized as its narrowness. Writing in 1580 about problems in the book trade, for example, William Lambarde also inveighs against ‘wanton workes’ and an excessiveness in print production, but he connects the problem of literary value to the balance of trade, to the ‘no small or sufferable wast[e] of the treasure of this Realme which is thearby consumed and spent in paper, being of it selfe a forrein and chargeable comoditie’.\(^{22}\) And Ben Jonson repeatedly figures the problem of literary value in terms of the circulation of paper, as often a wrapping material or an instrument of credit as a bookish thing. High literacy is an epiphenomenon of paper at the turn of the century. To be sure, high literacy matters, and it signifies materially, but the issues at stake in paper are those involved with the texts and transactions paper mediates in more mundane and far-reaching ways.

Davies’ one mention of non-literary paper – a Dickensian scenario of paper documents in which men lose themselves until they die – hints at a paper-mediated world in which purchased text, fees paid to scribes, comes to structure the very condition of human

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\(^{21}\) John Davies, The Scourge of Folly (1611; STC 2nd ed. 6341), 230-46. ‘Papers Complaint’ is a markedly long poem in this volume of short poems and epigrams; it was reprinted alone in 1624/25 (STC 2nd ed. 6339.5 and 6340). A digital surrogate can be found in Early English Books Online (EEBO) and copies located by consulting The English Short Title Catalogue (ESTC) online. Grosart, whose edition I quote, presents it separately. Alexander Grosart, The Complete Works of John Davies of Hereford, 2 vols. (Chertsey Worthies Library, Printed for Private Circulation by the University of Edinburgh Press, 1878), II, pp. 73-82.

\(^{22}\) Arber, Transcript, II, pp. 751-3.
life.\textsuperscript{23} Here the poem comes close to the problem of the seal in Cade’s speech from 2 Henry VI, but Davies is not interested in the consequences of scribal activity, but in distinguishing scribes as a ‘mistery’, an artisanal-vocational practice at once kin and competitor to his own practice as a writing master. Just as there are true poets and degraded ones, so there are true writers and false ones. Exactly how one might distinguish a writing master from a secretary from a scribe from a scrivener from a clerk is not altogether clear, save that a writing master taught calligraphy and a scrivener was a member of the Company of Scriveners, the writers of court hand who did the paperwork of the law and provided other notarial, scribal and proto-banking services. Of the writing master, we might say, invoking Dickens again, he did script in different hands, each hand occupying a particular node in the writing machine. For the writing master, as for many of us, paper signified because and by means of the marks made on it; without those marks, it indeed seemed a neutral (innocent, virginal) medium.

But paper is never simply white, nor blank space. It is textured matter, made from rags, rags which themselves materialize the relations and processes of transforming plant matter into cloth or rope. In The Praise of Hempseed (1620), John Taylor, a prolific pamphlet writer and member of the Watermens guild, marvels at the cycle of paper that enables his own writing practice:

\begin{quote}
May not the torne shift of a Lords or Kings
Be pasht and beaten in the Paper mill
And made Pot-paper by the workmans skill?
May not the linnen of a Tyborne slave
More honor than a mighty Monarch have:
That though he dies a traitor most disloyal
His shirt may be transformed to Paper-royall?
\end{quote}

The Praise of Hempseed argues that hemp is a foundation of the English economy in some 1400 rhyming couplets.\textsuperscript{24} By hemp Taylor means both flax and hemp – ’Flax the male and hemp the female is / And their engendering procreative seed / A thousand

\textsuperscript{23} The stanza on non-literary paper begins with ‘pettifogging Scribes, / That load mee with fowle lies for Fees and Bribes and ends with paper’s complaint that ‘I a Laborinth am made thereby /where men oft lose themselves untiill they dye’.\textsuperscript{24} The Praise of Hempseed (1620; STC 2\textsuperscript{nd} ed. 23788), reprinted in 1623 (STC 2\textsuperscript{nd} ed. 23789) and in the 1630 folio (STC 2\textsuperscript{nd} ed. 23725) of Taylor’s works. A digital surrogate can be found in Early English Books Online (EEBO) and copies located by consulting The English Short Title Catalogue (ESTC) online. I quote from the facsimile edition of the 1630 folio, Works of John Taylor, the Water-Poet (Manchester, for the Spenser Society, 1869), pp. 544-59.
thousand helps for man doth breed’ (546). The procreation of flax and hemp enables and links not only countless domestic trades, but also England’s mercantile adventuring, discovery and empire-building, the spread of the gospel, access to history, poetry and the promulgation of law and order, according to Taylor who evidently read his Churchyard: ‘here is Labor, Profet, Cloathing, Pleasure, Food, Navigation, Divinitie, Poetry, the Liberall Arts, Armes, Vertues defence, Vices offense, a true mans protection, a Thiefs execution’ (544). But the really awesome beauty of the ramifications of hempseed is, for Taylor, the manufacture of paper: ‘For when I think but how paper is made / Into phylosophy I straightways wade’.

For Taylor, paper is always already written, that is to say, positioned in specific social and material relations – a countess’s ruff, a rag on a dunghill, pot-paper or a crown sheet. The matter of paper passes from the intimacy of the body to the skill of other hands; the resulting paper might itself enter a chain of reuse, buried in a binding, tacked to a building wall, rotting on the floor of a privy, or it might dissolve in a watery shipwreck or disappear into flames or, perhaps, the archive. Pot-paper and Paper-royall pun on the names for paper sheets of approximately one size or another. But we need to resist too quickly glossing the names of paper (derived from watermarks) as indicators of dimension, for the pot or the crown or the fleur-de-lis was a mark of paper’s identity as a material object, the trace of the complex relations that constitute it as a thing and potential actor in the world. Indeed, paper might be distinguished as a thing by the mark it bears.

IV.

Watermark is not a mark on paper, but a mark in paper, easily visible under certain light conditions. Asian and Islamic paper makers, from whom Europeans learned the process, did not use watermarks. After all, paper is otherwise distinguished by texture, color, and density. Watermarks appear in European paper as the proprietary sign of the maker who practises his craft under the supervision of guild and municipal or state authority. Not all European paper had a watermark and, Taylor’s puns notwithstanding, a watermark did not necessarily indicate standard dimensions of a sheet. It was a kind of signature woven with wire into the screen of the mould. The question of watermark brings me back to Spilman’s paper mill. Spilman’s mill was not the only paper

manufacture begun by a close associate of the Crown. In the 1570s Thomas Gresham, the royal factor recently returned from years of negotiating England’s debt in Antwerp, built a paper mill on his estate at Osterly in Middlesex. Churchyard refers to it:

….one man,
That had great wealth, and might much treasure spare,
Who, with some charge, a Paper-mill began,
And after built a stately work moste rare,
The Royall Exchange, but got by that more gayne,
Than he, indeede, did lose by former payne.

If it is curious that the first patent for domestic white paper production was issued to a goldsmith, it is even more curious that two individuals so closely associated with the Crown and England’s financial position should have invested in paper production. And while both endeavours can be understood within growth of industry/balance of trade arguments, we might also pause over the ways in which Gresham and Spilman and the Crown had inevitable interests in a European circulation of various paper instruments that not only accompanied and enabled the circulation of commodities but became commodities in their own right. Might Gresham and Spilman and the Crown have been particularly, and not publically, interested in the ‘finest stuff’, white paper itself and the security it would afford to information, paper instruments and paper commodity transactions by way of watermark? There are, as John Davies remarks, good writers and bad writers. Davies’ contemporary and (future) writing master to Prince Henry, John Bales, admitted to having successfully forged the Earl of Essex’s hand, in letters to Essex’s wife, no less.26 Among those who traded in paper instruments, economic historians tell us, ‘signature did not count as sufficient authentication’.27

The most important paper instruments of the sixteenth century were bills of exchange, a credit mechanism developed to facilitate intra-European trade as early as the twelfth century.28 Paper substituted for coin on the assumption that paper would eventually be

28 Like paper itself, bills of exchange and other commercial paper instruments entered western Europe from the Arab world during the Abbasid Caliphate (750 CE-1258 CE). See Bloom, pp. 135-141 and Muller, 41-42.
redeemed in the coin of another place at another time. The time factor, called usance, was both a practical matter and a way of effectively charging interest at a time when interest was considered usury and proscribed. These paper instruments depended on the value of coin in particular jurisdictions, a value set by respective mints and articulated in units of account, that is, as imaginary money. Even this grossly simplified account makes it clear that there are a number of points of intervention in this social circulation of value in which it is possible to profit from the circulation itself without any involvement in the trading of goods per se. By the sixteenth century, writers in the know made a distinction between ‘forced exchange’, that is, exchanges that were the necessary or expedient accompaniment to other transactions, and exchange per arte, carried out by entering into the market of bills themselves to exploit various profit points in their circulation. In other words, a money market, based on paper. Exchange per arte was the province of very few, and despite being named as a practice by contemporary writers, understood only imperfectly even by those few. Those few were the private bankers and the royal or princely agents who dealt with them. A Spilman and a Gresham, say. Their art depended on the secure transfer of information and authority between situated centers of exchange where paper things obligated men to a stipulated but uncertain future. Gresham’s Royal Exchange (1569) was such a purposed space, at the time a satellite to the then dominant Bourse at Antwerp. What I’m suggesting here – without being able to prove – is that watermark was appropriated from the artisanal making of paper by those who practised exchange per arte as a secret handshake, the means whereby paper could take the place of the man with greater confidence. I do not think that Spilman or Gresham initiated the use about which I am speculating. Rather, it’s England’s late entry into white paper manufacture and their involvement in it that makes the possibility conspicuous.

29 I draw the terms of contrast between ‘forced’ exchange and exchange per arte from Boyer-Xambue, et. al., pp. 136-37.

30 In his introduction to Thomas Wilson’s Discourse on Usury (1572), R.H. Tawney characterizes foreign exchange as the practice of ‘resident correspondents maintained by the great financial houses...agents employed by governments...and...an inner ring of successful merchants who found finance more profitable than trade’ (New York: Harcourt Brace & Co., 1925), p. 62. In ‘Payments and the Development of Finance in Pre-Industrial Europe’ (Working Paper Series, Dartmouth College, Department of Economics, 2001, 01-15), Meir Kohn comments that ‘[i]n some exchange markets, there was little or no business with the general merchant public. These were ‘inside’ markets – markets in which merchant bankers traded only with one another’ (17).

31 In 1695, the Bank of England, founded a year earlier, began to use watermarks to protect against the forgery of its notes. For a discussion of the subsequent development of watermark as a security device for the Bank of England, see Hills, pp. 37-44.
This parallel economy of paper credit was steadily inflationary for sixteenth century Europe, increasing aggregate nominal wealth while redistributing actual wealth and causing popular grievance thereby. I mean popular in its broadest sense; different groups of people were affected in various ways by the impingement of this intra-European trade depending on their position in the domestic economy. By the beginning of the seventeenth century, the paper economy had expanded: bills of exchange became payable on endorsement, that is negotiable, and, at least in England, domestic or inland bills of exchange came into use. 2 Henry 6 marks this change. As Lord Say, indicted for the establishment of Spilman’s paper mill, is led off to his execution, one of the rebels says to Cade: ‘My lord, when shall we go to Cheapside and take up commodities on our bills?’ (4.7.108-9). For all the play's emphasis on the rebel hostility to literacy, it’s worth remarking, first, that the rebels themselves are not only literate, but fairly astute in their identification of nodes and practices in the writing machine, and second, that by taking up commodities on bills, they are doomed all over again.

V.

In 1993 Thomas Calhoun and Thomas Gravell established that Spilman’s paper was used in the 1605 quarto edition of Ben Jonson’s Sejanus, a circumstance they felt required explanation given that the cost of English white paper was, they estimate, some forty percent higher than that of French paper (also used in some copies of the same edition).32 They speculate that the paper was chosen in the charged atmosphere immediately after the Gunpowder episode: ‘What better way to assure the loyalty of poet, press and publisher that to “buy British” and print on paper that Spilman manufactured for the king’s letterhead’?33 They conclude that ‘Jonson arranged to use English paper with royal watermarks in order to give Sejanus (1605) the appearance of royal sanction – which, perhaps, it had’.34 To date, the 1605 Sejanus is the only printed book known to have used Spilman paper. Yet in his discussion of the Spilman mill, John Bidwell states: ‘As [Spilman] could not compete against imported writing grades, he had to specialize in printing grades to recoup his investment’. Both Bidwell and Mark Bland note that the known appearance of Spilman paper in manuscripts is attested though not extensive.35

34 Ibid, 63.
In 2014 Heather Wolfe, curator of manuscripts at the Folger Library, posted online a letter from Francis Walsingham, dated 1588/89, with a Spilman watermark. There is nothing extraordinary about the text of the latter, she notes (it is an administrative letter addressing a jurisdictional issue in a manor court), and adds that a warrant issued by Walsingham a few months earlier concerned the skilled German papermakers for Spilman’s mill. That warrant, to search for and ‘staye’ the workers, commands that they be brought before the Privy Council ‘where they shall noe the cause of their staye and sendinge for’. Walsingham’s warrant and letter establish, by date, that Spilman’s mill was producing white paper before the royal patent. Why the Privy Council wanted to speak directly with the papermakers we do not know. Nor do we know what the papermakers’ circumstances were when the warrant was issued. ‘Staye’ might mean to cease an operation or process, or, to remain in place. Evidently, as Wolfe notes, the papermakers stayed in England.

Epithets like ‘king’s letterhead’ and ‘royal stationery’ capture a sense of connection between the Crown and Spilman’s paper even as they introduce anachronism. Letterhead per se belongs to the later history of paper instruments; the ‘letterhead’ of the Crown would have been a seal affixed to the paper or perhaps embossed into it. No doubt there was a supply of paper for the royal household and offices, but equally sure more than one paper maker was represented in it. The only thing that can be said with confidence is that the Crown’s relationship to Spilman made it possible for the Crown to have exclusive access to a stock of paper whose watermark it controlled by proxy. Whether the Crown, or its officers and agents activated that possibility, we do not know.

Like the moving water that provides its matrix, paper has a flow. When paper historians talk of paper flow, they refer primarily to the movement of a stock or batch of paper through the production process and from the mill to (successive) points of distribution. Mark Bland studied Genoese writing paper bearing a ‘flag’ watermark used in England in the first half of the seventeenth century and attested by numerous surviving examples in the correspondence of the royal family, government officials, and individuals and

37 I quote from Wolfe’s post. Overend quotes the warrant at length, pp. 186-7.
38 The warrant is noted in passing by most historians of English paper, usually in conjunction with discussion of the patent. Overend thinks the paper makers deserted their posts in response to the xenophobia and hostility to foreign labour that characterized England in the late 1580s. Others speculate that competing mills tried to hire them away from Spilman’s operation.
39 OED stay,v.
aristocratic families connected to the court. His argument addresses the use of watermark evidence in the dating of manuscripts (and drawings), but the discussion also evidences the flow of a particular kind of paper from the vantage of the destination at which it arrives, its end use as a surface for writing among a restricted but not rigidly exclusive network of users. It appears among other kinds of paper in the archives of those users, but it does not appear in a more general pattern of dispersion among individuals or groups who also would have regular need of a good writing paper. The unavoidable inference is that the ‘flag’ paper was supplied from a common source and not an open market. Yet, unlike the Spilman paper in Sejanus, the use of ‘flag’ paper cannot have been a deliberate choice to exploit the mark in the paper. Rather the watermarks signify long after the paper was used and allow ‘access to social motives’ by identifying an associated group of users. The paper stands in for social relations among the users.

Mark Bland’s desideratum is to ‘begin by doing what is manageable’ (tracking identifiable paper stocks in the archives) so that ‘in the end, we will achieve what at present seems impossible: a comprehensive account of the trade in and use of paper in early seventeenth century England’. David Gants proposes to methodically capture the spaces between chainlines of sheets of paper in large quantities so as to prototype a database of paper – initially, the stocks used in books printed in London around 1616. Chain measurements, he argues, are ‘simple data’ and more easily machine readable than watermarks. He foresees an integrated database of chainspace measurements and watermarks that can be correlated with the analytic and descriptive information achieved by a long tradition of Anglo-American bibliography to map the book trade of early modern England. The sheer quantity of paper in use in early modern England, small though it may have been in relation to the ubiquity of paper in later centuries, belies such visions of empirical certitude. A ‘comprehensive account’ of paper cannot limit itself to literary (or art historical) paper. It must attend to paper as a shaping force in multiple literacies and the operation of a writing machine that thrives on the

41 Bland speculates that the paper was supplied by the printing house of Robert Barker and John Bill which also supplied paper to Parliament (p. 248).
43 Bland, p. 254.
coexistence of media forms – parchment, paper, digital – and media modes – oral, written, imaged, printed. The concept of paper flow might usefully be extended along the lines suggested by Taylor’s poem on hempseed to encompass a broader spectrum of activity – everything from the sourcing of materials to the end uses and, even more broadly, in the movement of the technology itself from the Arab world to Europe, its development as an industry, and its increasing importance in structuring social relations. Our knowledge of paper flow, even in the narrow sense, is still largely aspirational, though the manufacturing process and the movement across the boundaries of states that levied taxes are well known.

There aren’t many historical moments when paper becomes especially visible. I have argued that the archive examined here, which spans forty years, is one. Our own historical moment in which digital media are increasingly replacing paper as substrate and actor is another: paper is the parchment of the digital age, still present, becoming residual, an object of historical inquiry and of nostalgia. The digital intervention in the writing machine makes the materiality of paper all the more evident through its skeuomorphic adaptations of paper’s forms and signifiers, its reconfiguration and transmutation of paper’s functions and capacities, and its ambition in relation to the immense archive borne on paper. Among the affordances of the digital is the capacity to see, or rather, to capture, the materiality of paper (or parchment) in both the broad and narrow sense of materiality I have been using. Digital surrogates of written or printed texts and images, with their accompanying metadata, make it possible to gather the marks on paper now dispersed among archives and libraries and trace their material relations – epistolary networks, circles and trajectories of transmission, geospatial and temporal locations, etc. Digital spectral imaging and photography capture the materiality of paper in the narrow sense – the marks in paper: chemical and physical composition, erasures, chain lines and watermarks.

Paper always signifies. Given paper’s shaping of social relations and its capacity of dispersal, loss, re-use and reincarnation, it signifies even by its absence where it might expect to be found. Surviving paper is the material trace of its particular historicity. Absent paper signifies both the mixed media ecology that constitutes the historical world and the impossibility of the bibliographic desire to produce a ‘comprehensive account’ of paper. Still, we must learn to pay attention to paper, as bibliographers, manuscript scholars and codicologists have long done, and we must keep in mind the

importance of non-literary paper in order to understand paper’s shaping of our world and the digital world that now interacts with us and stands in our places.