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when the poet gives empty leaves

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Abstract

In the right light, blank pages in renaissance books routinely reveal legible impressions of uninked typeface, especially interesting when these frisket-hidden texts are intertextual, as when typeface from Aldo Manuzio's April 1501 Vergil prints blind in his May 1501 Horace (that's the past tucked into the future) or when some of his August 1502 Dante appears blind in the same Vergil (now the future's in the past). And there's upsetting too, as illustrated in the 1732 edition of *Paradise Lost*: here and there, reprinting itself remotely *en miroir*, this text, confounding first and last things, creates an apocolapse. Read this way with me, and watch the library become a librarynth.

Keywords: *Aldo Manuzio, analytical bibliography, beating of quires, blind impressions, offset*
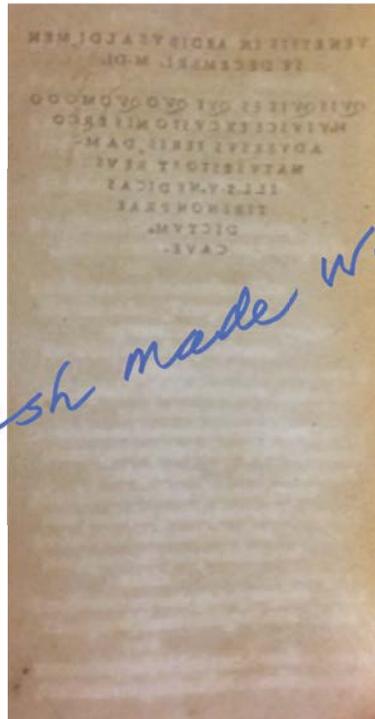
Toute vue des choses qui n'est pas étrange est fausse.

cum donat uacuas poeta chartas

when the poet gives empty leaves

By Dott.ssa Rosetta Stein for Doktor Michael Cahn

A–Z⁸ &⁸—that's the collation formula for Aldo Manuzio's 1501 octavo edition of Martial. Ideally, a copy consists of as many sheets as there are letters in the Latin alphabet, plus one more 'letter', '&' (the Latin ligature for 'et').[1] With these 24 letters, plus 4 numerals (also Latin letters), Aldo signed the first four rectos of each sheet: [A], A ii, A iii, A iiii … &, & ii, & iii, & iiii. Thrice-folded in half, always across the current long axis,   a printed sheet became an eight-leaf quire,
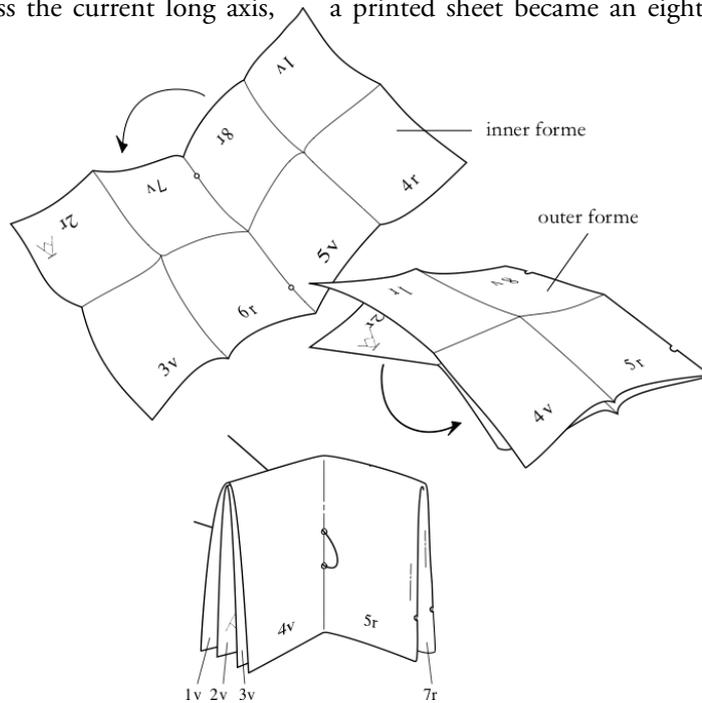
with pagination and foliation as follows, 'r' and 'v' standing for the recto and verso sides of a leaf.

pagination :	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
foliation, outer forme :	1r			2v	3r			4v	5r			6v	7r			8v
foliation, inner forme :		1v	2r			3v	4r			5v	6r			7v	8r	

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[1] Latin has no letters j, v, or w, but 'j' is an optional shape of i and 'V' is the upper-case shape of u. In handwriting, however, a 'v' shape can be used at the start of a word. On p. 181, see 'venere' in l. 15 on the left page of this manuscript (which is said to be in Aldo's hand), in contrast to the more usual initial shape, in 'uixerunt', in l. 16.

After all 24 quires had been sewn together to make the text-block for a copy of this edition, the bolts at the head of every quire and at the fore-edges of every aft-quire had to be ploughed off or individually sliced open in order to liberate the 192 leaves for reading. That's 384 pages.

In each quire properly folded, the leaves run 1–2–3–4–5–6–7–8. But be careful. Should a binder fold backwards, the numbers will jmuble. If the third (and last) fold pictured above were convex instead of concave, then—

$$5–6–7–8–1–2–3–4.$$

If just the second were folded so: 3–4–1–2–7–8–5–6.

If just the first: 2–1–4–3–6–5–8–7.

If first and second: 4–3–2–1–8–7–6–5.

First and third: 6–5–8–7–2–1–4–3.

Second and third: 7–8–5–6–3–4–1–2.

All these unique sequences are wrong, of course, but systerratically so according to the Mathematics of Folding. Not at all chaotic. Indeed, it' slogical. Very very logical.

And what if every fold were convex?

$$8–7–6–5–4–3–2–1$$

This last order of leaves might strike you as apt for an Old Testament in Hebrew. What could go wrong? But in this and all previous jumbles, the recto and verso pages of every leaf always land on their feet. Therefore, the order of pages in the first quire of such a fun bible would limp along

$$15–16–13–14–11–12–9–10–7–8–5–6–3–4–1–2$$

←——————————————————

—and 'בראשית ברא אלהים' ('Ịn principio creauit dei') would thus open the *second* page (p. 1); and that placement could well bring הוה, our Mother Eve, to crown the very *first* (p. 2).

That's the kind of topsy-turvy one expects from pagan epic, where poets typically race into the muddle. Take *Paradise Lots*, for example, in the famous quarto edition by Richard Bentley, the formidable classical scholar, whose 1699 *Dissertation on the Epistles of Phalaris* proved that the letters were composed long *after* the author's death. The *Dissertation* is full of offsetting from one side of an opening to the other, but occasionally—strangely—farther off. (Somebody should explain that.) Bentley's Milton edition was published by Jacob Tonson in 1732. Atop the next page (peek ahead, won't you, as there's no room for it at the bottom of this page), photographed from The William Andrews Clark Memorial Library (UCLA) copy, is its title-page, on the right, signed 'A' beneath, on close inspection, the words 'ǝliɥW', 'ǝnobnꓛ', and 'sǝin∀' (errors for 'Which', 'Outdone', and 'Andes' in the notes to Bk. 4)— all these words and more facing, on the left, George Vertue's *Nascuntur Poetae* ('Poets are born') portrait of young Milton (above) between busts of his predeceassors, Homer and Vergil (below). But his Mother's Bust?

Why, they're nowhere to be seen, nor are the busts of the two Moms of the other poets born.
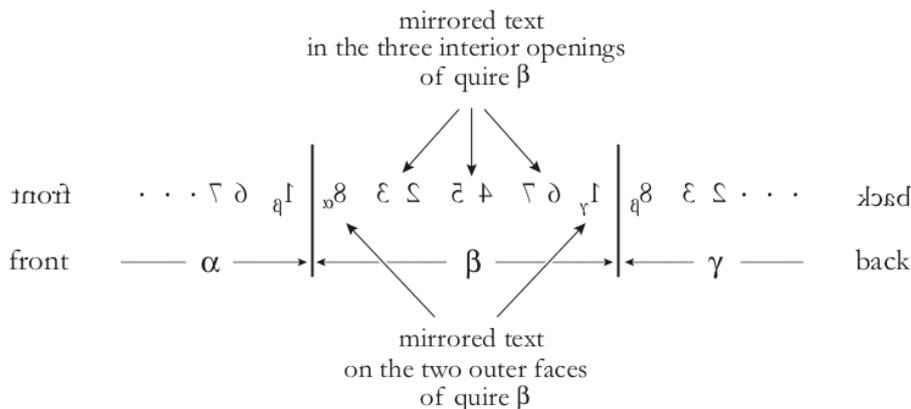
This portrait and another—of the bairn grown old and blind—are found in various configurations in some, but not all copies. Apparently, this pair of engravings was a supplement to the edition. They were printed on heavy opaque stock on a rolling press—not a printing press. (There's a lesson here: A printing press is not the only means of printing in a book.)

The letterpress sheets of Dr. Bentley's edition were meant to collate A^2 a–b^4 B–$3E^4$ 3F–$3I^2$, with Milton's long poem running into a thir dalphabet of signatures, B1r–3E4v (pp. 1–399). But two adjacent leaves, 2C4 and 2D1, were cancelled and replaced by a single bifolium in all the dozens of copies I have seen. (Without more leaves, the book thus gained a quire, and that affected the structure of sewing.) In the New York Public Library's copy 2, where all is now bound in order, this cancelling bifolium along with the four sheets following, 2E, 2F, 2G, and 2H, had earlier been folded backwards on the second of the two folds per sheet in quarto format (the spine/gutter fold), so that the order of leaves of each of these four quires ran 3–4–1–2. Sheet a was also misfolded in the same way.

Anyone with eyesight can witness these arcane details of the pre-history of this copy simply by reading the New York Public Library copy in the light of dayI mean the electric light of the Rare Book Division's reading room at 42nd & 5th. Before they were bound together, groups of quires, consolidated partly in and partly out of order (think 'shuffled like a deck of cards'), look as if they had simultaneously been pressed together. Luckily, because the ink of this copy had not yet dried, pressure exerted on this configuration caused the text to reprint itself mirror-image locally throughout the pile. In an instant, this Big Squeeze created a Hall of Mirrors—of Fun House mirrors—at least two paradises lost in one, happier far—

a library, a librarynth.

Within a typical quire of this quarto, I'll call it 'quire β', the pagination of *Paradise Lost* almost always fans as follows within the structure of a quire:

mirrored text
in the three interior openings
of quire β

front · · · 7 6 $1_β$ 7 6 5 4 3 2 $8_α$ 3 2 1 7 6 7 · · · back

front ——— α ———▶ ◀— β ——▶ ◀—— γ ——— back

mirrored text
on the two outer faces
of quire β

In each of the three interior openings of β, facing pages reverse their order across the gutter, so that p. 2 is reflected on p. 3 (as 2), and 3 on 2 (as 3). The first page of β, however, reflects the last of α (the quire before) and the last of β reflects the first of γ (the quire after). The structure of this setting-off in β is not hard to gasp, but it means—and this is important—that the material unit of a quire does not contain a unit of text: the mirrored texts at the front and back of the quires of *Paradise Lost* thus float free of the substrate—in sublimation *immediate*.

You're thinking that all this local offset is merely derivative—so why bother? But, amidst the local self-reflection in copy after copy, there is usually also something else, something other, something *remote*, which hardly seems so logical. It reminds me of refraction, as when daylight breaks open in a revelation of its colourful spectrum—a rainbow hiding there all the time. You may find disturbing the things I'm about to show you. They are like wormholes in spacetime. But I have felt nothing but awe and affection for them ever since the first encounter, when, on the Sabbath especially, my Mother made all her young daughters read Milton—in any old edition, but the older the better: 'Getting back to the source', she'd say. She even dictated to us, and we scribed. (This was before we moved back to Sumatra.) Mother was a believer. As a girl she had read *The Story of our First Parents, Selected from Milton's Paradise Lost: For the Use of Young Persons. By Mrs. Siddons*, London, 1822, as had her own mother and hers before her. I don't know before that. With few regrets, I have discontinued the practice for my two girls.

On the next page (peek ahead) is a map of nineteen remote offsets in Mom's favourite copy 2 at The New York Public Library—*remote*, I say—in contrast to the motleytude of *local* offsets just identified and explained (of α in β and β in α, β in β, and γ in β and β in γ), which are *not* shown in the coming map. The twelve examples there of remote offsetting of the accidentally retro-folded parts I mentioned earlier will display their voluptuous curves on the left side of this map, looking like one of the Solomonic columns in Bernini's *baldacchino* at Basilica di San Pietro. Michael, I dedicate this first map to Grammy and her Mother, to my Mom, and to her sisters and to all of mine, living and dead alike.

The epic challenge now is to read this work, not merely as it was first plainly printed (who can't do that?), but also as it later obscurely set off on itself, for superimposed on the ostensible *Paradise Lost* is a Snakes &L adders *Paradise Lost*, where, frankly, *here* in the one is also *there* in the other. Two at last for the price of one. It's a good idea to have your compact mirror handy.
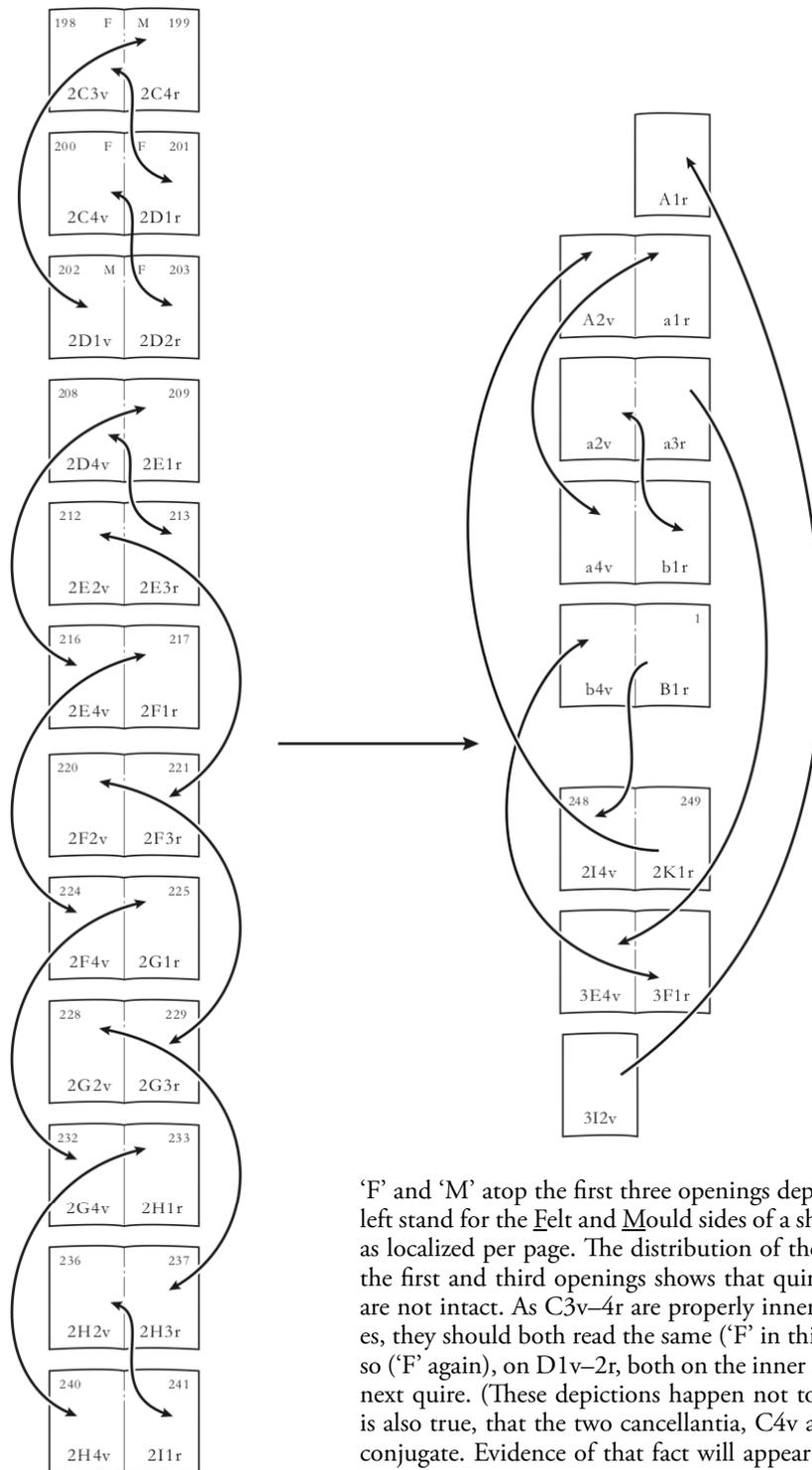
'F' and 'M' atop the first three openings depicted on the left stand for the F̲elt and M̲ould sides of a sheet of paper as localized per page. The distribution of these letters in the first and third openings shows that quires C and D are not intact. As C3v–4r are properly inner-forme pages, they should both read the same ('F' in this case). And so ('F' again), on D1v–2r, both on the inner forme of the next quire. (These depictions happen not to show what is also true, that the two cancellantia, C4v and D1r, are conjugate. Evidence of that fact will appear on p. 141.)

A horizontal arrow ↘pointing rightwards from the left column indicates where the contents of the column fit in the alphabetic ordering of selected openings of the book from start to finish—from the first signature, A (at the top of the right column), through to final 3I2 (at the bottom). Each opening is variously connected by curved arrows to one or two others. (As I've already explained, openings not shown here, and they are legion, are where the local offsets are found, of the verso of an opening on the recto and the recto on the verso.) The sequence of the selected book-openings down this map follows the narrative order of this edition as ideally bound. Not that all copies are well bound. The first binder of the Harvard copy screwed up.[2] She (or he, for binding wasn't always women's work) bound the cancelling bifolium 2C4–2D1 *after* rather than before the remains of 2D. (Subsequently, however, this copy was rebound in the proper order. Now, only a reader's annotation reminds us of the previous disarray.)
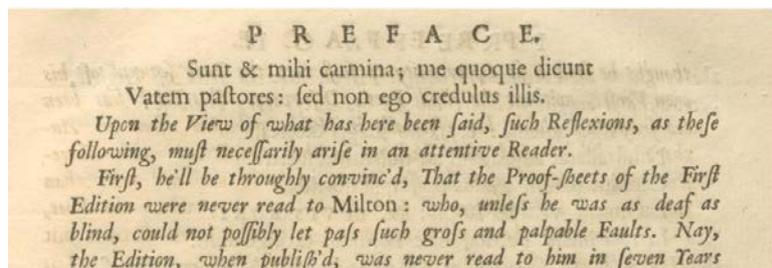
Curving arrows on the right of this diagram reveal seven remote off-settings, caused not by misfolding this time (except in quire a), but rather by an earlier non-narrative sequence of quires (such as I thought on p. 120 to characterize as 'shuffled'). To give you insight into how the epic was thereby reshaped, I'll sample just three of these pages with remote offset, the first and last pages of the poem (B1r and 3E4v) and the last page of the book (3I2v). Three will be enough.

• By following the arrows, observe that the first page of this poem, B1r, which ends (in l. 13) with the phrase 'my adventurous *Song*' (or '*Wing*', as Bentley corrects), which you will soon see in the photograph on p. 125—well, this page once adventurously soared not merely overleaf, onto B1v, but also winged its way hundreds of pages later (*in medias res*) to set off on 2I4v—that's later to the tune of 247 pages!—and roosted there without missing a beat. An adventurous Song (or Wing) indeed. (Page 2I4v, by the way, is the location in Bk. 8 where, in l. 173 on this page, Raphael instructs Adam to be 'lowly wife'. In my reading of the adventurous *Song* in the NYPL copy 2, this girl will *not* be taking that man's advice.)

• Consider also 3E4v, the page after the poem. Here, Tonson's printer gave us a blank. But the page has been printed since with offset—from a3r:

<div align="center">

blank, blank—*not* blank[3]

</div>

Here on 3E4v, ɪƐƨ repeats *en miroir* the matter following—*of such Reflexions, as must arise in an attentive Reader*, from 411 pages away, very close to the front of the book.

P R E F A C E.
    Sunt & mihi carmina; me quoque dicunt
Vatem paſtores: ſed non ego credulus illis.
  Upon the View of what has here been ſaid, ſuch Reflexions, as theſe following, muſt neceſſarily ariſe in an attentive Reader.
  Firſt, he'll be throughly convinc'd, That the Proof-ſheets of the Firſt Edition were never read to Milton: who, unleſs he was as deaf as blind, could not poſſibly let paſs ſuch groſs and palpable Faults. Nay, the Edition, when publiſh'd, was never read to him in ſeven Years

a3r

[2] For more on the Harvard copy, see Cloud 2013, 151. Throughout are maps of offsets in other copies of this edition and also (on pp. [158]–163, (you won't believe this), of offset evidence in the King's Library copy at the British Library of extensive previous intertextual interbifoliation of its bifolia with those of a copy of the 1724 quarto edition of Tasso's *Gerusalemme Liberata* (also printed for Tonson), plus, even more astonishingly, partial sheets of an unidentified 32mo French Psalter. (Here Comes Everybody.)

[3] way, way—not way

That is where Editor Bentley—HE for Milton alone, and we for Milton in HIM—held that the Proof-sheets of the First Edition were never read to the blind poet. This alternative fact provided the editor with th'irrationale of his copy-text—as for his changes to the verses overleaf (on 3E4r)—from the erroneous conclusion as foisted off on Milton in 1667,

> * *They hand in hand with wand'ring steps and slow,*
> 649 *Through* Eden *took their solitary way.*

to what Milton himself must have dictated:

> * THEN *hand in hand with* SOCIAL *steps their way*
> *Through* Eden *took,* WITH HEAV'NLY COMFORT CHEER'D.

    • Consider finally the last page of the volume, 3I2v, where the Index concludes with ' F I N I S .' But that is hardly the end, for this ' F I N I S .' sets off '. S I N I Ⅎ ' in a Great Leap Backwords onto A1r, the title page itself. In the end is our beginning—who said that? And in the beginning is our end. In a religious epic like Milton's, this short-circuitry reads like a parody of Christian scatology, an over-arching Apocolapse. I hardly need to tell *you* that this is a novel reading of Christian epic—like a serpent with her foot in her mouth and her head up her asp. Or a mare with wings—or a sow. This New York Library copy was good for laughs for us girls, not, of course, that we smart-ass kids could then have fathomed how such a mixing of First and Last Things had come about or have adequately mapped it.[4] But, as Mom droned on, not seeing what we saw, this daughter for one did not have to understand Metaphysics to know when it was funny. And it was funny—very very funny, uproariously drool, and still is. Anal lytical Bibliography is really funny too, I learned years later. But in a serious way. You'll see.

📖

Half of the many copies of Bentley's edition I've seen over the years exhibit various configura- tions of local and remote off-setting, the Clark Library copy among them. In the photograph on p. 120, did you notice the off-setting on the title page? I bet you didn't, though it could hardly have been more in your face—or in young Milton's. Look back now and check, won't you? Perhaps you deemed the mirror-image words 'While', 'Undone', and 'Anies' and the like were just showing through from overleaf and were therefore fit to be ignored? Well, they didn't come from overleaf. They set off onto signature 'A' from the Errata on b4v, seventeen pages away. (On p. 120, I did tell you then that those errors were printed on *top* of 'A', did I not? 'A' is 'A *underneath*'.) b4r—that's a different source of the offset on A1r than is found on the first page in the New York Public Library copy 2. The Lesson? Different copies of this work have different text: exemplars of an edition are simply not interchangeable. In the NYPL copy, the offset on A1r comes from 3I2v, the last page of the book. In the Clark Library copy, however, the offset atop A1r is a summary of Bk. 12, the last Book of the epic (as Milton revised it, from ten Books). In this exemplary exemplar, the epic narrative thus concludes on the very title page— yet another comic short-circuit, the *whole* of Cremation contracted to the *shortest* of stories.   In the next photo, you can see the source of this offset. Set off upon this opening is—what?
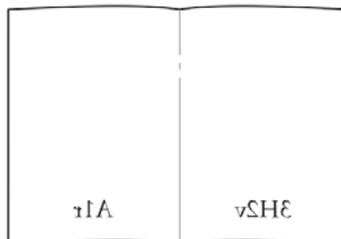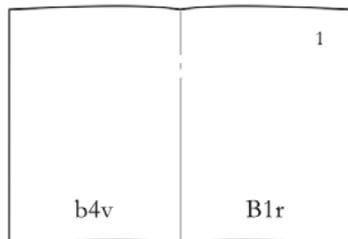
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[4] Not that Mother laughed. We didn't tell her. But I'm telling you.
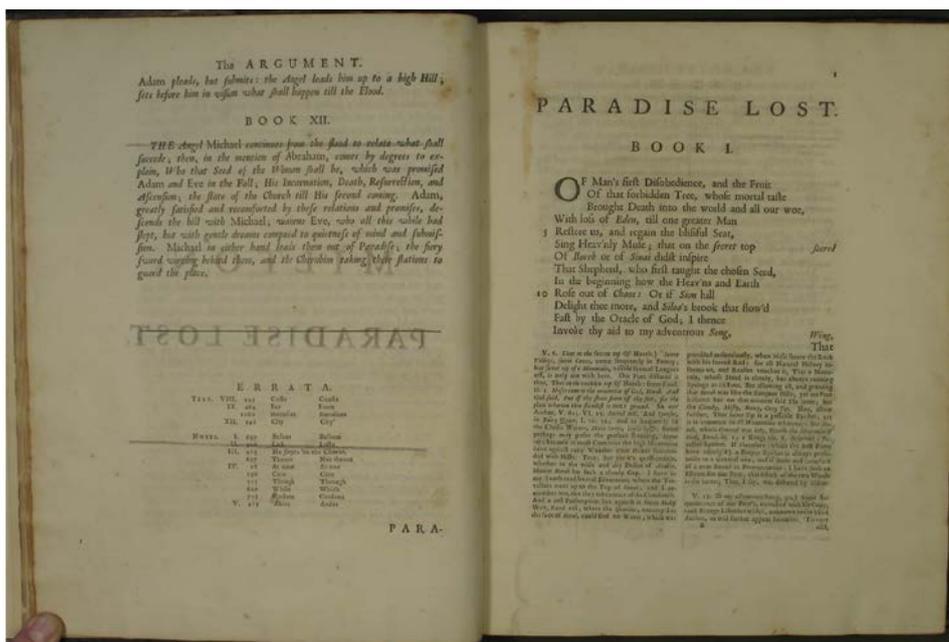
b4v, with offset from A1r   B1r, with offset from 3H2v

So, 'ꓑ A Ꞁ A ꓷ I S Ǝ Ꞁ O S Ꞇ,' mid-page on b4v in the Clark Library copy reflects the title on A1r, not 'P A R A D I S E   L O S T' high on B1r, across the gutter from it. As for this B1r page, it's in conversation with 3H2v, a page from the Index. This opening has a duel identity:

Magnify the bottom of B1r and you'll detect offset of the centred rule that runs the length of the Index page. Higher up, this rule appears doubled. The first three letters of ciceroI N D E X' (right above the letters 'S E   L' in the title) also stutter. Contrast those letters with the shadowy ones at top, which do not stutter. They are showing through from the headline overleaf.

And what of those copies (about half of them, I find) that don't exhibit any remote offsets or even local ones? No skeletons in their closets? Don't you think that their quires may once have been just as out of whack before they were presently bound? And their ink, having dried before they were compressed, mom's the word now?

Centuries ago, compressing the sheets of an edition was a common practice, for after the routine wetting of them for printing and then the drying—drying of the water, but luckily for us, not of the ink—each sheet became huffie, no more level than a potato chip (as you'll see in the text area of the photos on pp. 144 and 146). One place this compression could have taken place was in the standing press. To understand more about it, we'll need to move on to the printer's warehouse. Later, we'll come back to the 1732 *Paradise Losts*. Won't take a minute. Then back to Martial, for that poet—or rather, his printer, Aldo Manuzio—gave us blank leaves. And blank leaves—why *that*'s what this essay aims to read.

📖

Fœtal postures
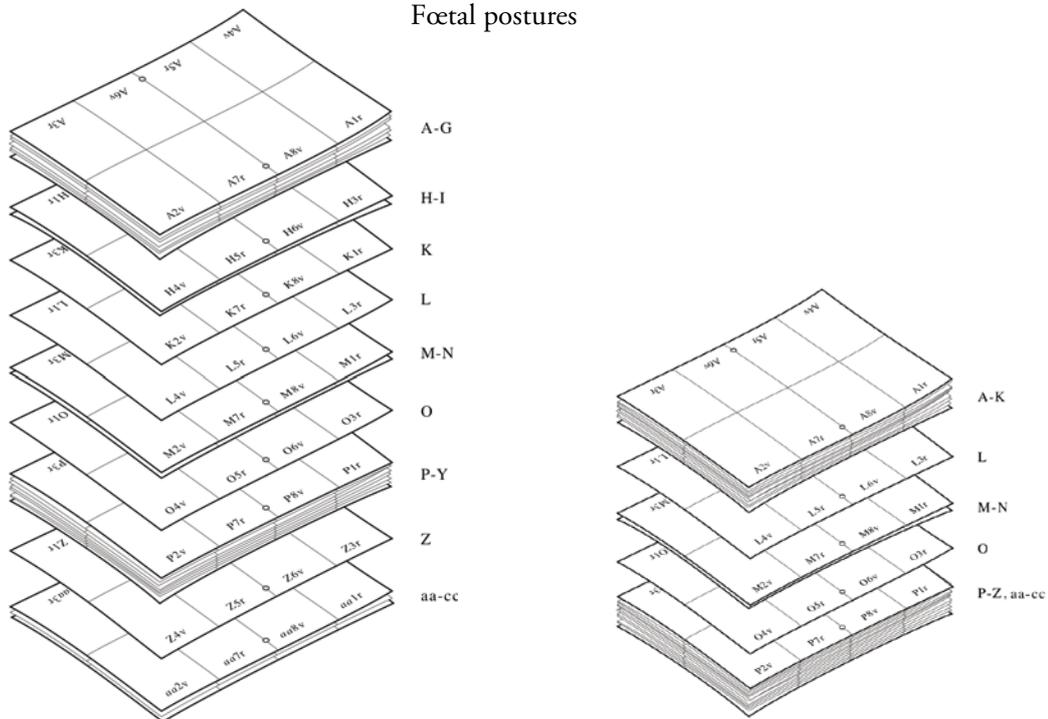
§25 of Joseph Moxon's *Mechanick Exercises on the Whole Art of Printing* (1683/4), 'The Warehouse-keepers Office', describes a practice that predates the author: 'Gathering of Books'—that is, the gathering of unfolded sheets in 'signatural succession' to make up individual copies of an edition prior to 'Colationing'. Gathered Books of the same edition are likely to vary structurally, as in the two examples at UCLA of the Lyonese contrefaction in italic type (c1504) of the second issue of Aldo's 1502 octavo edition of Valerius Maximus (Z 233 A4V235 1503). (It was Aldo, by the way, who pioneered italic type and pioneered octavo format as well.) The contrefaction collates π^4 A–Z^8 aa–cc^8. (Whoops—I see that I excluded half-sheet π^4 from these two models; in a moment, however I'll discuss the place of partial sheets in other editions.)

Offsetting throughout these piles indicates that each Book was complete and outer formes were always 'up'. But in one pile, H–I, L, O, and Z were rotated; in the other L and O. Moxon says it is the task of subsequent Colationing to establish the same rotation throughout.

The sheets of a Book are folded in half as a unit across the long axis, outer forme outword; and groups of 5 or 10 Books are stacked alternately turned 180º for ease of counting and for stability: 'the Fold of the Book being more or less hollow in the middle', stacks in a single orientation would soon topple over. Finally, several stacks of equal height are locked up in a standing press for 'about a Day and a Night' in order to make each Book compact. If the ink has not dried by then, it would set off internally under this pressure. In this way, a standing press can subtly become another printing press. On this exciting subject, Moxon is mum.

Aldo's octavo edition of the satires of Juvenal and Persius is dated August 1501, four months before the Martial. From offsets in a Harvard copy (Lobby I.1.12) of a Lyonese page-for-page contrefaction of Aldo's edition supposedly by Balthazrd de Gabiano, the exploded diagram to the left reconstructs the centre of the folded Book. This edition collates A–G^8 H^{10} I^8 K^4. (Aldo had enlarged H to conclude the text of Juvenal there; and so, Persius began a new quire, signed 'a' in the original, but 'I' in the contrefaction. Aldo's custom was to align textual and material units.) In this central opening of the Book of the contrefaction sits half-sheet K, unfolded. (In the bound book, of course, quire K will come last.) Surrounding half-sheet K in the Book is full-sheet I, then quarter-sheet H, then full-sheet H. Not modelled here are full-sheets G, F, E, D, C, and B downwards, inner formes inward, to A, at the outside of the Book.

The Aldine press warehoused its Books similarly, as can be deduced from very faint offsets in the second of its Juvenal-Persius editions dated '1501', but printed later (some say in 1508, some in 1515 or 1517). Like the first Aldine edition of these satirists, it collates A–G^8 H^{10} a^8 b^4. Unlike half-sheet K in the Book of the Lyonese contrefaction of Aldo's Juvenal and Persius, the corresponding Aldine half-sheet b was folded in half and this fold nested in that of full-sheet a in the centre of the Book. Consequently, when sheets a and b mutually set off, the lines of offset of sheet a on b and sheet b on a ran down (not along) the affected pages. A clearer example of this vertical direction than in any Aldine I have seen comes from the downpour on H5r in copy 1 of the Harry Ransom Center Lyonese octavo of the poetry of Prudentius (PA 8122 P588 1502) printed in italic, supposedly by Guillaume Huyon. (Although not actually a contrefaction, it was based on a quarto printed by Aldo in a roman fount in 1501. More on this edition in a moment.)

modo concipiam uirgo existens puella quo nã modo
etiam fiam mater condentis.

Dolose me loqui arbitraris, ut uidetur, & gaudeo ui=
dens tuam securitatem. confide domina, deo enim uo
lente facile perficiuntur etiam inopinabilia.

Defecit rex ex iuda, tempus uero aduenit reliquum, se=
cundum quod apparebit gentium spes Christus. tu au
tem, quo nam modo hunc pariam uirgo existens, ma=
nifesta.

Quaris a me scire uirgo modũ cõceptionis tuæ, sed hic
inenarrabilis. spiritus aũt sanctus opifici potentia ti
bi obumbrans, operabitur.

Mea progenitrix suscipiens consilium serpentis, a con
silio diuino inexilium missa est, quare et ego timeo sa
lutationem admirandam tuã uerens lapsum.

Dei antistes missus sum diuinũ nuntiare tibi cõsilium.
cur me times purissima magis te timentè? cur reuere=
ris me domina te ueneranter reuerentem?

Sacram quãdam uirginem parituram audiui prophe
tam olim Emanuelem præuaticinãtem. Desidero aũt
scire quo nam modo diuinitatis cõmixtionem natu=
ra mortalium sustinebit.

Annuntiauit rubus incõbustus manens, accipiens flam
mam o gratia plena. ualde laudabilis secũdum te my
sterium admirabile. post partum permanebis eni im
maculata semper uirgo.

Illustratus lumine dei omnipotentis, ueritatis præco
dic o Gabriel uerissima, quo nam modo iuiolata ma=
nente uirginitate uerbum pariam cum carne incor=
poreum.

                              H y

C'est vous. aussi qui pleut.

Huyon

Guillaume Apollonaire, 'Il pleut'

A remarkable feature of such offsets is that often only the outlines of letters are visible. (The reason for such outlining must be that the squash of ink that regularly accumulates at the edge of the impression of a typeface takes longer to dry than the thinly-spread ink deposited by the face itself.)[5]

duſtro

H y

[5] The signature on this page of the Lyonese Prudentius repre-sents the numeral '5' not by v, but by Hellenic y with its tail docked or perhaps bitten by a frisket. (For friskets, see pp. 135–137). As y with tail *intact* is found in Balthazard's Juvenal-Persius, y may actually be an intentional representation of 5. The lines of offset in Harvard copy Lobby I.1.12 of this edition (shown to the right), faintly visible in the fore-edge margin, are, by contrast, horizontal, not vertical.)

Shown next, on the left side, mirror-image, is the bottom of b3r (fol. 75) in Aldo's second edition of Juvenal-Persius, while to the right I have pasted up the sources of the offsets on it, which come from the top of a2r (on fol. 68) and the top of a3v (on fol. 67)—two pages that lay head to head on a(i). In this Aldine example, the lines of offset on b3r run down the page.
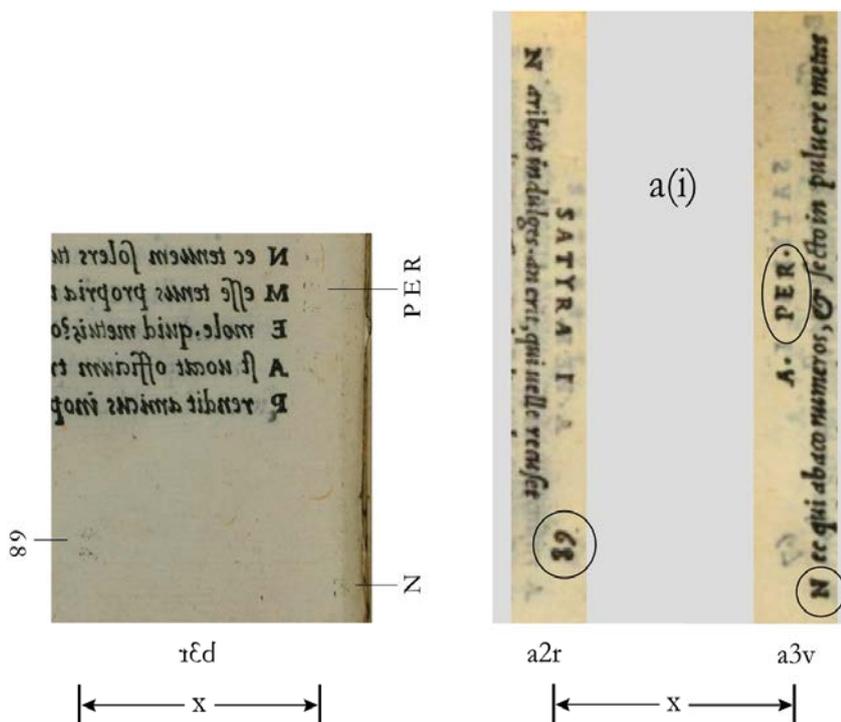
In the gutter margin of b3r appears offset of the a3v headline 'P E R' (for 'P E R S I V S') on a3v and, lower down, offset of 'N', the initial of the first word of the first verse ('N ec') on this page. In the lower margin of b3r, well to the left of offset 'N' (at distance 'x'), the folio number '68' sets off from the headline of a2r. In the previous diagram (the lower on p. 127), two arrows show the paths taken by these offsets of '68' and 'N'. The dimension 'x' appears atop that diagram as well, to represent this same distance between the base-lines of the headlines on a2r and a3v. You'd think that the measure of distance x on forme a(i) would be lost once the head of the bound text-block had been ploughed off; but it can indeed be recovered in this case through the offsets, which both fall within b3r, away from the trimmed bolt, for, in the Book from which the Harvard copy was made, the long axis of half-sheet b did not align with that of full-sheet a. Consequently, typeface from these *two* conjugate pages of sheet a was able to set off on a central area of a *single* page of sheet b, and so survive the routine trimming of the text-block.

In the first Aldine edition of Juvenal and Persius (where '1501' does mean '1501'), the leaves were not numbered; but they were so in this second edition. In the above photograph of the headline of a3r, the folio number '67' appears mirror image as show-through alongside 'N ec'. Do you see it? If '68' on a2r is correct (and it is), shouldn't the next leaf read '69', not '67'? To put this error in context, the following chart lays out by formes the folio numbers in the last three quires of this edition—H[10], a[8], and b[4].

	quire H¹⁰				quire a⁸								quire⁴			
	1r 2r 3r 4r	5r 6r	7r 8r 9r 10r		1r 2r 3r 4r 5r 6r 7r 8r								1r 2r 3r 4r			
outer forme :	57 59		**61 63**		**65 67 69 71**											
inner forme :	58 60		64 66		68 70 72 74											
single forme :		61 62												**73 74 75 76**			

Ten wrong numbers (all of them too low by 2) are underlined and printed bold. Quire H, where the problem emerges, has correct numbers though the quarter sheet, H5|H6, but thereafter, the outer-forme rectos were numbered as if the quire were a regular H⁸—instead of an expanded H¹⁰. The foliation of the outer forme in the next quire is also wrong by the same amount (and evidently for the same reason), as is that of the entire last quire (supposedly printed, like quarter-sheet H5|H6, by a single forme). These facts suggest (without actually proving) a division of labour between two non-communicating compositors, one of whom set full-sheet H(o), a(o), and half-sheet b, all with wrong numbering, while the other set quarter-sheet H5|H6 and full-sheet H(i) and a(i), all correctly numbered.

Each outer face of the outermost sheet of the folded Book shown in the centre of the next diagram, is also open to offsetting—intertextual offsetting—in the standing press, from the outermost sheets of the two Books flanking it in the pressing pile. (In this case, the central Book was obviously not stacked in a group of five or ten as Moxon advised.)
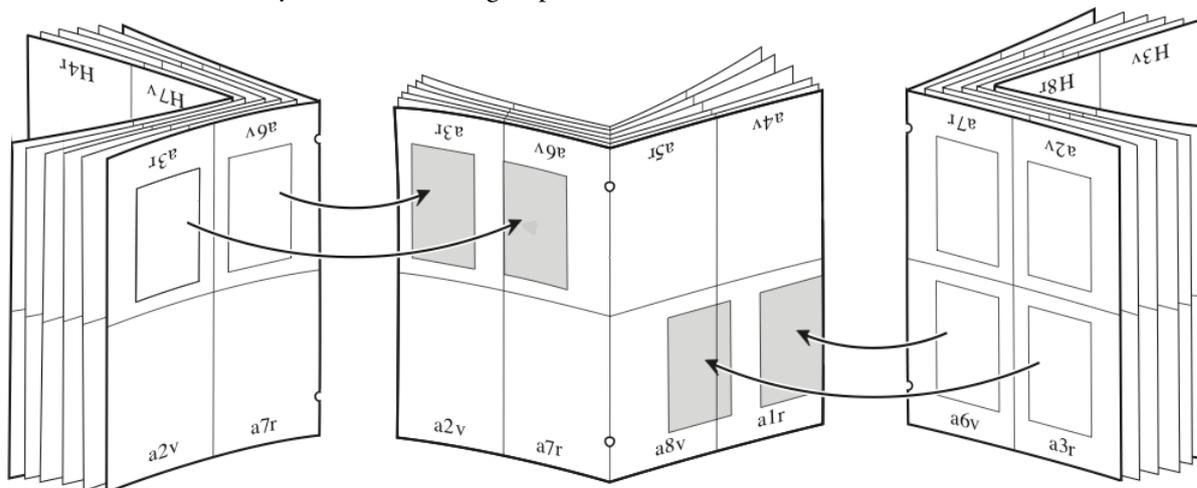
This diagram represents part of the pressing pile for the Lyonese octavo of the poetry of Prudentius, the one supposedly printed by Huyon from a quarto published by Aldo in 1501. The Lyonese printer's italic fount copied the overall italic appearance of Aldo's innovative octavos, but without his minute attention to ligatures. The Lyonese edition collates a–z⁸ &⁸ 9⁸ A–G⁸ H¹⁰. The central Book in the diagram is modelled on the Harvard copy. Because of the different orientations of the flanking Books, conjugate pages a3r|a6r set off *twice* on the central one (as you'll see in the next photographs, of the Harvard copy)—once on a1r (this page is on the lower-right corner of the central Book in the diagram above) and once on a3r (on the upper left). The different alignments of these three Books mean that the shaded areas on the central Book representing offsets lie at different distances from the fold of that Book.
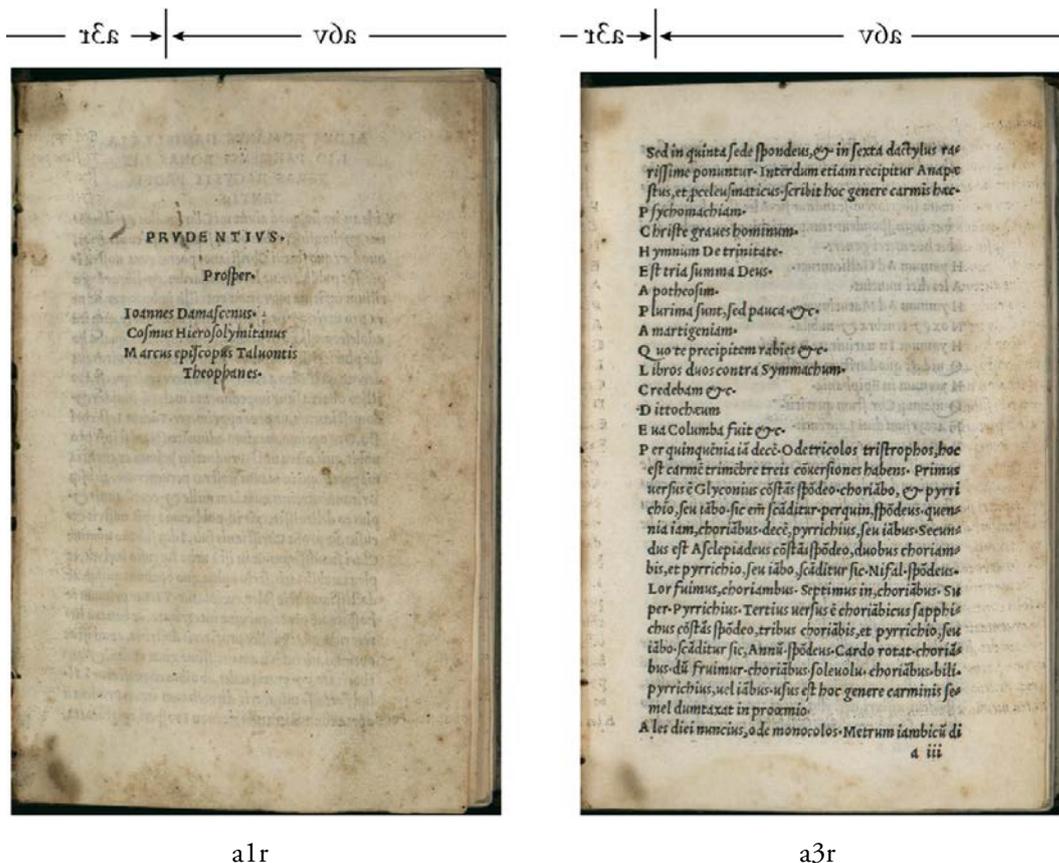
a1r　　　　　　　　　　　　　a3r

Above the photographs of these two pages of the Harvard copy, I have marked where the page division between a3r and a6v occurs in each setting-off. The difference in alignment of the two flanking Books is about a centimetre.

　　The easiest evidence of offset to detect and read here is the column of initials in the gutter margin of a3r, where the text that set off in the standing press is about to disappear into the gutter (to continue on the conjugate, a6v). Quite dark, and therefore readily legible, this offsett of a3r from the left Book into the gutter margin of a3r in the central Book clearly mirrors, just to the right of it, the typeface printed earlier, in the printing press.

　　On the fore-edge margin of a3r in this copy, fainter offsetting of a6v from the left Book can also be detected, but not so easily identified, as the starts of the lines set off from a6v have been trimmed off the fore-edge of a3r—and perhaps also partly trimmed off from the fore-edges of b3r and c3r of this Book, onto which they may have extended. Why 'extended'? In the previous diagram, note that the (shaded) offset pages have shifted away from the Fold of the central Book. When a folded Book consists of more than one sheet, the inner sheets will progressively protrude from the Edges opposite the Fold of the outermost sheet. In the next diagram, for example, the axis of a pile in the standing press (see the arrows) shifts away from the Fold as the number of sheets per Book increases.
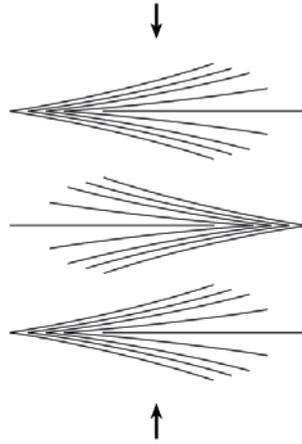
Now that you know what to look for, can you not detect the same a3r column, from the right Book this time, setting off faintly in the gutter margin in the photo of a1r of the Harvard copy? Under magnification, the first three lines of prose are the easiest to make out. Good luck.

In the interior of the Book of the Juvenal-Persius contrefaction modelled atop p. 127, to which I now return, the offsets are right-side up on each page (except for the tops of the four bifolium pages on H5|H6 and whatever upside-down pages they contacted on full-sheet H(i) and on I(o) (as shown next), because bifolium H5|H6 happened to straddle the long axis of those two flanking sheets). (This positioning allows once more for the recovery of the 'x' dimension, as in the '1501' Aldine edition just discussed).

in the Book,
the long axis
of sheet I
aligned here →

H5v   H6r
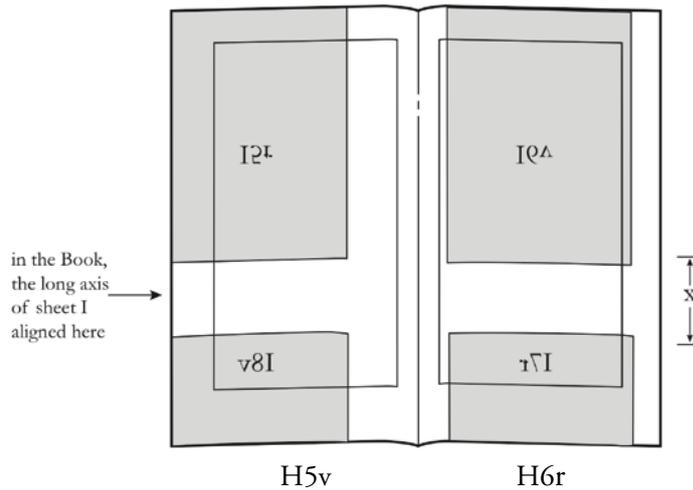
Shown next is a photograph of H9v–H10r in the Harvard copy. (It is the last opening in the full-sheet portion of quire H.) Here there is more spectacular offsetting, all right-side up this time, from just the bottom halves of two pages of I(o) (at the base of this opening), and (at the top) the bottom portions of the other two pages of quarter-sheet H(i). (In the lower diagram on the next page, the horizontal distance between v∂H and ıcH is larger than the distance be-

tween H5v and H6r in the diagram on the previous page because on this page the two leaves are fore-edge to fore-edge, whereas in the diagram on p. 16 they are gutter-edge to gutter-edge.)

At the right of the diagram low on this page, 'a' represents the distance from the base of the text area of H5r and H6v to the original bottom of the quarter-sheet they were printed on. (This bottom has since been trimmed to length b.) That the bottom of the quarter-sheet received offset from the tops of I7r and I8v (as shown in the model on p. 16, of opening H5v–H6r) kept the tops of these two pages from setting off on H9v and H10r—hence the large mid-page areas free of offsets on these two pages.

On H10r in every copy of this edition I've seen, just below where I8v sets off, 'ɔɔ', the last two letters of '*uice*', inverted, thicken the plot. The types that printed these very letters previously appeared on H7r in v. 53 of Juvenal's 'Satire 15': 'D *ein clamore pari concurritur, et uice teli*'. (In Aldo's original, the *c* and *e* form a ligature, but none of the printers who imitated Aldo's italic fount cared as much as he did to join such letters.) During the printing of full-sheet H(i) in the printing press (not the standing press), '*ce*' must have peeked out upside down through a small hole in the frisket into the space below the end of 'Satire 16' that had been intended to be blank. Since '*ce*' was inked, so must have been the rest of the line of type that held it in place—plus all the next *four* verses (I've now learned), vv. 54–57 of Satire 15: 27–31 (these were the last lines on H7r), which (except for '*ce*') must have printed their ink on the front of the frisket and simultaneously debossed it (think 'the inverse of Braille'), therefore printing

H9v   H10r

H9v   H10r

blind up into the area of the sheet where I8v set off later. Now it's getting interesting: if they debossed the frisket, they would also have debossed and thus printed blind the sheets going through the press while '*ce*' was also printing them more legibly with ink. Blind printing here, in fact, allowed me to identify these lines. In skin copies, like that at the Houghton Library at Harvard, they can actually be read—hence the following map.
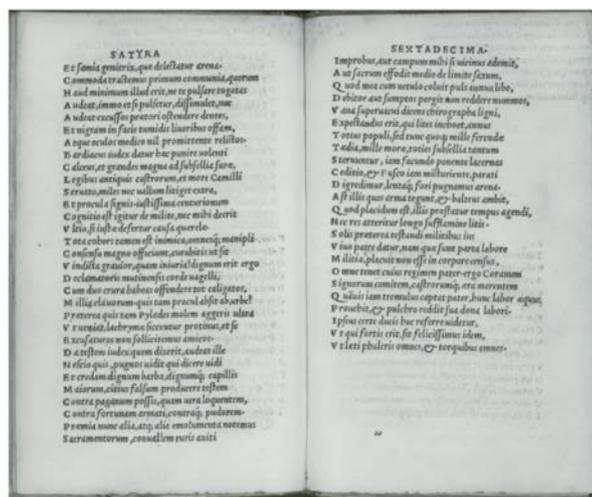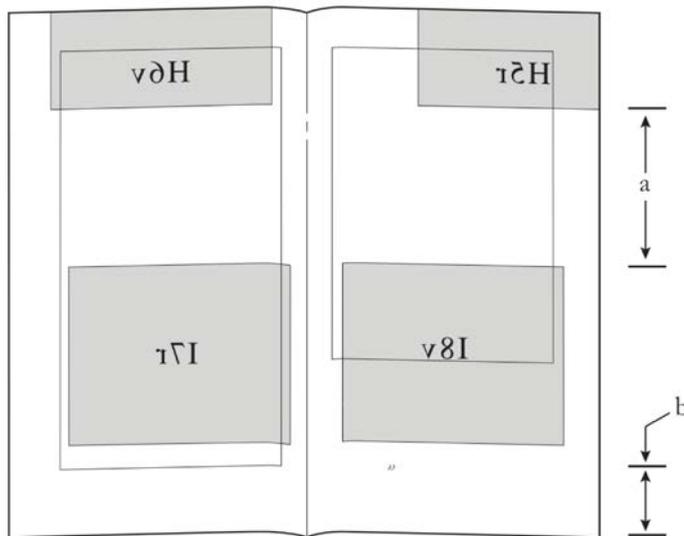
H7r   H10r
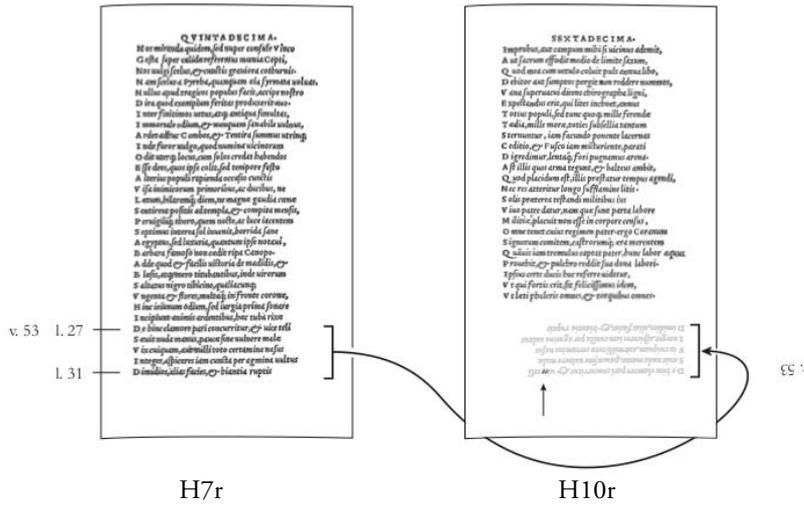
This H10r page remarkably blends past, present, and future. Along with all of the present, the 'SEXTADECIMA' verses on H10r, it combines some of the past, H7L and H6L, and some of the future, I8v. Also, printed blind overleaf is rearranged type from the more distant past, F8r, and in copies printed on skin, like the one at Harvard, some of this text can also be detected as show-through on the upper outer corner of H10r, as F8I. (In the following map, made with the help of raking light, I have yet to map the bottom of H10v.)

F8r   H10v
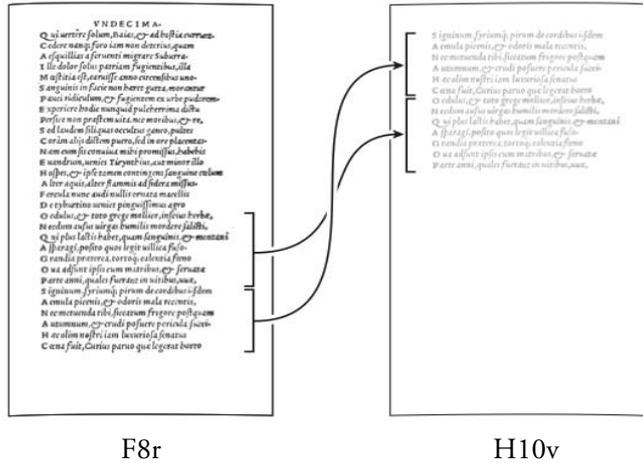
H7r and H10r are both pages on full-sheet H—H7r on the outer forme and H10r on the inner. Since the type of H7r had been broken up before H10r was imposed, we can deduce, for what it's worth, that Balthazard put the outer forme of full-sheet H sheet to press before the inner.

There is one more dizzying aspect of the offsetting onto H10r. We need to specify which setting of quarter-sheet H5|H6 pertains, for Balthazard (like Aldo) composed and imposed the text of a quarter-sheet twice so as to fill an entire forme of octavo for efficient printing of four copies per sheet (in a run only a fourth as large, therefore, as for each of the full-sheet quires in this edition). These sheets were printed by work-and-turn or end-over-end (as I'll explain in detail

when I draft Tome the Second of *Cum donat uacuas*) and therefore (this is the present point) there are likely to be variant readings in the different settings of H5 and H6 that might set off on H9v or H10r. These would not be your garden variety of stop-press variants, simply because, literally, the press would not have stopped to print them. Nor is it easy to establish which variants would have been composed earlier and which later, as they would all belong to the same printed state.

A word must be said now about two terms recently introduced: 'friskets' and 'raking light'.

Friskets—function & dysfunction
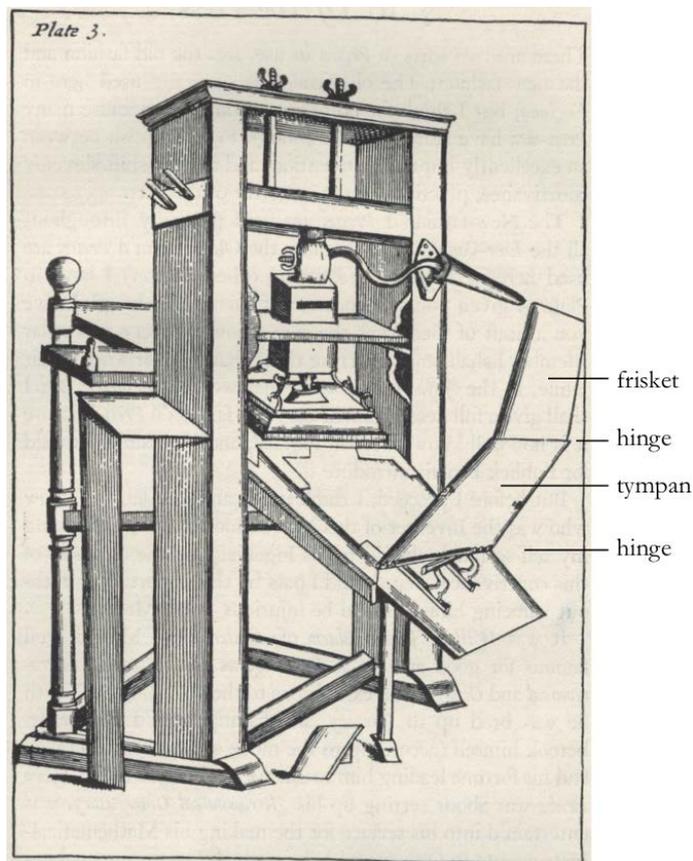
This cubist depiction of 'The Old-fashioned Press' is from §10 of Moxon's *Mechanick Exercises* (1683/4). I have added labels for the platen and for four parts of the carriage assembly. (This is not the oldest, the single-pull press of the early incunable period, but rather the two-pull press, which succeeded it.) The frisket is the upper rectangular frame of the carriage assembly. This frisket-frame is covered with skin, which is also loosely called a 'frisket' (and that is the way I shall mostly refer to it hereafter). The frisket-frame hinges counter-clockwise down over the sheet to be printed, which is positioned on two registration pins out of sight on the other side of the tympan—which is the lower frame, also covered in skin. (There may be some packing between the sheet and the tympan.) The folded assembly of frisket, sheet, and tympan hinges in turn counter-clockwise down onto type locked in a chase (Moxon does not illustrate the chase), which all reposes on

the stone—then tympan, sheet, frisket, locked-up type, and stone ride together horizontally as a unit of the carriage and come to rest in one of two positions under the platen, ready for printing half a forme at a time, for in this two-pull press, only one half of a forme could be printed per pull. In these positions, the frisket holds the sheet up against the tympan. And, to expose the sheet to the pages of inked type below, windows of appropriate size are carefully cut into the frisket, whose remaining parts keep stray ink from soiling the margins of the sheet.

As Moxon's illustration neglects to depict any of these essential windows in the frisket, shown next is the Bodleian Library's Broxbourne 97.40, a cut-down frisket (now merely 27 x 41cm) that previously had been part of a manuscript in folio format on Canon Law and later as the first of two friskets for printing a single forme of some unidentified octavo in two colours—this first frisket for the red printing, the second (now lost) for the black.
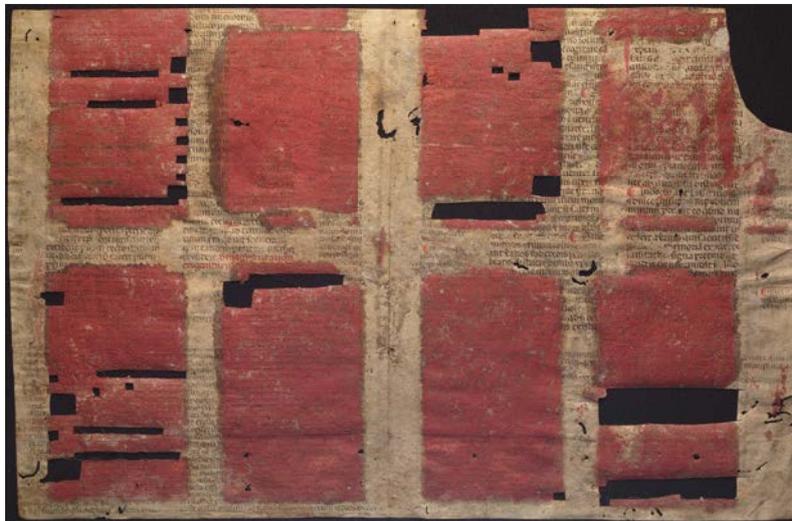
Ideally, the small windows in this frisket allowed for the printing of just red initials and headings, but not of the surrounding text, which currently held the red letters in place. Once the red-printing had finished and the types that had printed red were replaced with spaces, a second frisket with windows open to the full extent of each type-page would allow for the remaining

text to be printed black when the sheets already printed red were run through the press a second time, to perfect that side of each sheet.
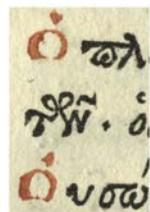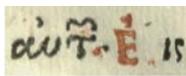
Luckily, mistakes happen—and they divulge some of a frisket's secrets. An aperture cut too large in a red frisket can prematurely reveal some of the surrounding type intended only for printing later in black. Such double printing becomes obvious when registration is off between the two print-runs (for then the black ink cannot obscure any red ink that might have printed beneath it), as in the first of the examples, to the left, of the (same) period printed twice, red first, then black, on β8r in a copy of Aldo's Greek Psalter (c1497) in the Boston Public Library (Q.405.133). Either the window cut for the red Epsilon was too wide or the frisket for the red run was off-register side to side.Registration for the black printing shifted by the distance between the red and black impressions of the period before Epsilon. In the second illustration, witness what happened to the bottoms of the two red Omicrons

on δ4v: an off-register frisket bit them. These windows were either cut too high in the frisket or the frisket shifted up. Note that the lower Omicron has a horizontal red streak at bottom, which must have been printed by the edge of the window in the frisket. In the last image from β1r, a more obvious streak can be seen. During the red run, the build-up of ink printed on the front of the frisket by the rho-iota ligature adjacent to the window must have gradually spread to the edge of the window and eventually over it and onto the upper surface of the frisket, where it was able to contact the sheet. Such a build-up and spreading of ink throughout the page areas on the frisket during the print run explains why the text printed on the Broxbourne frisket became completely illegible.

Raking light

When typeface, inked or not, bites the under side of a frisket, it compresses and debosses it along with the sheet above the frisket and any packing above that and also compresses against the platen the skin of the tympan, beyond the packing. A beam of light raking across the surface of a sheet so stamped—in my purse I always carry a tiny torch with a very tight beam—will brighten the upper surface while the depths remain in shadow. (These 'depths' were actually highest in the press, of course, for the surface to be printed faced down there.) The slight contrast of light on the surface and dark in the depths is often all one needs to reveal the presence of blind text and even to make it legible, especially in copies printed on skin, rather than on paper, for skin especially well remembers—as you can see next on the last page of *De motu animalium* in vol. 3 of the skin copy of the Aldine Aristotle at New College, Oxford (BT1.3.6), a folio-in-10s dated January 1497. It is reproduced here Courtesy of the Warden and Scholars of the College.
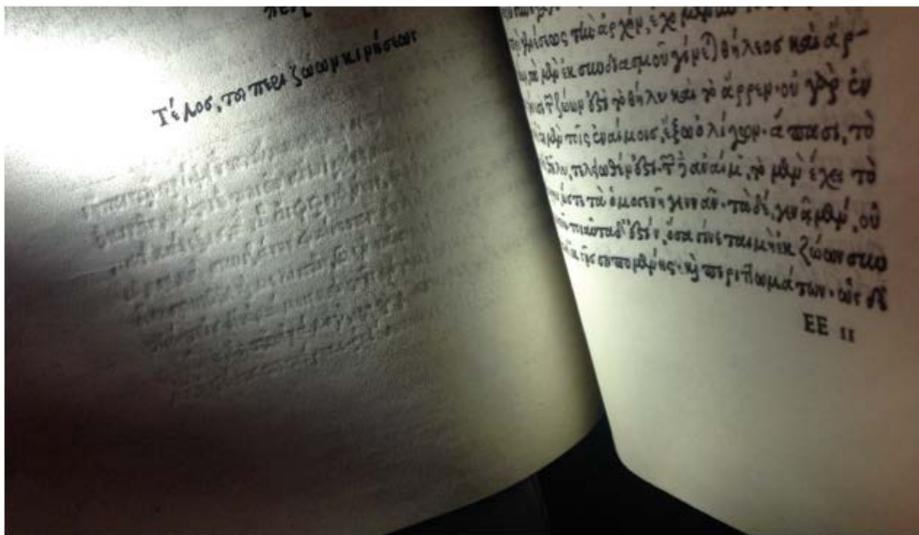
My light raking across EE1v from upper left reveals eight lines of blind type at the bottom of the page which have printed through a frisket whose window opened, properly, only to the last inked line—the 'Τέλοσ' or 'Finis' line. In raking light, this end is obviously *not* the last word.

    What is the source of these blind lines? It lies not where I looked for it first, in ΔΔ, the previous quire as the book is bound, but rather two quires back—on ΓΓ6v.

ΓΓ6v, f. 266   EE1v, f. 281

Why so far away?—thirteen formes, it would seem. The answer, as headline analysis showed me, is that in the schedule of composition for this portion of vol. 3, alternate quires were composed by different compositors or teams of compositors, working from the outermost forme of the quire to the innermost. Thus it was quire ΓΓ not quire ΔΔ that was composed immediately before quire EE. Accordingly, ΓΓ6v was produced merely three formes prior to EE1v, not thirteen.

As a frisket is a semi-permeable membrane, the recurring pressure of newly inked type-face on it from below in the printing press may eventually force ink up through the frisket itself, as in this example from Harvard's copy of Aldo's Prudentius (WKR 3.2.12, vol. 1), a quarto-in-8s printed on paper, where, even in the light of common day, traces of seven verses of masked type are detectable after the 'Finit' line. (Here again, a finish that is not final.)
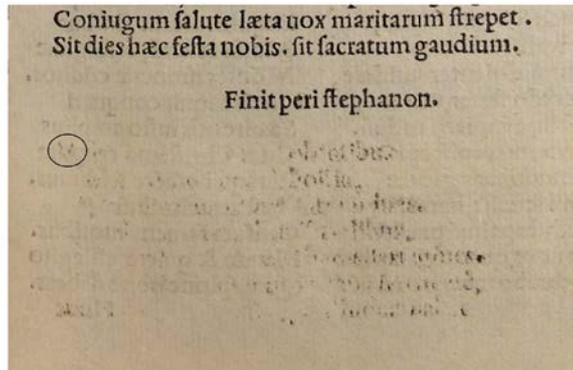
pp8r

Can you make out the (circled) initial of the first 'blind' line—a 'V'? And this verse ends in 'bus', does it not? So, we know the exact length. And the varying verse lengths that follow (resembling the cut of a key) contain clues to the identity of the source or sources. Here they open a door to the previous quire, where, on oo3r, we see that the 'V … bus' line reads in full 'Velut retortis intuens obtutibus'. The bibliographic secret leaked by this and adjacent lines is that the outer forme of the inner sheet of quire oo has provided type for the outer forme of the outer sheet of quire pp, which, by my reckoning, is two formes away in the printing of this work.

oo3r   pp8r

The practice of Booking continued into the nineteenth century with a new twist, as seen in the following modelling of offsets in a typical Book of *The Strayed Reveller,* Matthew Arnold's first volume of verse. Printed by Richard Clay of Bread Street Hill, London in 1849, it collates A⁴ B–I⁸. This edition looks like an octavo (and is even billed as a 'small octavo' in the advertisement in Arnold's next book of poems, *Empedocles on Etna*, 1852). But Clay printed a forme of all the sixteen pages for a quire on one side of a sheet, then turned it end over end and printed the same forme on its other side. His format was therefore 16mo, not octavo. (We have already encountered similar procedures in the quarter- and half-sheets of sixteenth-century printers.)

Consequently, there is no outer forme and no inner forme. (In the diagram above and in the discussion below, I will nevertheless resort to the fiction of outer and inner formes in order efficaciously to distinguish the two sides of each half of these sheets after they have been separated.)

So, each Book of this edition contains Siamese twins. (The same is true for the Booked *Empedocles*, also printed by Clay, down to the same off-centre preliminary half-sheet.) In this model, note the conjugacy foot to foot of H4r and H4v, atop the fold of sheet H. Similarly, A4r and A4v nearby on the half-sheet are still conjugate, fore-edge to fore-edge, where they have been pierced by a registration pin. A pin also pierced the conjugate feet of H4r and H4v. Eventually, the cutting-in-half of the eight full-sheets and one half-sheet of each Book presented the binder with materials for one left-hand copy of *The Strayed Reveller* and one right-hand.

The family secret, guarded these almost two centuries, is that, despite appearances, these twins are not identical. In the left-hand copy, G(i) and H(o) mutually set off, as do both H(i) and A(o)/A(i) (as the arrows show in the latter instance); and, oversheet, A(i)/A(o) sets off onto I(o), and vice versa. But in the right-hand copy, it is G(o) and H(i) that set off on each other; and, oversheet, H(o) and I(i) set off mutually and not at all onto A. In both left- and right-hand copies, half-sheet A variously displays offset from H(i) and I(o); but, after cutting, only in left-hand copies do H and I show offset from A—the A of that copy. In right-hand copies, the offsetting of H(i) and I(o) onto A, the first quire of the book as bound is intertextual—i.e., from H(i) and I(o) of the other twin. In the centre of the Book, all of I(i) on the left and I(o) on the right mutually set off, but, after cutting, in left-hand copies I(i) reflects I(o), whereas in right-hand copies I(o) reflects I(i). These offsets in the central sheet of the Book (in the last quire of each of the two bound books that are made from it) are also intertextual.

So it is that though the text of Arnold printed in the printing press offers (barring misbinding) to become identically arranged in both left- and right-hand copies, the shadows in left-handed copies are differently configured than those in the right-. Only when the offsets in left- and right-handed copies are taken together can one read the Booking of this edition.[6]

<center>📖</center>

But, dammit all, this sojourn in the warehouse has not brought us to an explanation of the offsets seen in the New York Public Library copy 2 of the 1732 *Paradise Lost*. In the warehouse, most every offset has proven to be remote, whereas in this copy of *Paradise Lost* most offsets are local. Furthermore, the abundant remote offsets of the warehouse are mostly on sheets adjacent in signatural succession, but in *Paradise Lost* the few offsets that are remote leap over considerable distances. Crucially, as the *Paradise Lost* offsets in the right column on p. 122, with the exception of the misfolded quire a pertain to the outsides of quires, to 1r and 4v pages in those made from full sheets (and 1r and 2v pages in half-sheet quires), they must have been made after the full sheets had been folded not just once for Booking, but rather twice for quiring in quarto. These facts indicate that to understand remote offsetting in this edition of *Paradise Lost*, we must now leave the warehouse. Next stop, the bindery.

[6] As they have no discernable offsets, quires B–E may have been printed much earlier than F–I and A or perhaps they used a more rapidly drying ink. Therefore, the outer side of the Books bear no offsets of the kind seen in the Prudentius Book. I include B–E in this diagram on analogy with the Books of *Empedocles on Etna* and those of Huyon's Prudentius, in which offsets are indeed found throughout and on the outer faces. Quires A of *The Strayed Reveller* and of *Empedocles on Etna* include the index with page numbers for each title. That was a good reason for printing sheet A late.

New York Public Library   Clark Library
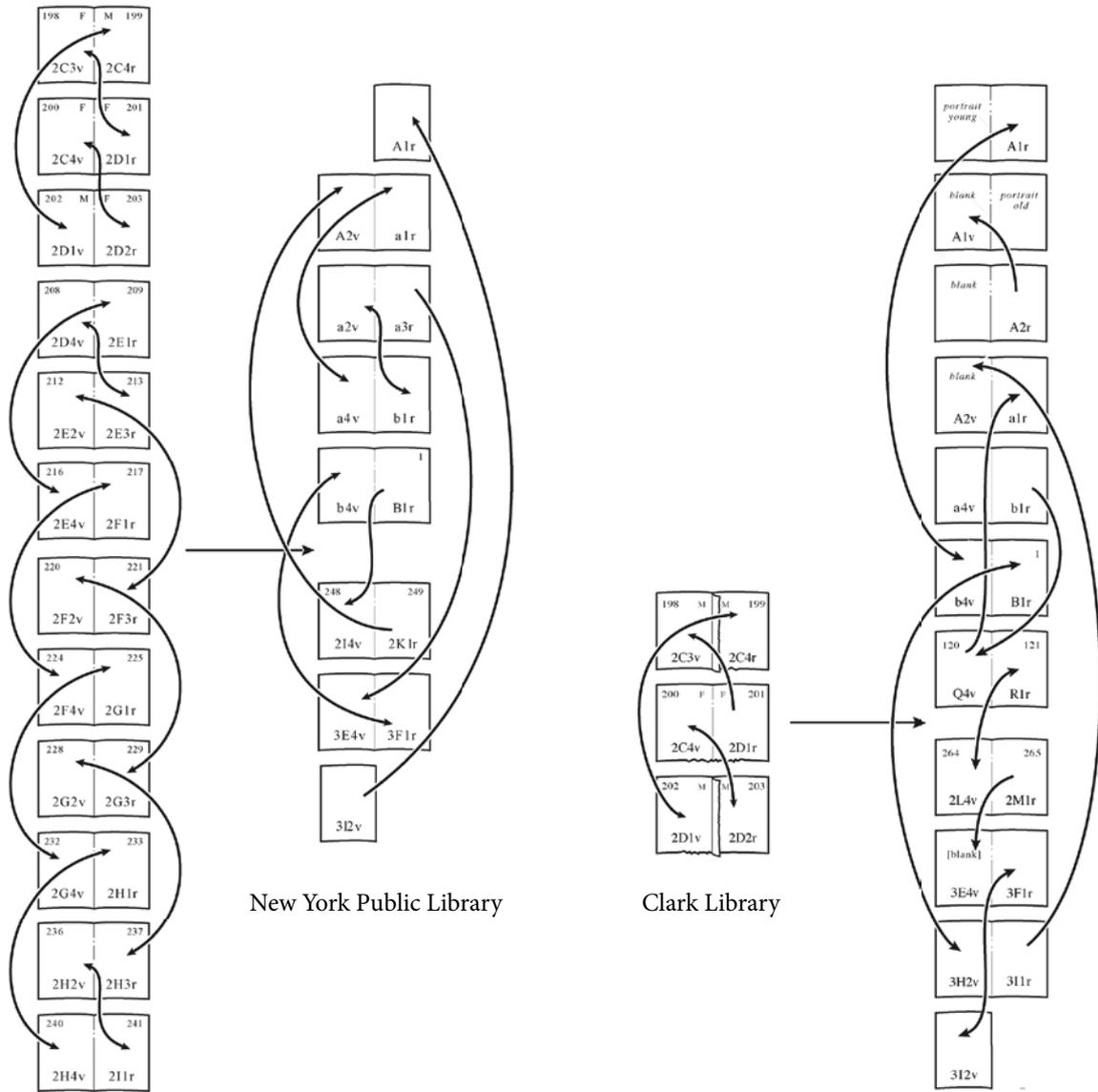
Now back to *Paradise Lost*. On the right is a map of the remote offsets in the Clark Library copy. (On the left, for comparison, I have repeated the map of the New York Public Library copy beside it.) The Clark Library copy has twelve remote offsets, all different from the nine of the New York Public Library copy, but frequently involving the front or back pages of the same quires.[7] Its local offsets run, for example, through each of two narratively-continuous

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[7] That 2C4|2D1 in the Clark Library copy is a cancel bifolium is suggested this time not by the mismatched Felt and Mould pages in an internal opening, as referred to on p. 122, but by the visible stubs of the original 2C4 (between pp. 198 and 199) and 2D1 (between pp. 202 and 203). Confirmation of the presence of a cancelling bifolium comes from the traces of a continuous deckle edge (depicted above) crossing the gutter along the bottom of 2C4|2D1. This example of a cancel presents a Mould surface on the outside, Felt on the inside.

units, R1r–2L4v and 2M1r–3E4v. The extremities of these two units come to attention because of the arrows that show they bear remote offsets. The first unit has 19 quires, the latter 17, each therefore containing about one third of the quires of the volume.[8] Paradoxically (this is the crazy part), in R1r–2L4v the front page sets off remotely on the back page, and vice versa, like the proverbial dog chasing her tail, except this bitch actually caught up to it. Good Girl! When written, the expression 'R1r–2L4v' appears to have a beginning and an end, but it must be understood also to go in a loop because, as the two-headed arrow proclaims, R1r once *followed* 2L4v, and 2L4v once *preceded* R1r. The other unit, 2M1r–3E4v, must also be circular, but as 3E4v left the printing press blank, it could not later make vivid the closing of the circle by setting off. The remaining quires of the Clark Library total 22, but, as six of them are half-sized, the overall bulk of this unit is like that of each of the two units previously discussed. The sequence of this third unit, A—3I—(3F–3H)—(B–Q)—(a–b), as the arrows show, is also circular, A and b mutually seetting off (with an oddity, in that quire a looks as if it were inserted late between Q and b, so that Q4v was in contact in turn with both b1r and a1r).[9] This trinitarian organization of the unbound quires hardly seems chaotic, does it?

tripartite

Not to deny the role of the standing press to create remote offsets, I'm now going to give the major credit specifically to the hammer to explain the creation simultaneously of local and remote offsets in these copies of Bentley's edition. *Yes*—the hammer. Why didn't I think of it earlier? The three units just identified now will be called '*battés*'. Each was repeatedly beaten on both front and back with a hammer, then (here's the magic) split in half, and, with halves reversed, beaten again, on both faces. It was this reversal of the two halves of each *batté* allowed Missy to bite her own tail—allowed, for example, R1r and 2L4v mutually to set off, while all other offsetting in the *batté* remained local.[10] Of course, when R1r and 2L4v mutually set off, they did so *locally* in the rearranged *batté*; but when, for binding, narrative order was re-established, their offsets came to *appear* remote in the printed book. As this weird process is spelled out in R. Cloud's 'Fearful Asymmetry' (referred to in n. 2) or better still, consult R. M^acGeddon's '**Hammered**',[11] I'll say no more about it here in the interest of saving time (which we're almost out of). After all, this paper was supposed to be about Martial (whose *Apophoreta* 14.12 is quoted in my title), not about Milton and his blank or over-printed pages. But first I shall take a little more space in passing, very quickly, to identify the two *battés* in the New York Public Library copy: one is B–2I, 19 quires; and the other (2K–3E)—(a–b)—(3F–3I)—A, 32 quires, with front and back mutually setting off (as now expected). That was quick.

And, second, to display the following four photos (never before published) to make the matter of hammering vivid to you without your having to turn to the outdated work of these two men (Cloud and M^acGeddon)—essays in print, not convenient files online. (Nor are they

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[8] In the count of 19, I treat the cancellans 2C4|2D1 as a quire, as it is separately sewn. The bulk of this unit is better expressed by '18'.

[9] I'm surprised that this second *batté* is twice the size of the other. (I wonder whether I missed remote offsetting in the middle of it?) Will have to check when this plague ends and I can travel again..

[10] This reversal offers a ready explanation for the stuttering observed on p. 125 in the remote offsetting of 'I N D E X': the contents must have shifted during the reversal and, beaten before and after, set off twice—stuttered.

[11] R. M^acGeddon (2010), '**Hammered**', *Negotiating the Jacobean Printed Book*, Pete Langman, ed., Ashgate, 136–199. See also Jeffrey S. Peachey (2013), 'Beating, Rolling, and Pressing: The Compression of Signatures in Bookbinding Prior to Sewing', in *Suave Mechanicals: Essays on the History of Bookbinding*, Vol. 1, Julia Miller, ed., The Legacy Press, 316–381. I had thought that that aim of beating was to make the text-block flat. But Jeff taught me that the aim was practical: by making it compact, to keep out dust. Jeff has the largest and nicest knowledge of beating of any man living.

easy to read, what with their affected styles and distracting diagrams.) Seeing the following four images should be sufficient to make you believe (not *you*, Michael, for you already believe) that hammering did exist as a lead-up to book-binding and that it can explain the remote offsets in the 1732 *Paradise Lost*. Seeing will be believing. You'll see.
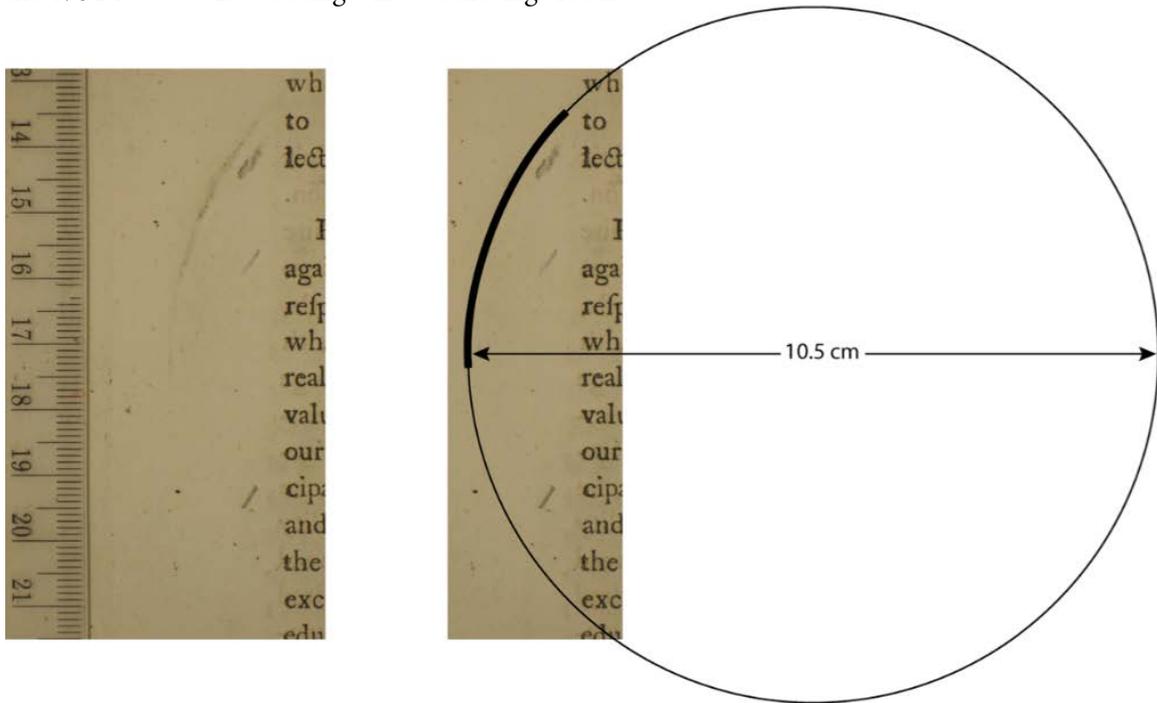
The image above left, with ruler, shows the inner margin of the last page of quire I (p. 64) in the copy of Maria Edgeworth's 1798 *Practical Education*, a quarto, at Queen's University, in Kingston, Ontario (reproduced here from LB 1025 .E128, courtesy of W. D. Jordan Rare Books and Special Collections). The *batté* of which p. 64 was an outer face was beaten after the ink had dried. Clumsily striking at an angle, the beater's hammer left indentations of approximately 55° of its rim. To the right, I have extended the arc full circle to recover the approximate diameter of the hammer-face: 10.5cm. (I have learned that this is a measurement close to one of the hammers in Jeffrey Peachey's collection.) An 'acute accent' just inside the arc is repeated directly below, faintly at 1.4cm and again, even less so, at 4.7cm, perhaps from less angled blows of the hammer, which left no impression of the rim this time. I suppose this 'accent' represents a flaw, if not in the hammer-face itself, then in the surface on which the quires were beaten.

The practice of beating surely predates the eighteenth century. Faint arcs of comparable measure (of a circle almost 9cm in diameter, I calculate) appear on the title page of the Morgan Library & Museum's copy of Aldo's 1505 folio edition of Aesop (PML 1114). It too must have been beaten after the ink had dried, for the indentations of the rim are clean in this example and thus appear only in raking light. Turn the leaf to see it now.

Scroll down

Habentur hoc uolumine hæc,uidelicet.

V ita,& Fabellæ Aesopi cum interpretatione latina,ita tamen ut separari a
graeco possit pro uniuscuiusq; arbitrio . quibus traducendis multum
certe elaborauimus. nam quæ ante tralata habebantur, insida admodú
erant,quod facillimum erit conferenti cognoscere.

G abriæ fabellæ tres & quadraginta ex trimetris iambis, præter ultimam
ex Scazonte, cum latina interpretatiõe . Quas idcirco bis curauimus in
formâdas, quia priores, ubi latinum a græco seiungi potest, admodum
quàm incorrecte excusæ fuerant exempli culpa . quare nacti emenda-
tum exemplum,operæpretium uisum est iterum excudendas curate , ut
ex secundis prima queant corrigi.

P hurnutus seu,ut alii,Curnutus de natura deorum.
P alæphatus de non credendis historiis.
H eraclides Ponticus de Allegoriis apud Homerum.
O ri Apollinis Niliaci hieroglyphica.
C ollectio prouerbiorum Tarrhæi,& Didymi,item eorum,quæ apud Su-
dam,alios'q; habentur per ordinem literarum.
E x Aphthonii exercitamentis de fabula.Tum de formicis,& cicadis græ-
ce, & latine.
D e Fabula ex imaginibus Philostrati græce, & latine.
E x Hermogenis exercitamentis de fabula Prisciano interprete.
A pologus Aesopi de Cassita apud Gellium.

AL   DVS
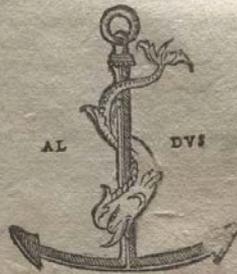
Balthazar Lydius

As this copy of Aesop has been rebound, the evidence of these impressed arcs cannot specify when the beating occurred. But the next image, courtesy of the Princeton University Library, from K8v in its paper copy of Aldo's November 1495 folio edition of Aristotle's *Praedicamenta* (the first of five volumes of his works published over the next three years), allows for more precision, because, luckily for us, it was beaten before the ink had dried.
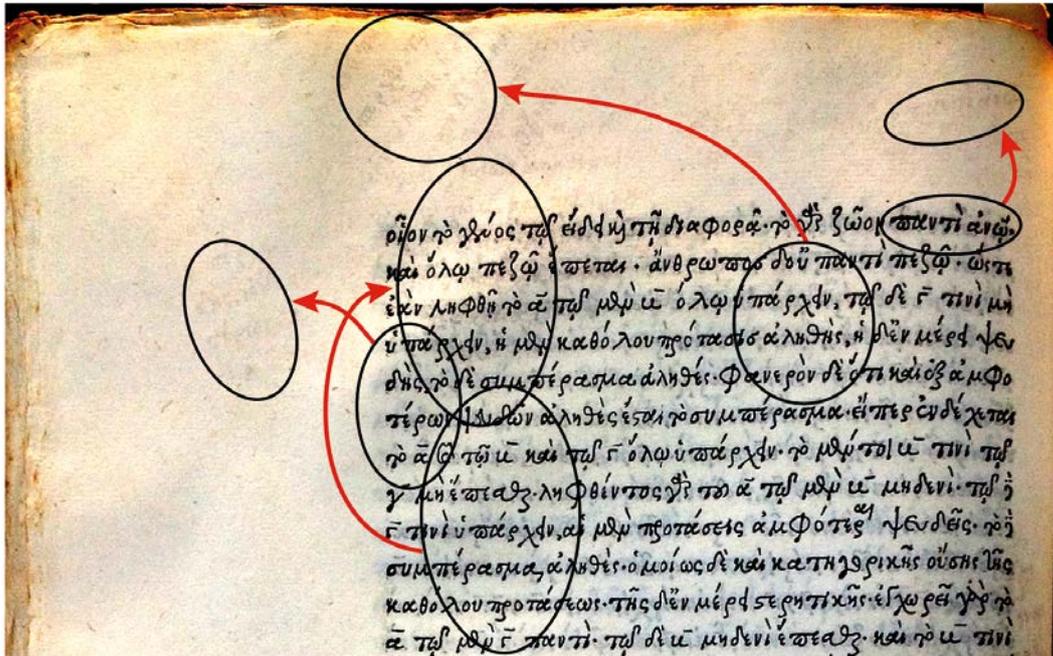
Here we see evidence of properly aimed hammer blows, which left no impression of the rim. But the centre of the slightly bevelled face of the hammer, exerting maximum pressure on impact, picked up still-wet ink mirror image, then deposited it—*printed* it—right image on the next blow or blows. Each arrow in the photograph connects the place where the hammer took up ink to where it deposited it, usually after clockwise rotation of the *batté*. (There are more deposits on this page than are traced here.) This beating must have occurred soon after printing. The fact that H1r of this copy shows similar hammer transfers may establish the size of this *batté* as consisting of quires H, I, and K, each of 8 leaves—so, 24 leaves in all. If so, it was beaten only on the outsides and not split in two, then rearranged, and beaten again, as were the *battés* in the Clark Library copy of *Paradise Lost*. (Or perhaps those 24 leaves are only half of the *batté*?)

Because of debossing of the sheet during printing, the surface of the text area of each leaf increased relative to the areas surrounding. This discrepancy explains the typical buckling that ripples across the text-area of the Aesop title page and on 4X1r (p. 705) of the Jordan Library's *Practical Education*, shown next (and so throughout all the leaves of the *batté*). Evidently, hammer blows advanced around the edges of the text area to address the border between the expanded centre (expanded by the bite of the type) and the constraining unchanged periphery.
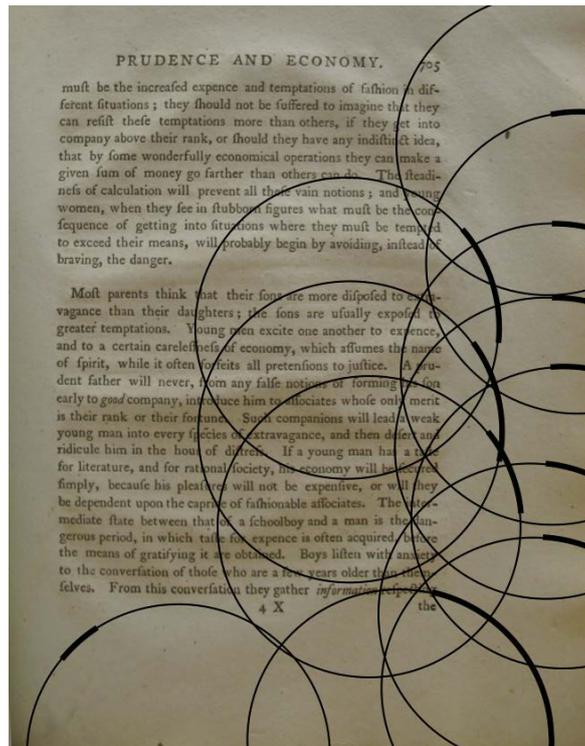
Obviously, this beating the edges of the expanded surface area of the text where it meets the more or less original dimensions of the adjacent margins could not have flattened the leaves, but it was able at least to make the *batté* compact. Jeff taught me that. Here, as in the diagram on p. 143, the short dark arc in each of the twelve rim-defining circles represents the impressions of part of the rim of the hammer, and from this arc the position of the whole face of the hammer has been projected. Of course, only those blows struck at too steep an angle have left evidence. One suspects there were also at least another twelve blows, twelve level blows along the other two sides of the text area on p. 705.

Note that the three blows along the right edge of the text area left their arcs at 2 o'clock, whereas the seven corresponding blows in the adjacent margin are at 1 o'clock—and the arc at the lower left is at 11. From such evidence, one envisions the rotation of the *batté* for beating its four edges in turn. The difference between 11 o'clock and 2 suggests a 90° rotation, but the difference between 1 and 2 o'clock merely the slight flexing of wrist and elbow in the numerous blows between rotations. With these speculations, we begin to conjure up across the centuries the varied postures of the Beater himself and his manly Work—his Work well done, if you can't detect it (as in most books one cannot).

I know we're running late, but I'll include in this discussion of hammering a strong example from Bentley's 1699 octavo *A Dissertation on the Epistles of Phalaris* to show how textually rich offsets can be. (Some readers, Michael, may still be thinking that offsets are merely derivative.) The ideal collation for this work was A^8 a–f^8 B–$2M^8$ $2N^6$. But leaves A1, e7, F3, and K5 were replaced by cancels. The following maps of offsets argue that these cancels were present during the beatings, sometimes along with the originals, as with A1 in the Fisher Library copy and e7 in that of The John W. Graham Library, Trinity College, both at the University of Toronto (as is the Victoria College copy, also mapped here, for general interest along with the NYPL copy).

Trinity College   Fisher   Victoria College   New York Public
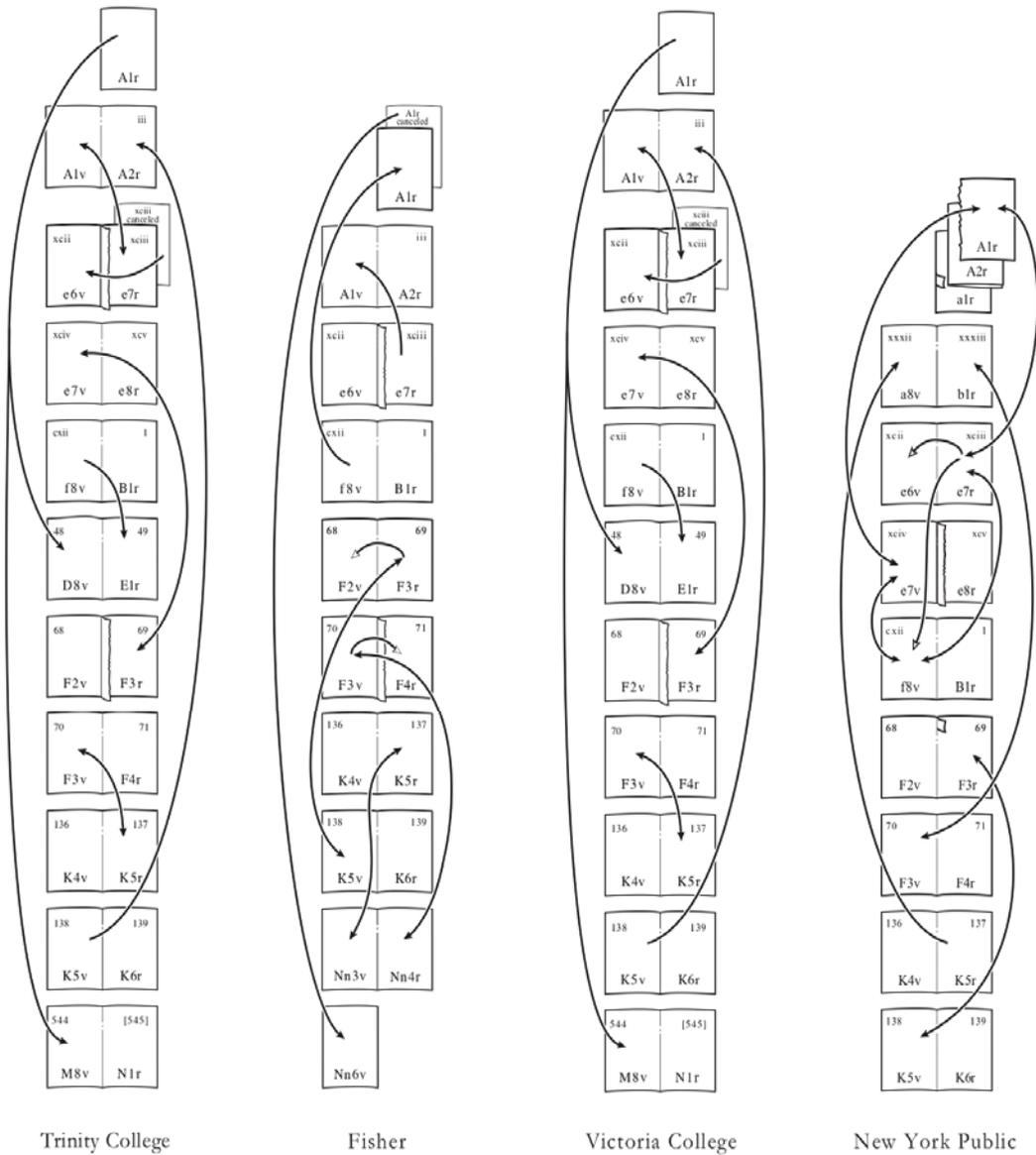
An arrow that originates from the head of another arrow and has itself a hollow head points to *right*-offset of a prior *mirror*-offset—a reflection of a reflection, a derivative of a derivative. There are two examples each in Fisher and New York Public. In the latter copy, multiple arrowheads on A1r, e7r, e7v, and f8v suggest a variety of configurations of the *battés* over time. (Recall the multiple arrows to Q4v in the map of the Clark Library copy of the 1732 *Paradise Lost* on p. 141.)

Because the original e7r set off on e6v in the Trinity copy, its early text survives *en miroir* across the gutter from the text that eventually replaced it. This copy thus archives the early and late stages of its production. That's pretty neat. (In the Trinity copy, e7r cancellans bears no offset from e6v, but it does from A1v (I can't at the moment say whether from the original A1 or from A1 cancellans).

In this photo-quote from opening e6v–7r in the Trinity College copy, the verso is replete with offset from the earlier version of the recto. As it is out of register vertically, this offset is easy to decipher with my compact mirror, especially as it differs from the cancel only in ll. 21–22.

e6v   e7r cancellans

stub of cancelled e7r   offset from A1v

21	it Delphi in <u>this Chronology of Pythagor-</u> 21
22	<u>as, which he honours my Book with</u> and 22
23	so did the Learned Gentleman Mr. Stan- 23

e6v   the cancelled text of e7r
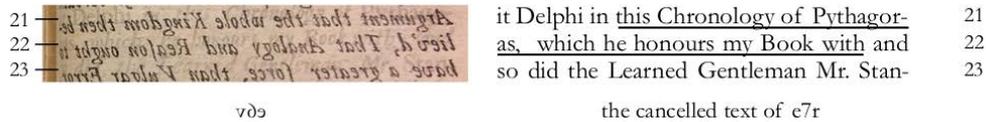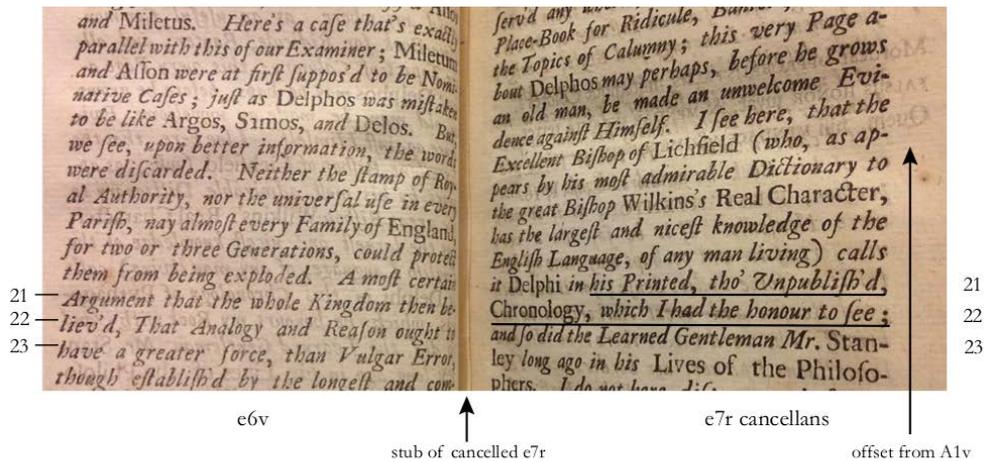
On the left, below this excerpt from e6v and 7r cancellans, I have reproduced mirror image ll. 21–23 from e6v, directly above; and, to the right of this three-line image, I have transcribed just the layer of offset on it (despite appearances, it is the top layer) and underlined its words that differ from the later wording in the cancellans, shown directly above this transcription, where I have also underlined the corresponding words. The revised words on the cancellans are surrounded not only by the original *text* of the rest of that page, but also—surprise!—by the *original composition of it in type*, as the same typeface appearing in both the cancellans and the stub of the cancellandum in the Peterhouse copy, C.9.17, reproduced on the next page (by permission of the Master and Fellows of Peterhouse, Cambridge) attests: on this stub, the distinctively bent *ſh* ligature in l. 3 and the damaged d in 'an<u>d</u>' in l. 5 also appear in the same places on the cancellans. The revision of e7r can thus be precisely timed: before the type that had printed the early state of that page was distributed. Having consulted the Bishop of Litchfield's *Chronology of Pythagoras* pamphlet (already printed but not yet published), Bentley must have planned for it to be bound alongside his *Dissertation*, to 'honour his book', as the cancellandum states. The revision to e7r is coordinate with the reprinting of the *Dissertation* title page. Both pages needed to deal with a last-minute change of plans—that the two works would, in fact, be published separately. (As Lloyd's *Chronology* includes a collegial letter to Bentley about their shared interest, there does not seem to have been a falling out.) When I encountered this stub, it was wedged out of sight in the gutter and took five painstaking minutes to extract. Had I not been looking for a stub, I would not have seen it. By reading in the shadows, however, I could have detected that a stub did once exist, for the offset on e6v in the Peterhouse copy from e7r cancellans (not from the cancellandum, as in the Trinity copy) was blocked in the gutter by the stub; and that is why, in the Peterhouse photograph, 'Chronology' at the start of l. 22 sets off merely as 'ygolor   '.

The PREFACE. xciii

Language *in those days all over the Nation. So that if the* Examiner's Mumpsimus *should pass for an Argument, the* Æneidos *should be the current Language at this day; and those that call it* Æneis *must be run down for Pedants. I dare venture to foretell the* Examiner, *that his* Delphos *in a few years will be thought as barbarous as* Æneidos: *and if his Book shall happen to be preserv'd any where, as an useful Common Place-Book for Ridicule, Banter, and all the Topics of Calumny; this very Page about* Delphos *may perhaps, before he grows an old man, be made an unwelcome Evidence against Himself. I see here, that the Excellent Bishop of* Lichfield *(who, as appears by his most admirable Dictionary to the great Bishop* Wilkins's *Real Character, has the largest and nicest knowledge of the* English *Language, of any man living) calls it* Delphi *in his Printed, tho' Unpublish'd,* rasonology, *which I had the honour to see; so did the Learned Gentleman Mr.* Stanley *long ago in his* Lives *of the* Philosophers. *I do not here disparage those excellent Pens, that have unawares fallen into the common Error; but to defend it against manifest Reason, and to vilify those that would reform it, is a plain instance of a positive and Pedantic Genius.*

I must

'rasonology'

Peterhouse C.9.17

📖

Back now, quickly then, to Aldo's Martial, for I've taken too long hammering my points. But I don't regret the expenditure of time, as it has all been in the service of obscure text in out-of-the-way places. You'll have guessed by now that that's really what this essay is all about. Maybe I should have made my *modus operandy* clear at the outset? Well, it's clear now.

In the manufacture of the paper-stock used in Aldo's Martial (to which author I'll now return), there is no watermark, but a corner of each sheet was countermarked between adjacent chain-lines (see the arrows) with a giant 'letter'.[12]
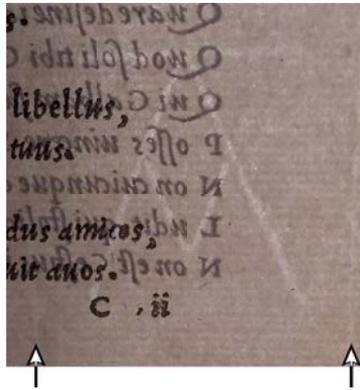
Witness this 'A' shape looming here between recto and verso faces of the leaf in this Simon Fraser University Library copy in Burnaby, British Columbia, with its left foot planted behind the 'C' of signature 'C .ii'. In this photo, light taking the leaf from behind renders the countermark vivid and legible—along with Martial's text overleaf, which thus appears *en miroir*. Printers are used to reading text mirror-image, of course, since that's the look of typeface not only line by line in the composing-stick—where it is also downside up, and where the compositor can read the nick in the shank—if it is located where I have shown it in the two models I plan to present on pp. 159 and 195 (if there's room), but also page by page in the bed of the press (often upside down there too, depending on where one stands). Moreover, reading through a leaf illuminated from behind, as we have just done, was a routine practice of early binders, as shown by the next illustration, from by Dirk de Bray's tiny manuscript, 'Onderwijs van 't boek-binden', 1658, reprinted here by permission of the Noord-Hollands Archief in Haarlem from manuscript Stell 21B 201 (Hs. 201).[13] (The original measures merely 58 by 82mm.)

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[12] On these two features of the paper mould, the countermark and the chain-lines, the wet 'stuff', so called, lay thinner than on the wire-lines, which run horizontal, about 40 times denser than the chain-lines. There are two different sizes of the 'A' countermark in Aldo's early octavos. The April 1501 Vergil has both of them, usually one in some quires throughout the edition and the other in others, which distribution helps to argue that the early quires of that edition were printed late: composition of *Aeneid*, the last of the Vergilian texts in the volume, was begun first, as its separate run of signatures and absence of pagination allowed, and *Eclogues* and *Georgics* followed, with another run of signatures. So, countermark letter 'A' implicates itself in '*letteratura*', as the Italians say. So too does the coming on stream of the new typographic sorts that appear in them (see pp. 183-184 & 191-192), late in *Aeneid*, but throughout *Eclogues* and *Georgics*. See Randall McLeod's August 1, 2016 'The Birth of Italics' Lecture no. 604 (available online) at The Rare Book School. It is a clever essay, but with a problem I can solve.

[13] In 1977, a facsimile of de Bray's manuscript was published in Dutch with English translation as *A Short Instruction in the Binding of Books*, by Nico Israel, Amsterdam.

In the foreground, at the right, ignore the fellow with the big hammer. Focus instead on two workers at the left and at centre-rear, each in the process of making the first fold on a sheet printed in-octavo by aligning its two halves with the help of sunlight shining through the windows on the left, as in Vermeer. The worker by the window holds a folder in his left hand, the one at the rear perhaps in his right. Because sheets of paper were then produced with deckle (and therefore irregular) edges, binders could not accurately fold a sheet simply by aligning its edges: they had rather, as de Bray states, to peer through a tentatively folded sheet and align the edges of a page of type printed on the front half of the sheet with the edges of a corresponding page of type on the back half, before they adjusted the fold as necessary and finally compressed it. This same deckle edge had already made it difficult for the printer to lay sheets square on the points on the tympan. (These problems for printer and binder would not be solved until the start of the nineteenth century, when the Fourdrinier machine first produced a web of 'wove' paper without deckle edges. Since then, a sheet cut from such a web would more simply be positioned for printing or folding just by its straight edges, without the need of points.)

Back now to Martial.

In plain ambient light this time, here is the appearance of the penultimate opening of Aldo's 1501 edition of Martial in the Simon Fraser copy. This essay is going to get hard now.[14]
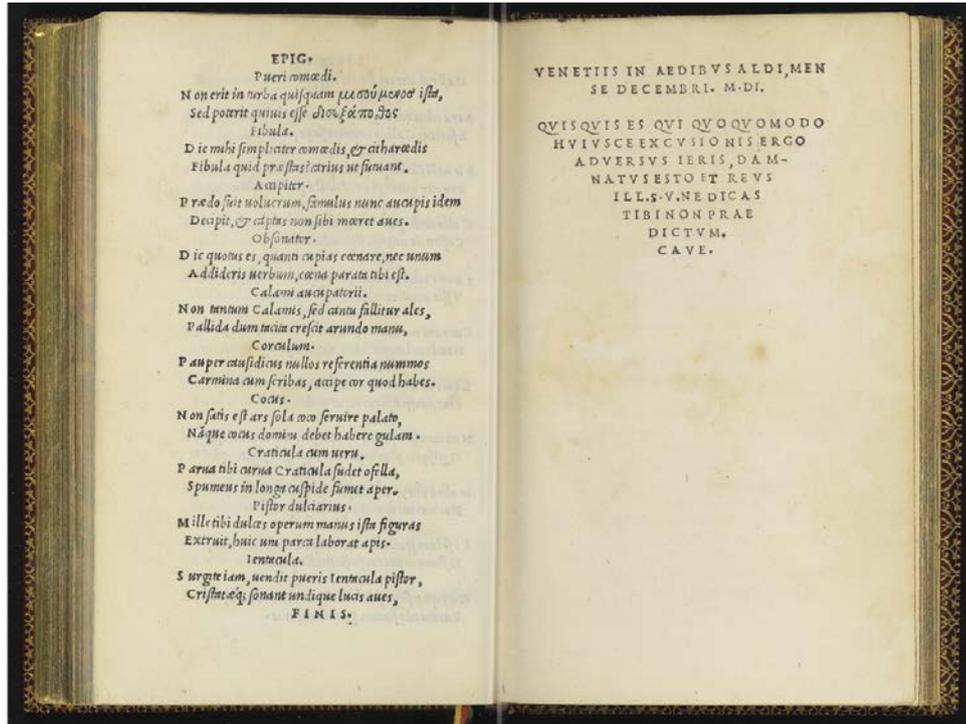
&6v   &7r

Outer-forme &6v ends with ' F I N I S .' below a column consisting of a headline, tabbed titles, and couplets (with second lines indented). The paper's translucency allows one to make out more text, overleaf, on &6r, very faint and in mirror-image again. Look closely. And beyond it, right-image, even text on &5v. Who among us pays heed to such overlapping textual shadows? But there they are nevertheless, subliminally open to all—a persistence of vision and a persistence of text after we have turned away from it.

On the recto of the next leaf, &7, we find the colophon and the printer's warning.[15] When you turn this leaf, thinking, I imagine, that all of Martial is said and done, can you not still see, *en miroir*, the colophon and warning?

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[14] Courtesy of SFU Special Collections and Rare Books, Wosk-McDonald Aldine Collection, 'Martialis Epigrammata PA 6501 A2 1501'. This copy and other volumes in the collection can be viewed online on the Library's website. Thanks to librarian David Kloepfer for bibliographic details and photos of this copy. Images of three copies at the Biblioteca Nazionale Centrale in Florence can be accessed through the Edit 16 website.

[15] Aldo's target in this warning was the critic, not, as I first mistakenly thought, the Lyonese counterfeiters, whose thefts he had not yet experienced: 'Whoever you are who will criticize this printed work in whatever way possible, you will be condemned and stand trial before the illustrious senate of Venice. Beware of saying you have not been forewarned.' Thanks to John Grant for this translation. He adds that 'the priority of the condemnation before trial is definitely odd. I wonder if there is a printing error here of *et* for *ut*, the latter meaning "as, in the role of ". It could be translated as "when brought before the illustrious senate of Venice."'
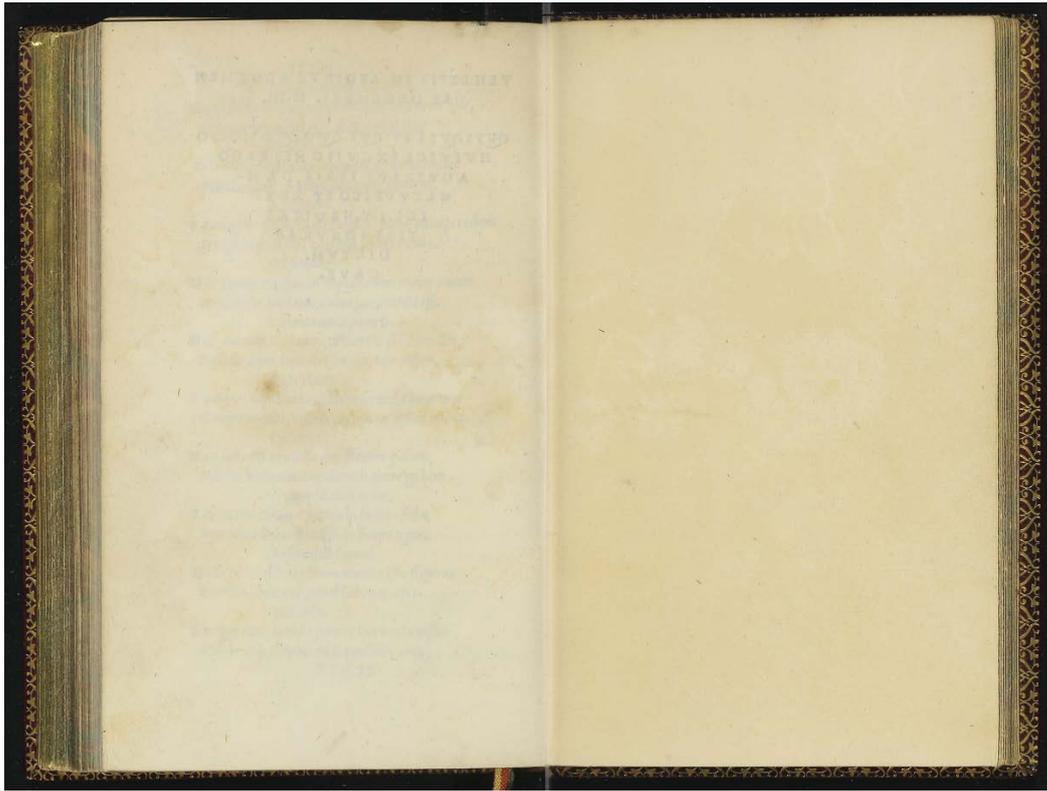
&7v   '&8r'

And also, right-image and even more faint, can you not also make out the preceding 'F I N I S .' at the foot of &6v, where we began a moment ago—as if we hadn't quite finished with it yet? Exactly when and where does text end in this book?—in any book? On Z3v, Martial himself advised of his own, 'You can finish the book when and where you wish'.

This is from poem 14.2 in modern editions, but 14.1 in Aldo's. Later in this poem (but in the next poem in Aldo's edition), the poet even quipped that he provided titles so that one might read only them—*lemmata sola*.

Our Martial—he was a fun guy. Funnier than Milton, I warrant, or Mrs. Siddons. Or Mother.

Did you notice that &7v is not as dark and creamy as '&8r'? And why have I used quotation marks in referring to the latter page and not the former?

Well, the original (blank) leaf &8 is missing in this copy—that's why. This copy does not have the ideal shape spelled out in the collation formula at the start of this essay: A–Z^8 &^{8}. Also, the 22 leaves after the 191 remaining of those that Aldo printed (the recto of the first of which 22 we see here) and also the 22 leaves at the front of this copy are of Dutch manufacture, three centuries after Aldo's publication. The watermark reads 'J KOOL CORP [18]02'.[16] Some of Kool's chain-lines run vertical, like those on Aldo's stock, but most, puzzlingly, are horizontal. What with countermarks and watermarks in various orientations, you can see that the very sheets of this volume are textual throughout—even without consideration of the poetry subsequently stamped on some of them with ink (even stamped *without* ink, as we shall soon see). Obviously, in the 235 leaves of this copy (an odd number, of course, because of the loss of &8), printer's ink does not say it all.

If it is true, as p. 70 of the UCLA catalogue tersely reports of its copy of the 1501 Martial

> CONTENTS: (A1r) title (A1v) Plin. epist. III 21 (A2r–&6v)
> Mart. (&7r) colophon and printer's warning (&7v–&8v)
> blank

'(&7v–8v) blank', does it really matter that the last of Aldo's leaves in the Simon Fraser copy is missing? A defective copy does not fetch top dollar in the market, of course. But in terms just of literature, isn't the answer 'No, it doesn't matter. As there is no text on &7r–8v, nothing is lacking.' But the correct answer is 'Yes, it certainly does matter—even, in fact, as literature it matters.' How '*as literature*'? Because in books printed in the renaissance, blank pages—or just the portions of them blank only at top or bottom—are often not blank there at all. How many people know this? You do now, but how many others? There may be text to find and read in those spots—and not just the text of watermarks—your A's and your KOOL's—or the text of mere visitors, like offsets, local or remote, by standing press or hammer, or even debossed blind type, as observed in raking light. On such pages, blank is not blank. So, here's your short answer: Blank Leaves Matter—for they may not really be empty. The rest of this essay is the long answer. You'll see.

<p style="text-align:center">📖</p>

<p style="text-align:center">text out of now here</p>

To *see* what I mean (for seeing is believing) consider Uzielli 34, a copy of Aldo's Martial in the Giorgio Uzielli Collection of Aldine Editions at The Harry Ransom Center at The University of Texas. Its text was printed on skin, not paper: and so, it has no countermarks, no watermarks, no chain lines, and no deckle edges. Now, as you know, I always carry a tiny torch with a very tight beam in my purse. I did tell you this already, didn't I? (And a compact too—for its mirror). But to my surprise, raking its light across the blank pages of this copy did not create the expected shadows.

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[16] Thanks to John Bidwell of the Morgan Library for identifying this Jan Kool paper, from Polecat Mill (De Bonsem), which was in the Kool family from 1774 until 1837. See Voorn (1973, 322-333 for Dutch and 553 for English).

But consider two other less familiar ways for light to bring out blind text stamped on skin. Since this medium may become more translucent where pressed or stretched, light shining through a 'blank' leaf from behind (as when we read the 'A' counter-mark on C2r) may reveal bright letters in a dark field, as shown here on &7 of this copy, viewed from the verso side.
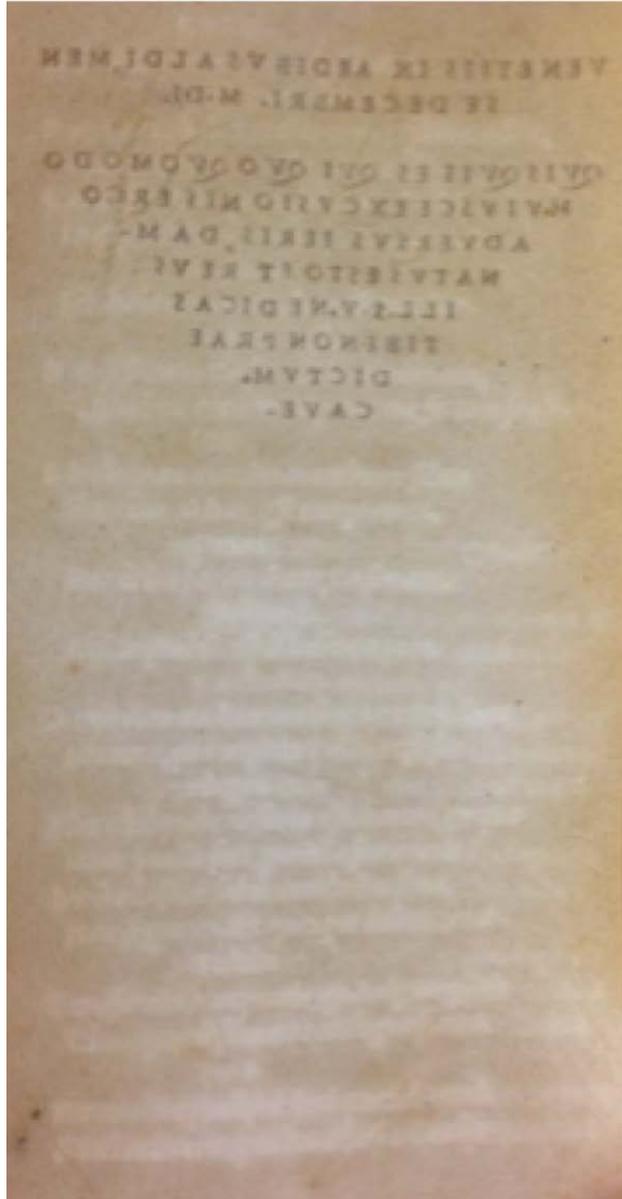
Uzielli 34, &7v

And if a black sheet of matt paper is placed behind such a 'blank' leaf (in this case &8), as shown here, and if light comes now from the recto side, it will be partly reflected from the surface of the leaf and partly sucked up by the black sheet behind; wherever the leaf has been thinned (or eaten, please note), the field will show brighter and the letters (and the nibble) darker.
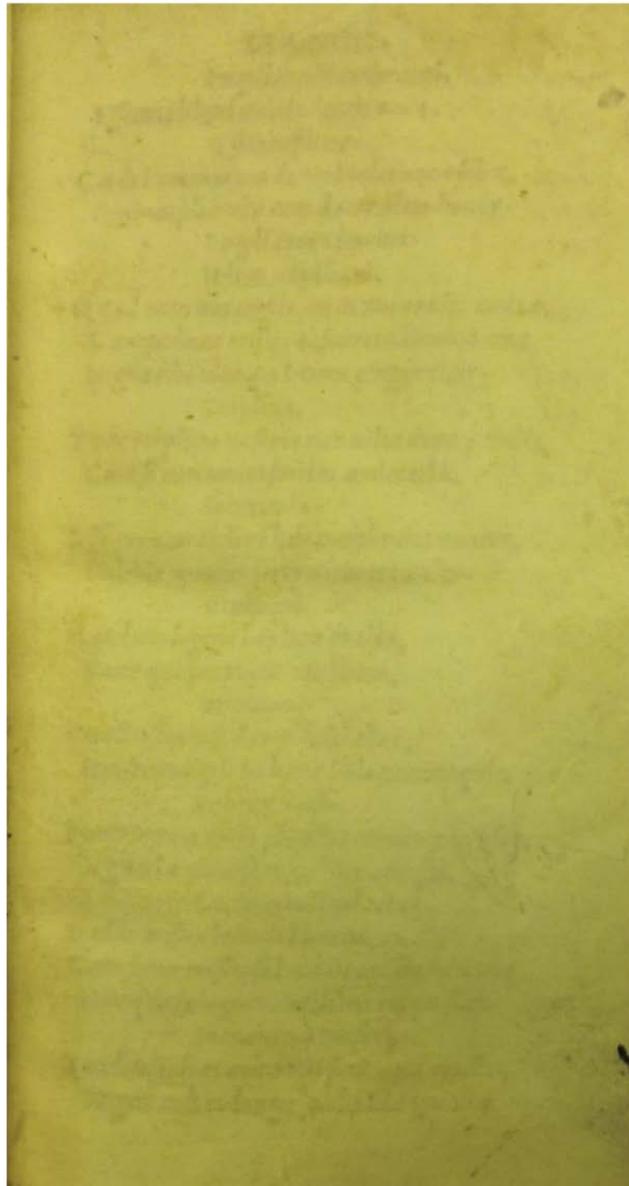
morsus tineae[17]

Uzielli 34, &8r

[17] A good book is thought for food.

From such *chiaroscuro*—be it light on dark or dark on light—legibility and literature may follow, as it soon shall, spectacularly, you'll see, from these two pages of Uzielli 34—&7v and &8r. Their text is all before us.

📖

I was blind, but now I see.

What do the blind have to teach us? Consider these two snippets of the same area of &8r, from 4 to 7 lines above the base. The first photograph records reflected-light, the second through-light.
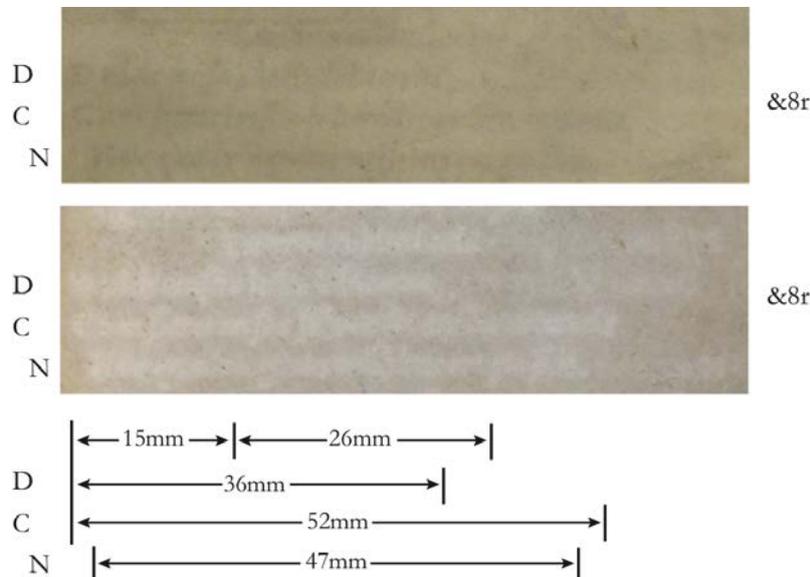

Initial capitals 'D' and 'C' and 'N' (or is it 'H'?) are legible in three lines of the top image, the first two letters flush left, the third indented. In the lower image, these initials are not as clear, but now the literary extent of each line is very easy to measure: 15cm, then 26, 36, 52, 47. As none is right-justified, they resemble the lines of verse we saw on &6v. And the centered line above them? It suggests a title. It all looks like more Martial, no?

Sometimes, you can also orient yourself by the gaps between words. The 'C' line, for example, begins with a short word. Just after the space following that word, I see the tail of an initial ʃ or f. (What a pity Adobe Garamond Pro has no long-*s* plus ligatures that look like ʃ and its ligatures, as if only atoms counted to the type designer, and not molecules, historical molecules. How Pro is that?) A similar graceful shape appears a word or two later.

On the right side of the lower image, I detect lines of text overleaf; the first, beginning with 'E', and the last with 'H' (or 'N', perhaps) are flush left (left on that side of the leaf). The second, indented, begins with 'D'; and the third is blank—blank at least in the part of it covered by the D-line (on our side of the leaf), which—I'm guessing—may obscure a centered title overleaf.

In our slow and wondering steps through this small portion of &8r, I am sure of only a couple of letters and guess at a several more. It may not look like much to go on. But coupled with the precisely measured body language, this information is actually very help-

ful, because text, whatever it may mean, is precisely configured. If, supposing that these are indeed lines of Martial's verse in italics, we thumb back through Aldo's edition with a ruler in hand (I always carry one in my purse, the gift from Father) to scout out potential sources, it takes but a few minutes to find possible matches in the previous quire for the verses of these four lines—both potential sources on Z5r, 21 pages earlier. On this page, our three initial caps (the third must be 'H', not 'N') and the indentation and length of these two pairs of lines correspond exactly to details measured in the two recent photographs of &8r:

Z5v   &8r
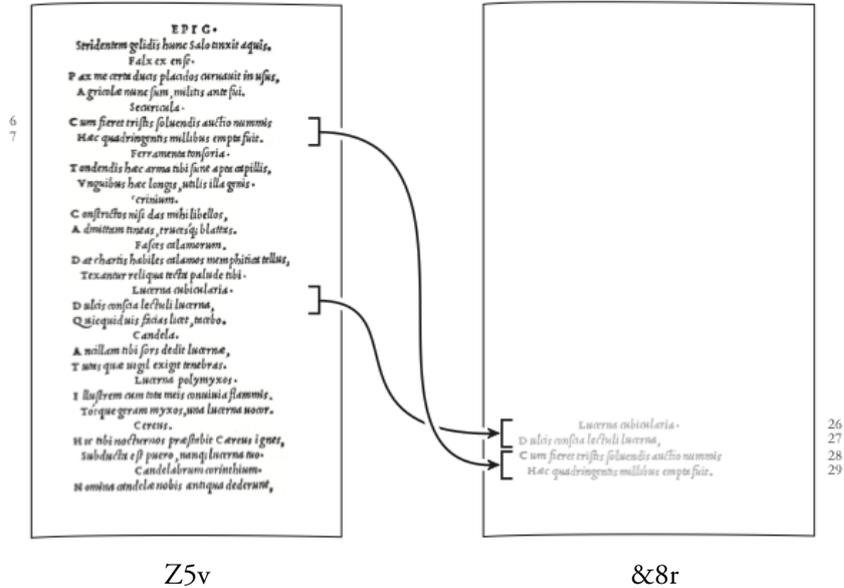
To search more thoroughly for correspondences in these four lines, I shall next juxtapose the through-light photograph of the blind impressions on &8r (above) and, in the same magnification, photographs (below) of the four lines of the two potential sources on Z5v.


Now we know, by vertical alignment, precisely where to look and what to look for. The more correspondences of shapes and locations we find, the greater our confidence that we have indeed located the source—especially so if nothing contradicts. Are you ready?

In the middle verse, the letters ∫ and *f* (at just the right distances) are not quite as I guessed, but close enough: not ∫ and *f*, but *f* and ∫—or, more accurately, the initial letters of ligatures *f* + *i* (in '*fieret*') and ∫ + *t* + *i* (in '*tri∫tis*'), each printed with a single type,[18] each with a seductive kern or two, requiring support, by the way, on the shoulder or shoulders of adjacent types,
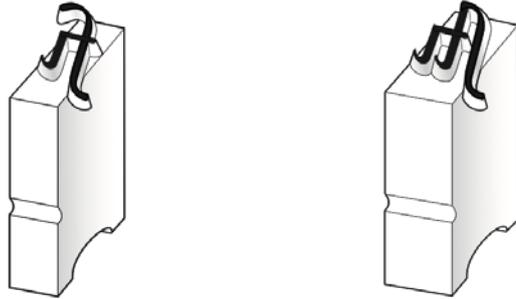
though Aldo's cases also had stand-alone *f*, *i*, and ∫—as well as an ∫*t* ligature. Ligatures abound in Aldo's founts, but not in Pro—why, I count 25 uses of 19 ligatures in the 116 letters of just these four lines of the supposed source

æ; ce, ci, co, cu; cta, cti; fi, fu; in; mi; na, ne; ∫o, ∫ti; ta, ti; ua, um

—for Aldo prided himself on the mechanical imitation of handwriting. Witness his petition of October 17, 1502 to the Venetian Senate for a ten-year privilege against counterfeiters. (Little good the granted privilege did him.)[19] If the alphabet is atoms, Aldo spelled in molecules.

> *Aldo Romano … ha facte lettere greche cum ligature che pareno cum calamo, et ha ritrovato invention et inzegni che ciascuno se ne maraveglia, et piu di novo ha excogitato lettere cancellaresche sive corsive latine bellissime che pareno scripte a mano …*
>
> *Aldo Romano … has made Greek letters with ligatures, which appear penned, so also other type of his invention and discovery arouse all men's admiration; and whereas he has of late devised Latin chancery or cursive letters of surpassing beauty which seem handwritten …*

The new Greek and italic founts were the achievement of his collaboration with the type-cutter Francesco da Bologna (these two men would soon fall out—but that's another story), and also with Aldo's compositors, of course, who could, if they wished, compose with letters untied. Two decades after his father's death, Aldo's son Paolo tossed out the bulk of the old man's liga-

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[18] Aldo's types do not survive. I have given my models modern feet and grooves, which they may not have had. The kerning of the lead-in curls of the *f* and ∫ ('kerning' means the extending of typeface off the edge of the type body) must be right, however, and the same with the exiting kern of the *f*. Kerns are liable to bend or break and so to create shapes sometimes distinctive enough to be recognized from one appearance to the next, like the bent-kern ∫*h* ligature in l. 3 of Bentley's *Dissertation* (see above, p. 149). The exiting curl of the *f* explains why graphically the *i* on that type needs no dot (but that explanation won't do for the missing dot on the ∫*ti* ligature).

[19] For the Italian, see Fletcher (1988, 144). The English translation is based on American Institute of Graphic Arts (1927).

tures, keeping mostly those that themselves kerned extensively or were prone to fouling if the constituents were composed individually (those containing *f* and *ſ*, for example).[20] I hope to show you an example of setting without ligatures from Aldo's 1501 Vergil later—if there is still time. (It's a really choice composition.)

The word '*ſoluendis*', slightly later in Z5v.6, shows another ligature (so called), *ſ* + *o*—though, in fact, the two letter-shapes, despite having been cast on a single body, are not actually tied, as the etymology (< Latin *ligare*) would imply. And note also '*fuit*' in the last line and its ligature, *f* + *u*.

Ascenders and descenders also can be landmarks, as in '*cubicularia*' ('bedroom') in the title, and '*empta*' ('bought'), in the last line. (What should be *bought* in a *bedroom*? you might well ask.) Can you not discern these shapes now? I'm not alone, am I? And note two more ligatures in these words: *c* + *u* (twice), and *t* + *a*. And so far nothing contradicts. Surely you're on board now?

Without this potential source on Z5v, I could not confidently have extended my reading of the blind type on &8r this far. Encouraged by it, in just two hours of close reading—of *very* close reading, as you can readily imagine (having come this far in the essay from either end, unless you parachuted here)—one is able to locate nearby the sources of all the blind lines on these two pages of inner-forme &—'inner-forme &' can, as you know, be written succinctly as '&(i)'—on Z3v, 4r, 5v, and 7v, all pages on Z(i).

Z4r   &8r   Z5v   Z3v   &7v   Z7v
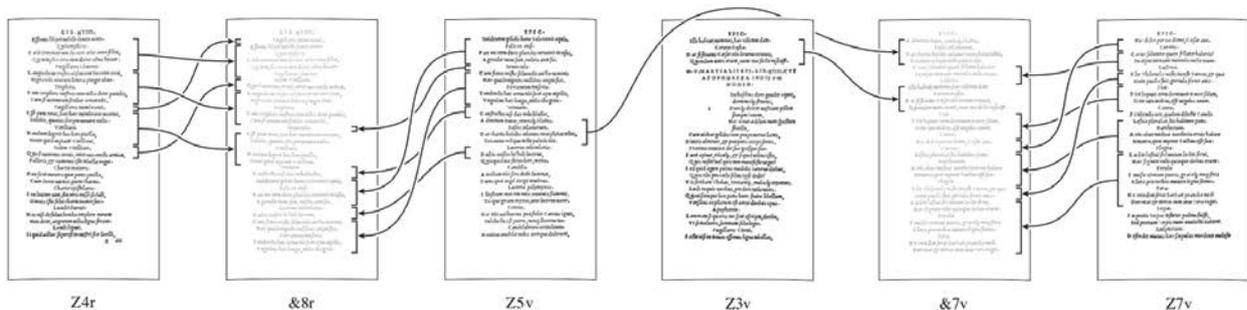
And that means (again succinctly): Z(i) → &(i). You realize, don't you that you're not reading *Martial* now: you're reading *book*. How many people can read book? Very few. Very, very few.

Verily, verily, blank leaves *must* matter if they are not really blank. In the last 'blanks' of this copy, presumably in all copies, whether printed on flesh or printed on paper, Aldo's Martial has been muttering to himself for over half a millennium now. But has anyone stopped to listen? As Raimonda Modiano has explained it to me:

this is the textual unconscious

📖

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[20] A full range of Aldo's ligatures appears in Sannazaro's *Actii Synceri* in 1533, the year Paulo began printing, and again, I see, in Sannazaro's *Opera Omnia* in 1535. But, by Cicero's *Epistolae Familiares* in 1540, few of his old man's ligatures remained.

cento

Here, stripped to its essentials, enlarged and made compact, and (on the right) with its faint letters darkened, is a new version of the topsy-turvy map from the top of p. 158. It will allow us to test the claim that this blind noncesequitor matters *as literature*. And it does, it does—because, simply, noncesense itself matters.[21]
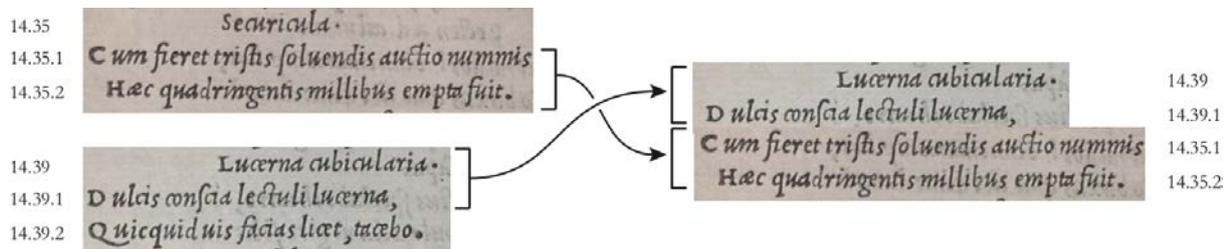
This blind text—well, it's not blind now, is it?—easily reads as a travesty of Martial's originals from Bk. 14 (it is titled '*Apophoreta*')—of 'Lucerna cubicularis', as modern editors call 14.39 and of 'Securicula' (14.35). These are epigrams to accompany gifts to 'take away' (in Greek, *apo* + *phoreta* means 'take away') during Saturnalia, that most topsy-turvy of Roman holidays. In *Apophoreta*, the poem for one gift, supposedly more expensive, alternates with the poem for the next gift, supposedly less so.[22] Here are Shackleton Bailey's translations from the Loeb edition.[23]

> 39. Bedroom Lamp
> I am a lamp, confidante of your sweet bed.
> You may do whatever you will, I shall be silent.   (Martial 1993, III, 243)

> 35. Small hatchet
> When a dismal auction was held for payment of debts,
> This was bought for four hundred thousand.   (*Ibid.*, 241)

'Securicula' needs some explanation. The editor defines the small hatchet as a child's ornament or toy and suggests that the enormous sale-price for this trinket at auction is meant to be absurd. Against the actual sale price, whatever small amount such a hatchet might normally have fetched at auction represents a vast loss to the creditor—to or from whom the epithet '*triſtis*' might well be transferred. The bedroom-lamp poem is more straightforward; but the word '*conſcia*' hints that the personified lamp may symbolize more than a confidante—hints that she is also perhaps a discrete sexual partner or an accomplice.

  Aldo's three-verse cento shown above on the right, drawn from the two poems on the left, may be translated like this:

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[21] Images on this and the next page are 'su concessione del Ministero della Cultura—Biblioteca Nazionale Centrale di Firenze'.

[22] 'Diuitis alternas et pauperis accipe sortes' (14.1.5) provides the basis for interpreting alternate gifts as costly or cheap. See T. J. Leary (2016 [1996]), *Martial, Book XIV, The Apophoreta: Text with introduction and commentary*, Bloomsbury Academic, London, New York, etc., 13–21. As 14.35 and 14.39 are both odd-numbered, editorial juggling is required to assign opposite values to the gifts treated in these two epigrams and in some others.

[23] Martial, *Epigrams* (1993), D. R. Shackleton Bailey, trans. and ed., 3 vols., Cambridge, MA & London, UK, Harvard University Press.

> 39. Bedroom lamp.
> When a dismal auction was held for payment of debts,
> This lamp, the sweet bed's confidante,
>   Was bought for four hundred thousand.

No write-off this time, the Big Money[24] has bought a real prize—the confidante herself. And as money talks, so may she, and thus may well be worth her great cost. And if she does talk, who then will be *triſtis*?

And what's the 'take-away' from the remaining scraps of 14.35 and 14.39, a title and a single verse—the parts that were not chosen—what you might call 'the Shadow Cento', or 'the Wall-Flower cento'?

> 35. Little hatchet.
> You may do whatever you will, I shall be silent.

Here, the speaker's discrete utterance shades into complicity—perhaps, ominously, into instigation?

Without any changes to diction, these titles and verses are all Martial's (or at least Aldo's version of Martial), as are the *dramatis personæ*, the props, and *les mises-en-scène*. But with a reading of these recombined lines of type, new meanings emerge, which stand in ironic relationship to whatever we deem the Roman poet meant or to whatever his contemporaries understood from expressions in the genre of epi-gramm, evolved from Greek (when the objects themselves were said to have been inscribed, not merely written about)—and, moreover, to any meaning that the printer intended, *if* Aldo did ascribe literary meaning to his or his compositors' rearranged compositions. But really, the boss's consciousness or unconsciousness need not concern us. We moderns—nay, we post-moderns—have dredged up new ancient Saturnalian texts from where they have slumbered for centuries. And we Archaeologists of the Book have now read them—the first, I warrant, in half a millennium to do so—to be able to do so. *We* shone the light *on*. *We* shone the light *through*. The Saturnalian interpretations are ours to make.

Another? Here is the short 'C*oruus*' cento, distilled from Martial's 'Crow' and 'Cage' poems,
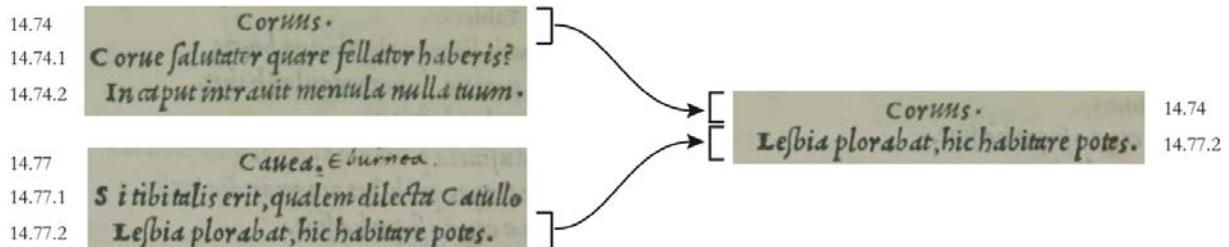
in the first of which Martial questions the *fellator-* or dick-head reputation of the bird he addresses—'C *orue salutator*' ('Welcoming crow')—since this poor bird's head is not so engorged. *engaged*

Modern editions report the other poem, 'The Cage'—which provides the title for the cento—as 'The Ivory Cage' ('Ivory' suggesting how costly it is). In RA 383, the copy of the Martial edition photo-quoted here from the Biblioteca Nazionale Centrale in Florence, 'Eburnea',

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[24] Four hundred thousand sesterces was, by the way, the qualification for equestrian status in ancient Rome, which, is the very status Martial claimed for himself (while crying poor-house, as in 5.13: 'Sum, fateor, semperque fui, Callistrate, pauper').

added by hand, supplies a version of the adjective associated with this epigram in a handful of authoritative manuscripts dating from as early as the ninth century. Let me translate:

> The Cage. *Ivory*
> If ever you have such [a bird] as the one that the beloved of Catullus,
>   Lesbia, wept for, it can live here.

—live here 'in ivory splendor' that is (if you read the handwriting), or 'in a plain cage' (if you don't). But in Aldo's dark cento,

> The Crow.
> Lesbia was weeping. You can live here.

there is no *eburnea* and no *cauea* for any bird to inhabit, much less this big black fellow, which is all a very far squawk from the chirping sparrow that pecked Lesbia's finger and over whose death she wept in those famous verses by her pet lover. Cento Crow (with or even without his sexual reputation) hardly seems poised, should he come to roost in Lesbia's sorrow, to comfort the lady. (I assure you that he couldn't comfort this lady when I'm lonely or sad or grieving. I wouldn't trust the likes of any such men out of their cages.)

And what of the scraps from this great fast of language—our imagined Shadow Cento?

> The Cage.
> If ever you have such a one as that the beloved of Catullus,
> Welcoming crow, why are you considered a cock-sucker?
>   No pecker has entered your pecker.

Aren't these poor little centos and their shadows rich and grand? Everything distorted as in a fun-house mirror? There are a hundred—a thousand more interpretations for such *cadavres exquises*, and we're just laughing up I mean just rolling up our sleeves. But there remains a very big problem—Have you noticed?—with that revelation, that 'Z(i) → &(i)' map on p. 160. It looks pretty clever, but something, I warrant, is not right with it. You'd better get serious now and attend to this problem right away. It could change everything. Reading blind type is not just fun and games, you know. There's work to be done. Critical work. And struggle and sweat.

<div align="center">📖</div>

<div align="center">strubbly</div>

Here is the first of two maps of blind type in quires XX and ✳, which are usually bound as the last two in vol. 3 of the monumental first edition of Aristotle printed in Greek. (It was, by the way, Aldo's Greek that helped put the *quattro cento* on the map.) The edition includes Theophrastus too, and the Greek on these three pages is actually from his *De Sudore* (*On Sweat*). Aldo published the five folio volumes of this edition between 1495 and 1498.

XX5v   �﹡8r   XX3r

PTOLEMÆVS
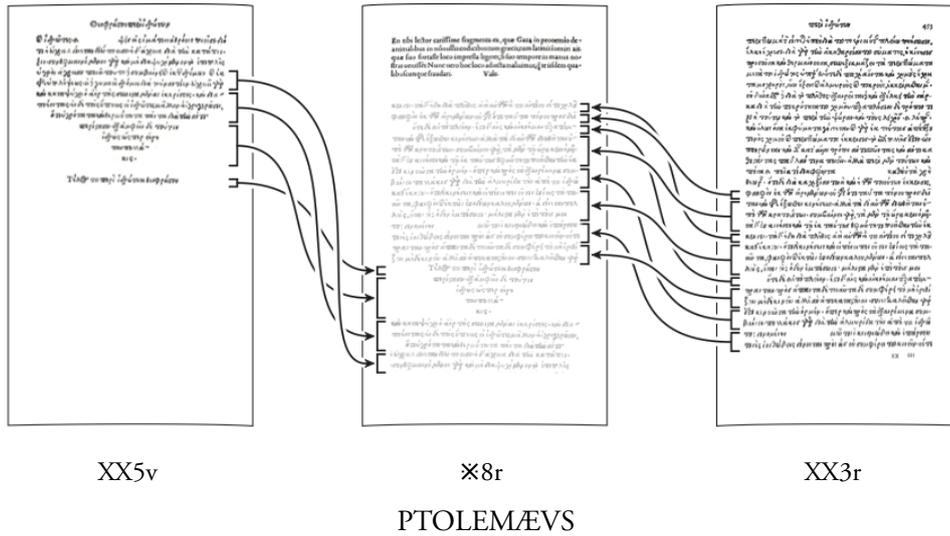
This and the next hairy map will soon lead us back to the one on p. 160 (of &7v and &8r in the 1501 Aldine Martial) with an understanding of its secrets for, as I just warned you, it hasn't really leveled with us. When, by the way, I created this the first of these two Aristotle maps, I had already detected the presence of blind type at the bottom of XX5v—don't expect such a space to stand empty—but I was not then able to read it. Nevertheless, I was sure that each arrow shown above connecting source and destination was accurate. And though right to think so, I was, as I often am, over-confident of how to read the map. It's been a steep learning curve for me too.

    Observe that the arrays of arrows connecting the sources to their destinations exhibit different patterns. To appreciate the difference, imagine a straight rather than curved shaft connecting the nock of each arrow to its head. On the left, between pp. XX5v and �﹡8r, these four imagined straight arrows, if taken one after another (up the page, say) obviously rotate in one direction only. The source of each consecutive arrow follows that of the previous arrow, up XX5v, and its destination follows that of the previous arrow, down �﹡8r. On the right, however, though the source of each arrow, its nock, follows that of the previous arrow up the page, p. XX3r, its destination on ✻8r does not progress downward in so orderly a fashion: the eight arrows between ✻8r and XX3r move back and forth between just two orientations, to create two intersecting sets of four parallel arrows each. One wonders, therefore, whether there are not distinct compositional practices represented in these two transfers of lines of type? That's the question.

    Why I have turned to the blind texts of a Greek philosopher to explain those of a Latin poet is because the distinctive pattern of progressions and retrogressions in the arrows on the right side of the Aristotle map mirrors the pattern of most of the arrows in the map of blind type in Martial on p. 160. (Look back now, won't you?—and see how those arrows do indeed pivot back and forth, in Ptolemaic fashion.)

    When, eventually, I was able to read the blind text on Aristotle XX5v, I had, to my immense surprise—just imagine—not merely to supplement Ptolemy, but rather radically to reconfigure him—and also to differentiate time-lines:

Theophrastus

XX3r XX5v ✳8r

COPERNICVS

This Copernicus, the revised coiffure of the Ptolemy map, shows the same three pages, but what was then last, XX3r, is now first; furthermore, it has no immediate connection to ✳8r. Time is reconfigured too: in Copernicus, it runs left to right, whereas in Ptolemy it ran from outsides to centre. What Ptolemy did not comprehend, I eventually concluded (for it takes a long time to learn to read this way, what with coming at it alone and blind), and what Copernicus does understand, is that the lines of dead type of XX3r did not proceed directly to ✳8r, as in the following left meta-map, but passed thither through XX5v, as allowed on the right.

451	1 ————— 8	
452	2 ————— 7	457
453	3 ————— 6	456
454	4 ————— 5	455
	1 ————— 8	
	2 ————— 7	
	3 ————— 6	
	4 ————— 5	

XX

X

PTOLOMÆVS
meta-map

COPERNICVS
meta-map

Significantly, in their passage both to and from XX5v in Copernicus, all the imagined straight arrow-shafts tracking the transfers rotate in a single direction on each page and thereby offer an answer to our question: there must have been only *one* kind of compositional practice of imposing blind type on these three pages. The alternating progressions and retrogressions of Ptolemy (think of them as epicycles), are a sign that my first map did not offer the whole truth.

Copernicus leads to a more accurate assessment of the rhythms of composition, presswork, and distribution, without contradicting Ptolemy's identification of the ultimate source of the blind lines of type on ✕8r. (Ptolemy was certainly clever, but limited—partially wrong.)[25]

The graphic difference in the two groups of arrows emanating (in different directions) from XX3r in these two maps makes vivid the contrasting dynamics of the kempt Copernican universe (on the right, below)—1–2–3–4–5

XX3r
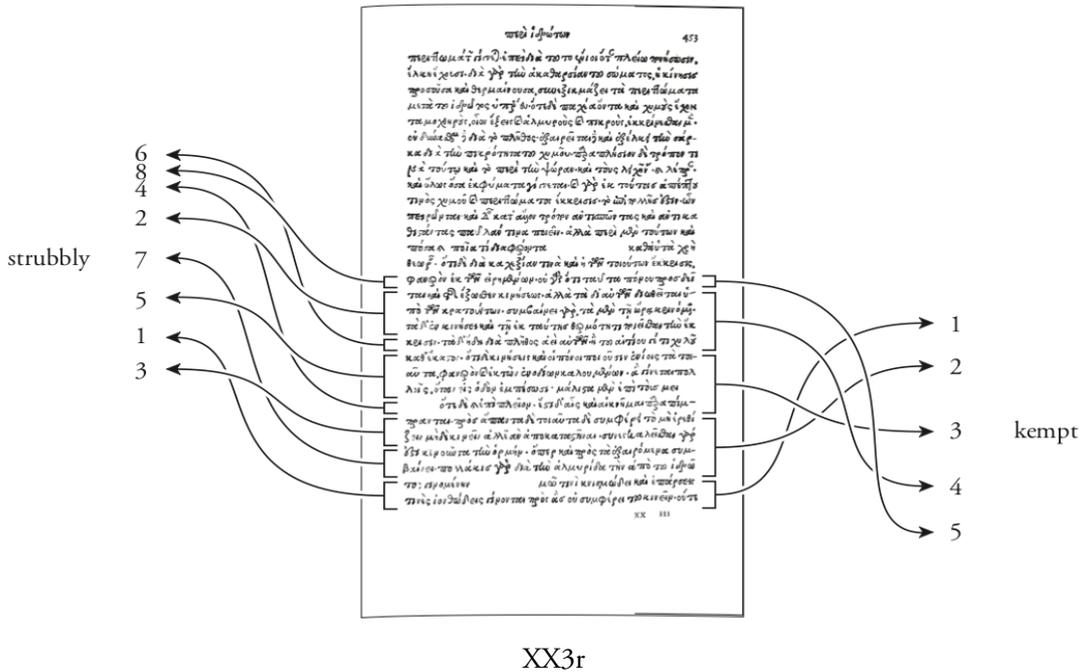
and the strubbly Ptolemaic (on the wrong)—6–8–4–2–7–5–1–3. We can now divine that, as the strubbly map of blind type on &7v and &8r in the Aldine Martial on p. 160 is Ptolemaic, somewhere there exists (or at least once existed) a prior *kempt* arrangement of the blind type emanating from these four pages of Z(i). The existence and the whereabouts of this Source now detected, but as yet unlocated, represents your new goal:

an even more unconscious unconscious

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[25] In these meta-maps of quires XX and ✕ on p. 165, production-time flows straight down the map, for, in the folio format of the Aristotle edition, Aldo composed and printed by formes, from the outermost forme of the outermost sheet of a quire to the innermost forme of its innermost sheet, then on to the outermost forme of the next quire. (The meta-map on p. 183 offers another example of this flow.) For this means of production, Aldo had to cast off copy into page lengths and start by composing pages 1 & 16 and, when they were at press, turn next to pp. 2 & 15, to perfect the outermost sheet.) Narrative sequence in these maps, by contrast, proceeds via Aldo's numbering of leaves—down through ff. 451 to 454–455, then up to 457 ([458] is blank–*really* blank), then on to the next quire. The leaf-numbers I have added to the meta-map (1–8 in each quire) trace the same route. (In quire ✕ Aldo provided no folio numbers.) For more on the printing of the Aldine Aristotle, see McLeod and Perry (2021).

📖

Before returning to Martial to climax, let us understand the practical implications of strubbly and kempt for the compositor of the Greek text, for in his capable hands that's where the action was. Once one grasps how easily lines of type can pie—how fragile literature can be before a compositor locks it in a chase—the following nine-panel Strubbly cartoon reads like a How-Not-To comic-strip. (Michael, see how I've made it cut-out-ready for re-assembly as one of your 𝕯𝖆𝖚𝖒𝖊𝖓-𝕶𝖎𝖓𝖔𝖘).

Courting disaster on ※8r with every transfer of type, this strubbly cartoon is not really a believable account of re-imposition—as you'll soon see.
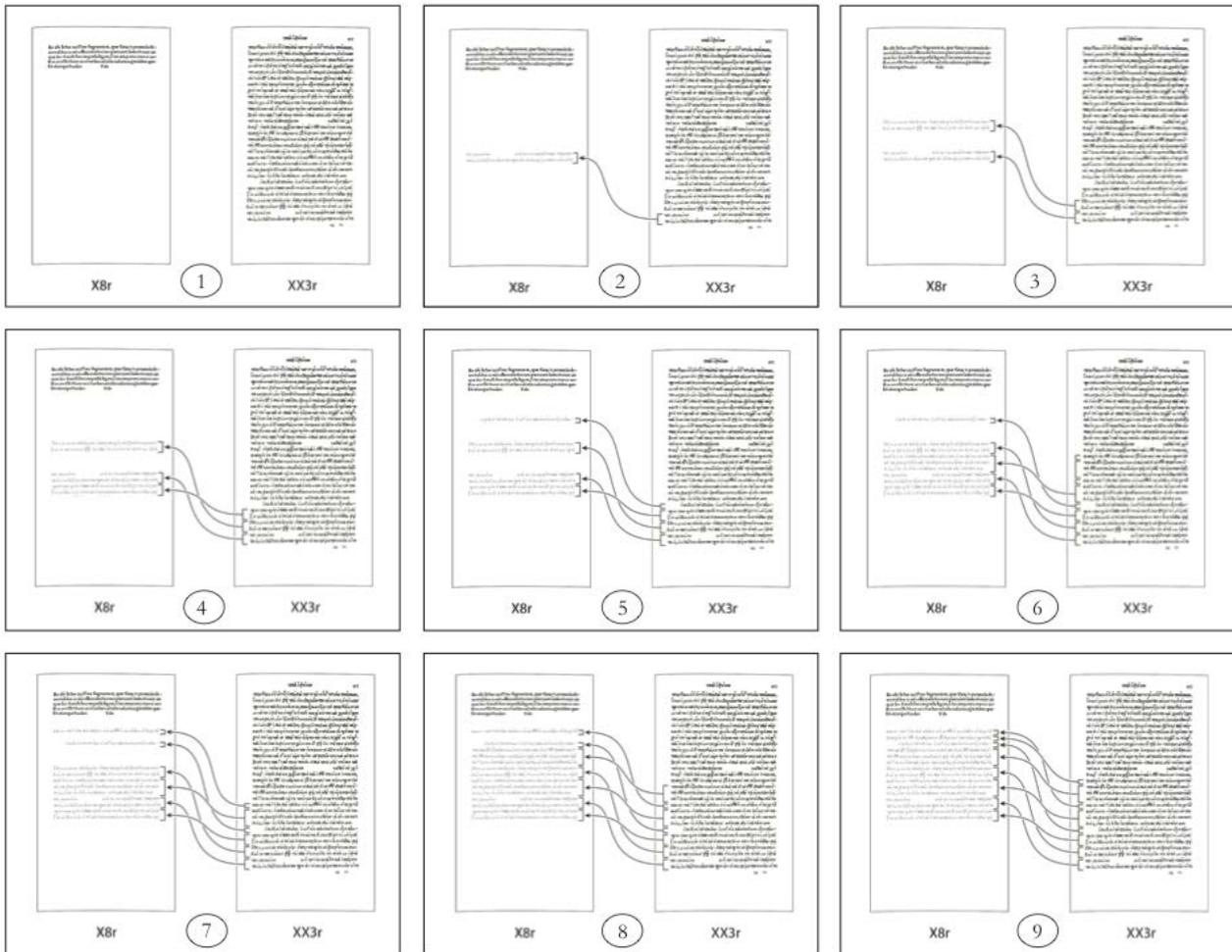
Strubbly: Ptolemy in 8 transfers

Strubbly depicts the action of transposing type with, say, a reglet placed against the bottom of the source. Pushing up against the reglet with both thumbs and, applying lateral pressure with the second

or third finger of each hand against the sides of the several lines of type to be moved (a half-dozen lines or somewhat more seems a workable number for type of this size in a column of this width), the compositor tips these lines onto the reglet, so that gravity supports them while they move to their destination. In the second panel, imagine that these few transposed lines are now tipped back onto their feet and released on p. ✕8r. OK so far. But they cannot be left just standing unsupported in the middle of nowhere, as shown here, where they would be open to being jostled and knocked over during subsequent transfers of type to this page. For stability, they should be slid tight up against something solid, such as other lines of type—or against scabbards, reglets, or some such (which, in the last three panels of this cartoon must, though unseen, separate the inked lines atop the page, from the first of the blind ones below). The third panel shows a similar problem; and the fourth suggests that newly transposed lines abut a previous vulnerable 'island' of type deposited on ✕8r.[26]

Although the transfers in this cartoon are always taken from the readily accessed bottom of the quarry (the bottom, retreating with every transfer), the sixth, eighth, and ninth panels show the transfers being deposited awkwardly between previous deposits, rather than added to the bottom of ✕8r (to make it grow down the page with each transfer), where all would be stable. Why, one wonders, is laying-down not simply the inverse of taking-up? In the following diagram of text-vectors, the current transfer is coloured red, to make vivid its wayward motion: now you see it below, now above, now in between, reckless.

2   3   4   5   6   7   8   9
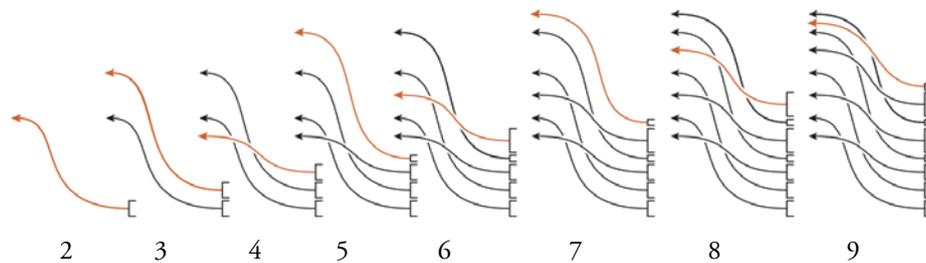
Placing the current group of transposed lines of type between previous deposits risks knocking something over. Better to place the first deposit against something stable, the second against the first, the third against the second, uʃw. Building solid in this way would mean that laying-down would indeed be the inverse of taking-up—and that is just what is evident in the following Kempt cartoon, Michael, which now comes to the rescue. It will not be a *comic*-strip this time. And see how concise it is now. That's good, surely. Here we must assume that the first group of transposed lines (see #2) abuts something solid, like a scabbard or a reglet.

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[26] The closest Moxon comes to depicting such a process is in ¶ 3('Of Destribution') in §22 ('The Compositers Trade') of *Mechanick Exercises*. It treats taking-up of lines for distribution. In Plate 23, his compositor places a 'Riglet' against the top of a horizontal page of type; but in my description, placement is against the bottom. (That's certainly how I transfer lines of type—and with a flexible lead, not with a stiff reglet.)
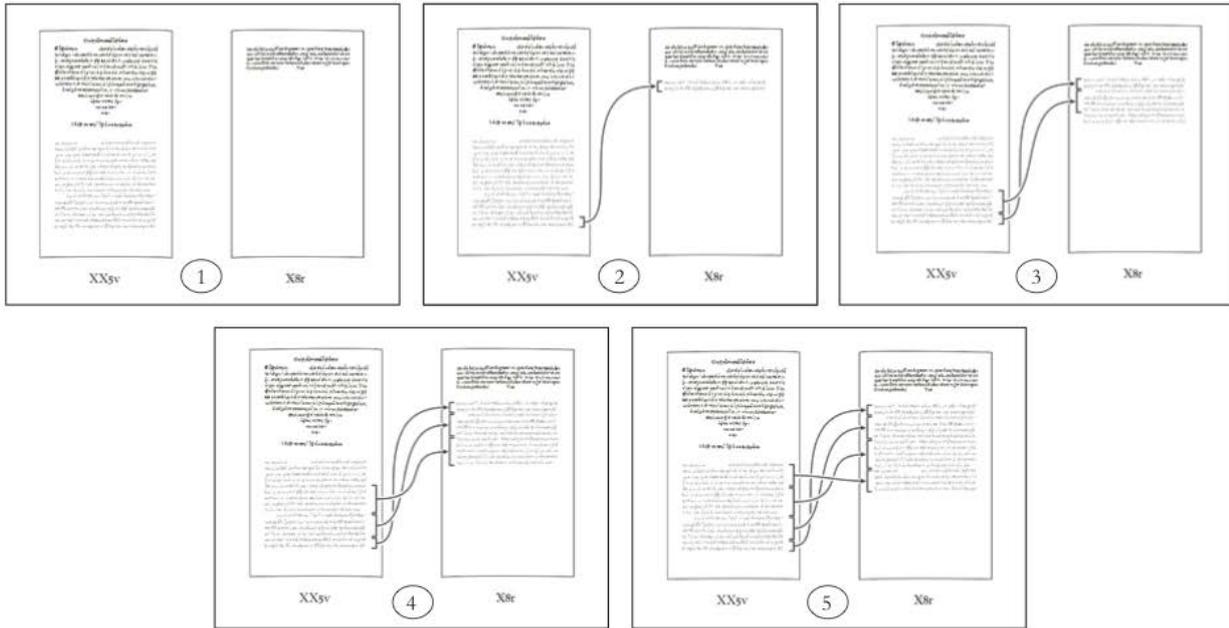
Kempt: Copernicus in 4

To be sure, in *Strubbly*, one could have built solid on ✳8r by extracting successive groups of lines from various *internal* places in XX3v. But extraction from the interior of a page of type is itself awkward and would merely have shifted the instability of the whole operation from the destination page to the source page, where such extraction would have left vulnerable islands of type during excavations, such as are implied by the gaps that first appear in the following diagram of text-vectors emanating from XX3r between the brackets in 8, 6, and 4 after the transpositions (marked in red) in 9, 7, and 5.
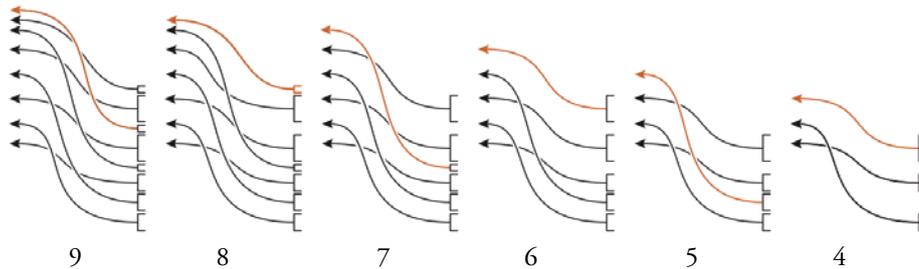
In the eyes of an Occam, of course, what especially recommends *Kempt* over *Stubbly* is that the very same fifteen lines of type are transposed in merely four moves, not in eight.

Our perception of the structure of arrows connecting sources and destinations in Copernicus can be enhanced by numbering the lines, as in the following example of how Aldo's lines of type jmuble with each reconfiguration. My discussion of these lines and numbers will be brief, but also dense. Please read it slowly against the picture. Understanding all this will prepare you for the Joy and Beauty of the impending Magic Trick, without (I assure you) lessening the Surprise.

XX3r   XX5v   ✳8r
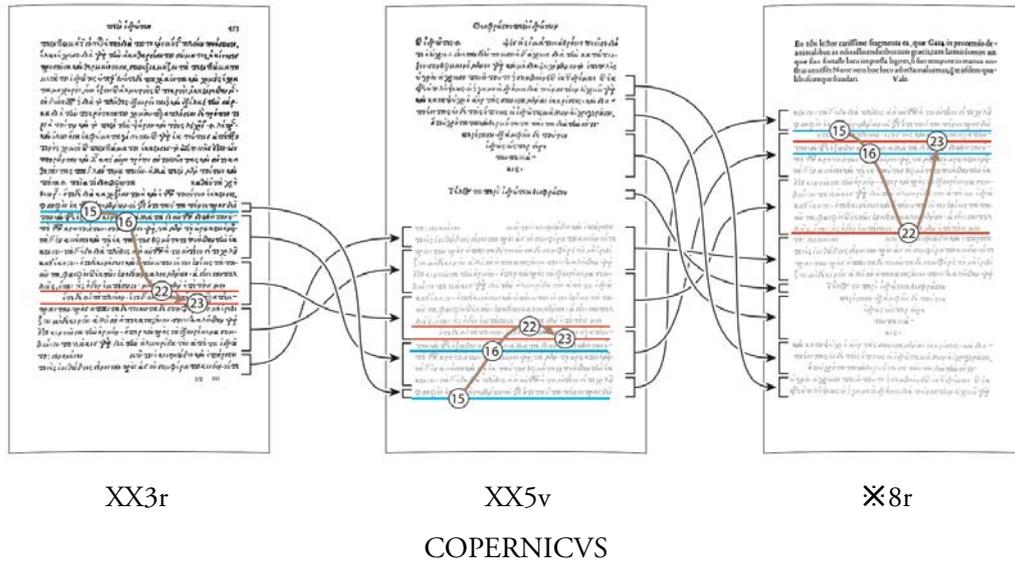
COPERNICVS

In the leftmost page of the Copernicus map (shown here again from p. 165), I have underlined and numbered two pairs of lines, arbitrarily chosen: ll. 15 and 16 in blue and ll. 22 and 23 in red. The circles bearing their numbers are strung along an arrow in numerical (i.e. narrative) order. Because the latter pair of lines is transposed from XX3r to XX5v in a single four-line group (see the third, or middle, of the five brackets on the right side of XX3r), ll. 22 and 23 remain adjacent and in the same order when transferred to the new page. Because ll. 15 and 16 are transposed in separate groups, however (see the top two brackets), they cease to be adjacent on XX5v and, in fact, reverse their sequence and move apart; and both of these early lines now appear after the later ones, ll. 22 and 23. The original sequence of numbers along the arrow, 15, 16 (and six lines later), 22, 23 has been replaced by 22, 23, 16 (one line immediately after the next), followed by 15, four lines below. Line 15, once first, is now last—and 22 is first.

    In the next transfer, from XX5v to ✳8r, it is the adjacent ll. 23 and 16 that are now in a single group (see the second-last bracket on the right side of XX5v); and so, their new relationship survives the next transfer. But each of the other two lines, 15 and 22, now belongs to a different group (see the bottom bracket and the second from the top—neither of which is the one containing ll. 23 and 16); they reverse their sequence and move apart. The recent reordering along the arrow, 22, 23, 16, 15, is replaced by 15, 23, 16 (one row immediately after the next again, though these are not all the same rows), followed by 22, seven lines later. Recently first, l. 22 is now last; and 15 is first once more.

    Here's the thing. If one had only the last state and knew that it was a transposition of a transposition, the Magic Trick would be to understand the overall dynamic and to engineer in reverse:[27]

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[27] Father was an engineer.

from   to   to
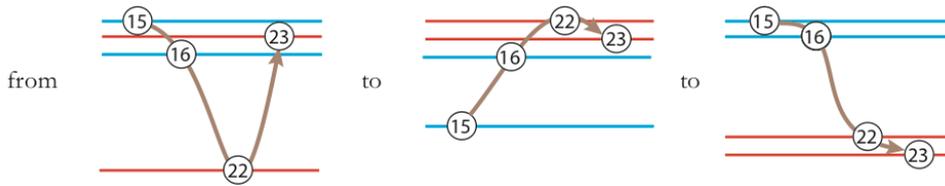
What might our Engineer take into account in order to start formulating her strategy? Well, in the last state (on the left), the early-numbered lines are on top, but infiltrated by a later number. Then, in the earlier state (shown in the middle), the later numbers are on top, cheek by jowl with an early number, but its mate is on the bottom. *That* is the kind of pattern, I suppose. I suppose …

Certainly, rigorous physics was at work in the compositor's transpositions of these lines of type. And there is rigorous geometry to match it in the Copernican map of his reconfigurations. Nevertheless, these migrations are hardly intuitive: one struggles to read this rewoven text in the twilight of successive blind impressions. I struggled for five years until—well, you'll see.

<p style="text-align:center">this struggle for the text is the text</p>

<p style="text-align:center">📖</p>

<p style="text-align:center">Reverse engineering</p>

The blind lines that were transposed strubbly to ♓8r by twelve arrows in the Ptolemy map are transposed kemptly in the Copernicus map by merely eight. The numerous Ptolemaic retrogressions on the right side of the first of these maps—do they not invite Occam's razor? Yes, they do. Can we not now move quickly to the payoff? Yes, we can. Yes, we can.

To summarize: the problem with my strubbly old Martial map on p. 160, shown here again (to refresh your memory),


Z4r   &8r   Z5v   Z3v   &7v   Z7v
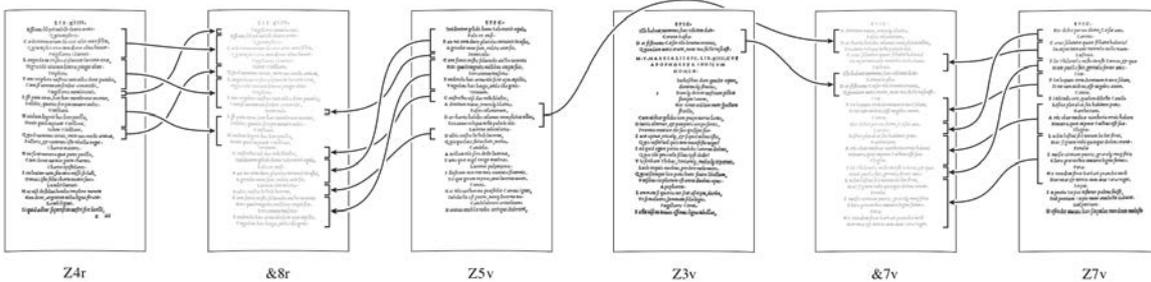
and shown again atop the next page, too (for contrast there)

Z4r   &8r   Z5v   Z3v   &7v   Z7v
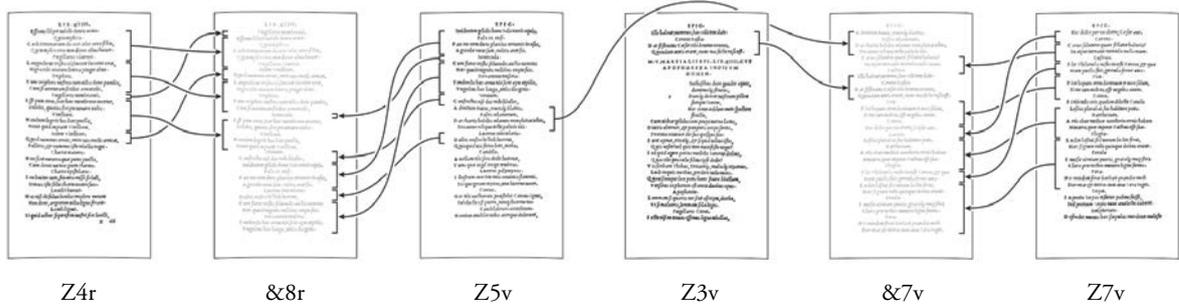
is that its arrows leading to the lines of blind type on &8r and &7v hide the fact that they omitted a stage of transmission. The blind texts of pp. &7v and &8r are not mere derivatives, as this map implies: each must depict, at least a derivative of a derivative. So, the Trick now will be to reconstruct the earlier derivatives, the Sources of the blind texts visible in Uzielli 34.

Are you ready for things unattempted yet in prose or diagram? Seat-belts fastened? Yes? Then, out of now here, behold its Revelation—most kempt![28] *drumroll*

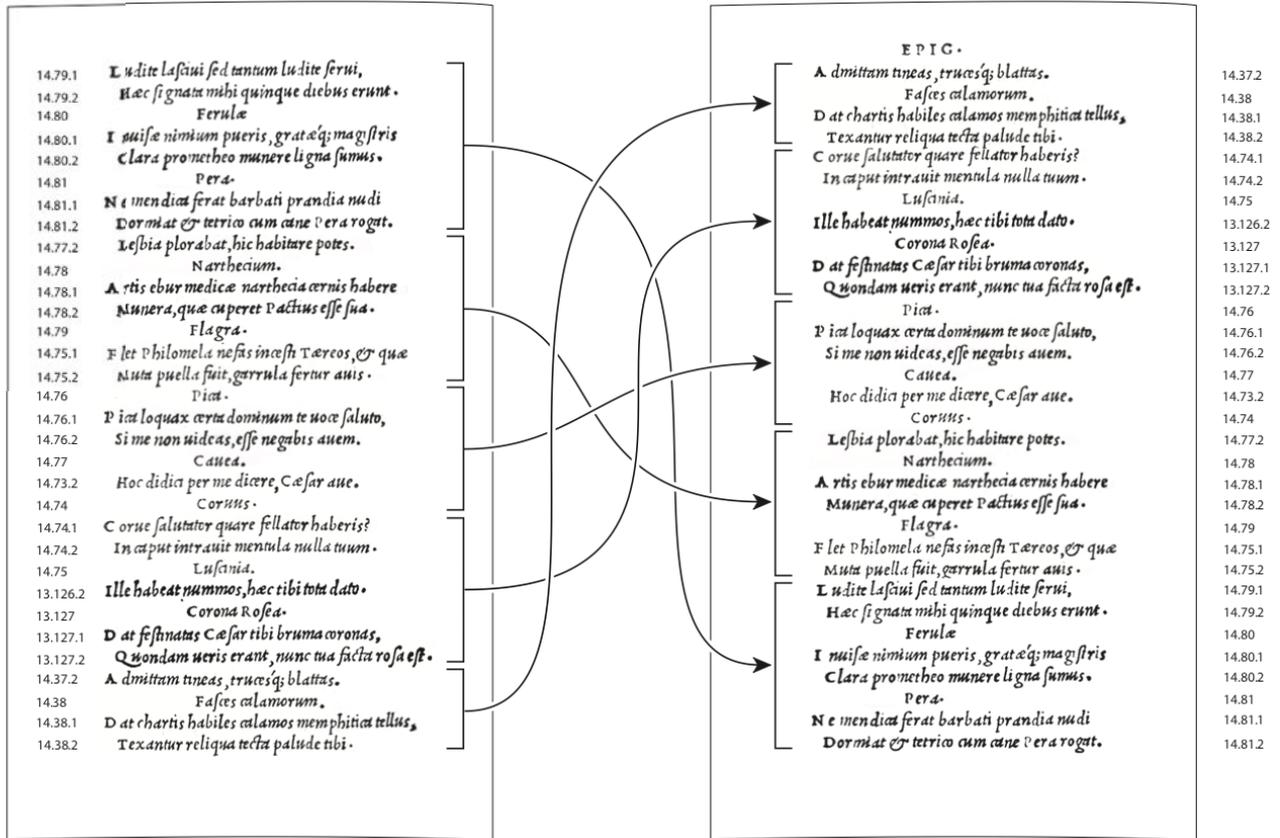Z4r   Source of &8r   Z5v   Z3v   Source of &7v   Z7v
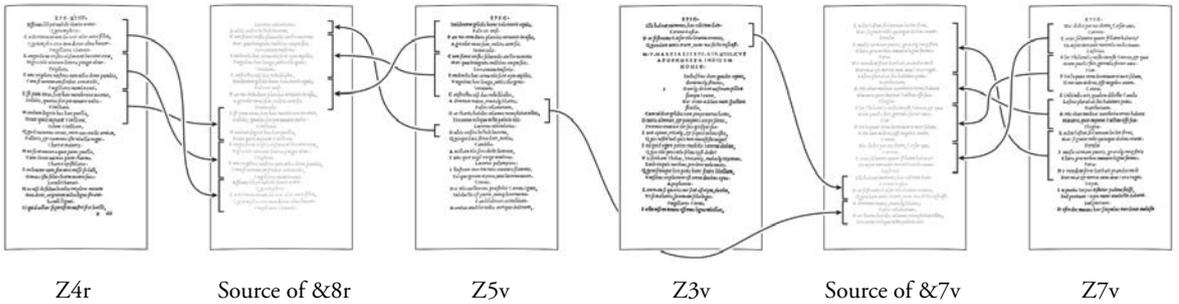
Pause now to see how simplified. But the wander of it!

We know where to locate the *later* derivatives—where we first saw them in Uzielli 34. Seeing, however obscurely, was believing. (You did—you *do* believe?) But where did or do the *earlier* derivatives, these Sources, exist? Someday, maybe, we'll know. But for now, wielding Occam's two-handed razor, we can at least flesh out the derivation from the Sources just reconstructed. Behold them next, as if in the Bibliographer's Heaven of Formes—'vacant charters' no more, enlarged now, darkened for legibility, and numbered—all for your Saturnalian reading convenience, Michael, and for all those reading over your shoulder. Start this Jumblathon—this *re*Jumblathon—when and where you wish.

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[28] This latest map informs speculation about the compositor's schedule. He commenced transferring groups of lines for printing blind onto the Source of &7v from Z7v once its bottom five lines had been removed and presumably distributed. He took from low and deposited high. When Z7v was emptied after four transfers, more type came from Z3v to fill the bottom of the Source of &7v, seemingly after it had all been distributed except for its top four lines. After they went to the Source of &7v, and before the last group of lines to be transferred to that page appeared, from Z5v, Z5v itself seems to have been stripped of its last twelve lines and had already begun transferring lines to the top of the Source of &8r. By the time that Z5v was emptied, the bottom 15 lines of type on Z4r had been distributed and the remaining lines on that page went to complete the blind type on the source of &8r. Here again, blind type quarried from low on one page was deposited high on another. That was the norm.

At last, it seems, the text is all before us.[29]

Q *nouiscunque loco potes hunc finire libellum,*

the Source of &7v   &7v

OCCAM'S RAZOR 1

[29] Well, not *all* the text is before us here, for the blind headline is not distinctive enough to trace to a specific source.

You can start wherever you wish.

Q nouiscunque loco potes hunc finire libellum,
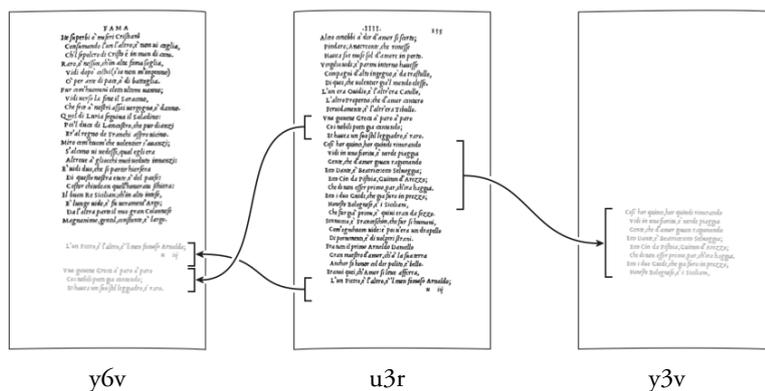
the Source of &8r

	Lucerna cubicularia.
14.39	
14.39.1	D ulcis conscia lectuli lucerna,
14.35.1	C um fieret tristis soluendis auctio nummis
14.35.2	Haec quadringentis millibus empta fuit.
14.36	Ferramenta tonsoria.
14.36.1	T ondendis haec arma tibi sunt apta capillis,
14.36.2	V nguibus haec longis, utilis illa genis.
14.37	crinium.
14.37.1	C onstrictos nisi das mihi libellos,
14.33.2	Stridentem gelidis hunc Salo tinxit aquis.
14.34	Falx ex ense.
14.34.1	P ax me certa ducis placidos curuauit in usus,
14.34.2	A gricolae nunc sum, militis ante fui.
14.35	Securicula.
14.7.1	E sse puta ceras, licet haec membrana uocetur,
14.7.2	Delebis, quoties scripta nouare uoles.
14.8	Vitelliani.
14.8.1	N ondum legerit hos licet puella,
14.8.2	Nouit quid cupiant Vitelliani.
14.9	Iidem Vitelliani.
14.9.1	Q uod nummos cernis, mitti nos credis amicae,
14.5.1	L anguida ne tristes obscurent lumina cerae,
14.5.2	Nigra tibi niueum littera pingat ebur.
14.6	Triplices.
14.6.1	T unc triplices nostros non uilia dona putabis,
14.6.2	Cum se uenturam scribet amica tibi.
14.7	Pugillares membranei.
14.3.2	E ssemus libyca nobile dentis onus.
14.4	Quincuplices.
14.4.1	C aede iuuencorum domini calet area felix,
14.4.2	Q uincuplia cera cum datur altus honor.
14.5	Pugillares Eburnei.

&8r

LIB. XIIII.	
Pugillares membranei.	14.7
E ssemus libyca nobile dentis onus.	14.3.2
Quincuplices.	14.4
C aede iuuencorum domini calet area felix,	14.4.1
Q uincuplia cera cum datur altus honor.	14.4.2
Pugillares Eburnei.	14.5
Iidem Vitelliani.	14.9
Q uod nummos cernis, mitti nos credis amicae,	14.9.1
L anguida ne tristes obscurent lumina cerae,	14.5.1
Nigra tibi niueum littera pingat ebur.	14.5.2
Triplices.	14.6
T unc triplices nostros non uilia dona putabis,	14.6.1
Cum se uenturam scribet amica tibi.	14.6.2
Securicula.	14.35
E sse puta ceras, licet haec membrana uocetur,	14.7.1
Delebis, quoties scripta nouare uoles.	14.7.2
Vitelliani.	14.8
N ondum legerit hos licet puella,	14.8.1
Nouit quid cupiant Vitelliani.	14.8.2
crinium.	14.37
C onstrictos nisi das mihi libellos,	14.37.1
Stridentem gelidis hunc Salo tinxit aquis.	14.33.2
Falx ex ense.	14.34
P ax me certa ducis placidos curuauit in usus,	14.34.1
A gricolae nunc sum, militis ante fui.	14.34.2
Lucerna cubicularia.	14.39
D ulcis conscia lectuli lucerna,	14.39.1
C um fieret tristis soluendis auctio nummis	14.35.1
Haec quadringentis millibus empta fuit.	14.35.2
Ferramenta tonsoria.	14.36
T ondendis haec arma tibi sunt apta capillis,	14.36.1
V nguibus haec longis, utilis illa genis.	14.36.2

OCCAM'S RAZOR 2

📖

Exit William.

Now you've seen reverse engineering in action, consider the following early map of my explorations of Paolo's 1533 Petrarch. So far, the blind type on y6v is fully identified, but on y3v only the base of the page. (Of course, being early doesn't mean that the derivations mapped so far may not prove to be final too.) The question is 'Is this map shaping up Ptolemaic or Copernican?'

y6v   u3r   y3v

Right, it's Ptolemaic. It doesn't exactly *look* strubbly, but the interrupted movement of blocks of type from the bottom of the source, u3r, to y6v certainly is odd: it sends type there first, then skipping over eight lines, sends type to y3r, then again to y6v. If y6v and y3v were pages in the same forme, this pattern might seem normal enough, as when Martial Z5v sends type to the Source of &8r, then to the Source of &7v, then back to the Source of &8r. But both these Source pages are on the same forme, whereas Petrarch y3v is on the inner forme and y6v on the outer. Emptying u(o) into both y(o) and y(i), supposedly in simultaneous production, would have taken much space on the stone—for three formes. Imposing in two formes at a time seems scattered—especially in light of this Copernican map that emerged after more research:

u3r   u5v   y6v   y3r   y3v
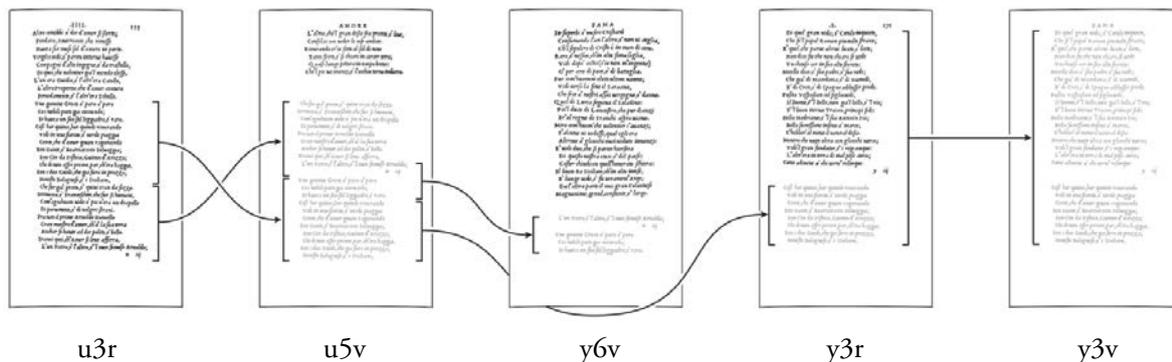
In it, y3v, again at the right end, is not a simple derivative from u3r, still at the other end; it is, rather, a derivative of a derivative of a derivative, as the intervening stages show. It is this multiplicity of stages that serves to grow the map kempt. At the start, u3v on u(o) feeds u5v on u(i), which feeds two pages in y— both y3r and y6v on a *single* forme, y(o)—and one of these y(o) pages feeds y(i). This derivation is straightforward: u(o) → u(i) → y(o) → y(i). Only a single forme was in composition at one time in this later map, outer before inner, whereas in the former, Ptolemaic, map, u(o) appears to feed both formes of y at the same time—and without evidence of passing through u(i). That is just too complicated.

📖

Return Alpheus (handwritten marginal note)

und ſo weiter

Recall from p. 158 that at the right margin of ll. 26–29 in the illustration of blind type on Martial &8r, it was possible to read (or at least decipher) several faint mirror-image initials overleaf. They seemed to be 'E' (flush to the right margin), 'D' (indented), followed by the blank beginning of a line that, so I surmised, contained a title obscured by the impression of the 'D' verse on our (recto) side of the leaf (this verse proved to be 14.39.1), and, finally, flush to the margin, 'H'—or was it 'N'? (It's always hard to decide which of such look-alike letters it might be before one has a potential source to guide interpretation.) The bright images from typeface on the recto obliterate much of the rest—text obscuring text.

Time now to flip that illustration side to side (so that we won't have to continue reading *en miroir*), add two more lines above and three below, open our eyes wider, and take another look. With the following excerpt of the final nine lines on &8v, I'll pair the first nine on Z6r, for I have concluded after years lost in a Dark Wood that Z6r is the source of the blind type on this part of &8v. You may be surprised to realize after what was just said about Petrarch 1533 that Z6r is yet another page from the same forme, Z(i), that fed the *other* forme of quire &.[30]

N —		&8v.24
		&8v.25
E ——		&8v.26
D —		&8v.27
		&8v.28
H ——		&8v.29
? —		&8v.30
		&8v.31
? ——		&8v.32

LIB.XIIII.

N ——	Non norat parcos uncta lucerna patres.	Z6r.1	14.43.2
	Candelabrum ligneum.	Z6r.2	14.44
E —	Eſſe uides lignum, ſeruês niſi lumina, fiet	Z6r.3	14.44.1
D —	De candelabro magna lucerna tibi.	Z6r.4	14.44.2
	Pila paganica.	Z6r.5	14.45
H ——	Hæc quæ difficilis turget Paganica pluma,	Z6r.6	14.45.1
F —	Folle minus laxa eſt, & minus arĉta pila.	Z6r.7	14.45.2
	Pila trigonalis.	Z6r.8	14.46
S ——	s. Si me nobilibus ſcis expulſare ſiniſtris,	Z6r.9	14.46.1

[30] The Florence copy RA 383, shown in the lower photograph, has annotations in ll. 1, 3, and 7. Lindsay (Martial 1929, n.p.) records that 'parthos' (*pro-*tos) (14.43.2) is found only in Thuaneum florilegium Parisinum, a ninth- or tenth-century manuscript; and he records no sources for '*serues*' (14.44.1) or for '*arcta*' (14.45.2). (Aldo's edition did not break new ground on the text of this poet. He seems to have followed the corrupt text that appeared in previous printed editions.) Lindsay has litte to say about early printed texts.

The key to identifying the source of blind type is &8v, l. 26. That blind line certainly begins with 'E *f* ' or 'E *ſ* '. And near the end of this verse, where I have drawn a circle, there seems to be the eloquent oblique of an '*ſ* ' or '*f* ', neither of which is a terminal shape in Latin. This oblique cannot be part of text overleaf, as no Latin letter in italic slopes so, from high on the left (on that side) to low on the right. This near-end of the verse overleaf is detectable because, luckily for us, the width of the title on the corresponding line overleaf—it's none other than our 'L*ucerna cubicularia*'—misses obliterating it by the width of only a few letters.

As numerous verses in quires Y, Z and & have such a combination of letters, it was not immediately clear which of them was the source? Perhaps 'E *ffugere … eſt* ' (12.82.10) on Y1v— this '*f* ' being part of an '*ffu*' ligature and this '*ſ* ' part of an '*ſt*' ligature? But no, the length of that line is off. Or consider 'E *ſſem … forem*' (13.103.2) on Z2r, the first '*ſ* ' being part of an '*ſſe*' ligature, the last '*f* ' part of an '*fo*' ligature. No again—as this prospective source is off for the same reason, and also because the initial is indented. After searching through the candidates, I found that everything points to 'E *ſſe … fiet*' (14.44.1) on Z6r.3. The start of this verse is flush left and the length is just right to reach the '*f* ' (it is indeed '*f* ') later in the line, part of an '*fi*' ligature, not a stand-alone letter. (See the vertical white line connecting the two circled appearances of the word '*fiet*' from one photo to the other.)

Confirmation of three other blind initials follows quickly, all sequential in the six-line range 14.43.2–14.45.1. The last letter I can make out must be 'H', not 'N'. And the blank beginnings of &8v.25 and of &8v.28 in the upper photo must indicate the presence of titles in the middle of these blind lines—titles obscured by verses overleaf. The four blind lines with legible initials in this range are, alas, the only blind lines on the whole of &(o) that I can presently identify. The body language of the left margin of the last three blind lines suggests, however, that they continue from where the identified lines of Z6r leave off—with indentation in the ante-penultimate line, a blank beginning in the penultimate, and no indentation in the last. All these features match the corresponding ones in the three lines, ll. 7–9, that follow the top six lines on Z6r already confidently identified.

So what? We now gather that at least the six blind verses identified very near the bottom of a page on &(o) (as shown here on the left)

Z6r   &8v   Z6r   &8v
confirmed   quite possible
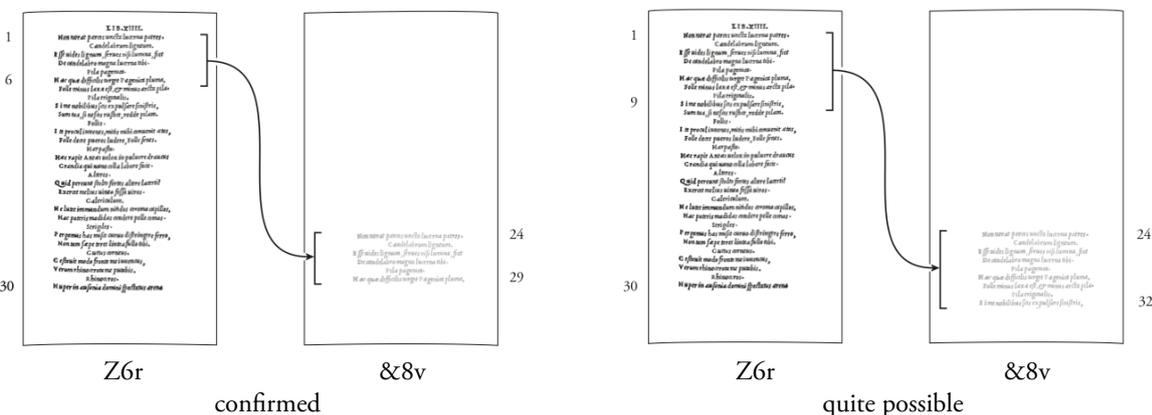
and quite possibly all of the last nine lines down to the bottom, l. 32 (as shown on the right), come from the very top of this Z(i) page—and such a transfer from one extreme of the source page to the other extreme of the destination page is significant. If we could see all the blind type on &8v, we might therefore expect that the last lines of Z6r would reappear at the top of

&8v (or at least *near* the top, because although the source, Z6r, has 30 lines, the destination has 32, and so there must be at least two lines on this page from another source). Such a transfer would be characteristic of a simple derivative, whereas the derivative of a derivative, as we know from our investigation of the text of Theophrastus (beginning on p. 163), transfers a group of lines from the top of the source to near the top of the destination (the *second* destination) and also inserts other lines in their midst. But the blind lines identified on &8v appear to be a single transfer of a coherent nine-line group from the top of one page to the bottom of another.

Why should derivation be more complex (a derivative of a derivative) from Z(i) to &(i) than from Z(i) to &(o) (seemingly a simple derivative)? That's now the question.

📖

To attempt an answer, I'll first consider the rhythm of Aldo's production of the 1501 Martial as reflected in a sampling of its headlines. Shown next on the left are the three outer-forme recto headlines on A3r, A5r, and A7r. (I omit the A1r page, as it begins with a title, rather than a headline.)

LIB·I. 3 / Qualiter in scythica religatus rupe Prometheus / Assiduam nimio pectore pauit auem,	3r	LIB·I. ii. / De Ruffo, & Neuia. / Quicquid agit Ruffus nihil est, nisi Neuia Ruffo,
LIB·I. 5 / Et par unda fretis, hic modo terra fuit. / Non credis, spectes, dum laxent æquora martem.	5r	LIB·I. 13 / De Mario. / Venderet excultos colles cum præco facetus,
LIB·I. 7 / Quæ maiora putas miracula? summus utrisque / Author adest, hæc sunt Cæsaris, illa Iouis.	7r	LIB·I. 15 / O ptarent tibi centies amici· / Audit uota Deus, precesq; nostras,

A(o)   B(o)

Note that each headline sits at a unique distance from the margins. Also, the punctuation of each is usually distinctive by virtue of its particular distances from the base line and from the numeral. In addition, an individual typeface is sometimes recognizable, as is, for example, the 'I' numeral in the headline of A3r—by its minimal lower serifs. One could happily read a book just for such differences. But here's the point. Early printers usually transposed the eight justified headline settings of each octavo forme one at a time from the forme just off the press to the one in preparation. Thus, the distinctive indentation, punctuation, and type damage in A3r, A5r, and A7r recur respectively in B3r, B5r, and B7r (shown on the right, above). And every sixteen pages, outer forme after outer forme throughout a volume, these same features can be recognized *mutatis mutandis* as the recto headlines gradually evolve for naming subsequent Books.[31] (So it is that the 1r headline appearing first on B1r reappears on C1r, and thereafter on the first recto of subsequent quires.)

As similar transfers take place regularly in the headlines of the inner formes, this edition can be characterized by two distinct 'trains of production':

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[31] And if the title of a new Book should temporarily displace the headline, as happens on S7r, where Bk. XI is announced, look for the R7r headline to reappear not 16 pages, but rather 32 pages later—on T7r.

$$A(o) \rightarrow B(o) \rightarrow C(o) \rightarrow \ldots \&(o)$$

and

$$A(i) \rightarrow B(i) \rightarrow C(i) \rightarrow \ldots \&(i).$$

How were these two trains of production coordinated? I'll begin to visualize the process as follows (but soon introduce another option). After an outer forme had been printed, its place at the press (for now, I'll assume a single press) was taken by the next forme, an inner one, already prepared. The outer forme was then washed, laid on the stone and unlocked, ready to be stripped. Beside it there would have been imposed, or would soon have been imposed, the eight type-pages of the next outer forme-in-preparation; and one by one the headlines of the old forme would have been transferred to the new. Here, I show the migration paths of the three headlines just displayed.
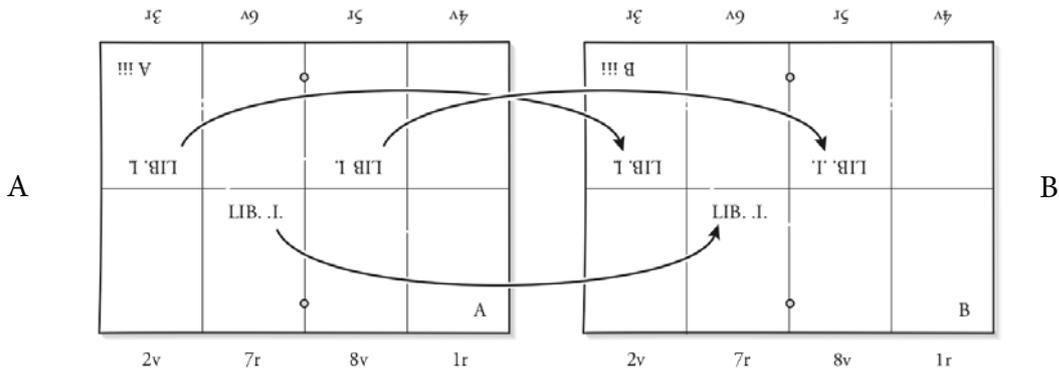
At some time during this process, the chase (the bounding frame) would also have been transferred, and, piece by piece, so would have been the furniture surrounding each page of type. Should any blind type have been required for the forme-in-preparation, blocks of whole lines of type could also have been moved to it from the forme being stripped. (Otherwise, its types would have been distributed one by one into the cases for later composition.)

   To try to answer the question of how these two sequences 'A(o) → B(o) → C(o) → … &(o)' and 'A(i) → B(i) → C(i) →… &(i)' might have been coordinated, I'll now consider three kinds of evidence. (Five pages will take us to where we need to go.) *First*: the shadows cast by raking light—as discussed on p. 137. Recall that raking light shines neither onto the leaf from above, nor through it from behind; rather, it shines level with it, in the very plane of the leaf. The three raking-light photographs atop the next page are from an unbeaten copy of the fourth edition of de Béranger's *Chansons*, 1821 (chez les Marchands de Nouveautés) in the newly acquired François Gros collection of Tamil books at the University of Toronto. (But any old book could do; it doesn't have to be Aldine.) After a preliminary quire of seven leaves, the body of this copy is made from nine sheets of 18mo, from each of which came a quire of twelve leaves followed by one of six. In each quire, the terms 'outer forme' and 'inner forme' that applied to the printing of the sheet still apply after its division. (So, the caution on pp. 139–140 concerning the use of these terms in bound copies of *The Strayed Reveller* does not apply here.) Light raking from the left across p. 8 of quire 1 of *Chansons* casts tall-tale shadows, as in v. 23 of the poem 'L'ACADÉMIE ET LE CAVEAU', the title of which happens to print overleaf at the same height on the page. This will all be easier to visualize if I take a photograph of this line on p. 8 and show it first, then flip it side to side and show it second, like this—

v. 23   *Mais, que je m'effrayais à tort !*   p. 8

↑

v. 23   *Mais, que je m'effrayais à tort !*   p. 8

↕

title   L'ACADEMIE ET LE CAVEAU.   p. 7
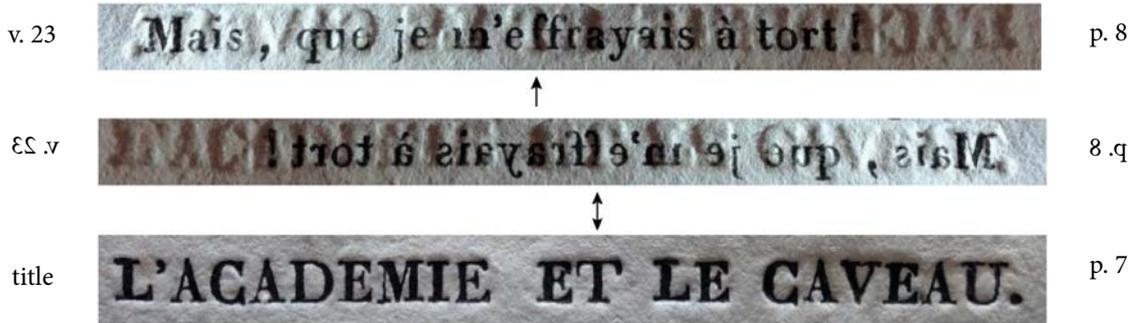
and, third, align below it a photograph of the title itself, from p. 7 (with light raking from the top of the page this time). In the photograph of p. 7, the title appears appears sunken. In the first photograph of p. 8, it appears raised. Page 7 is on the inner forme, p. 8 on the outer.

Now it gets interesting. At the arrow, mid-verse in the first of these three photographs, light raking from the left, illuminates a protuberance at the start of the first f in 'm'effrayais' (no ff ligature here), and the letter f itself, starting at the summit of this swelling, where a shadow also begins, slopes downward to the right into darkness. Obviously, in this range from light to shade, the debossed T of 'ET' had thrust the f up into the packing of the tympan of the printing press and so cancelled whatever bite the f typeface may previously have made in the sheet—when the page-8 side of the sheet had been printed. (The paper has remembered all this for two centuries!) As p. 8 is on the outer forme, we can deduce that the order through the printing press for this first sheet (and its two quires, 1 and 2) was outer forme before inner. That sequence through the press pertained for the next sheet too. (If this text had been composed seriatim, composition of the inner forme would have been completed before composition of the outer.) But, for sheets 3 through 7, as the shadows there reveal, the inner forme was printed first; in the 8th, the outer; in the 9th and last, the inner again.

Contrast copy Rari.22.A.7.13 of the 1505 Aldine octavo of poems by Augurellus in the Biblioteca Nazionale Centrale. The play of raking light and shadow in that unbeaten (or perhaps lightly beaten) copy shows that its outer formes were all printed first. This sequence jibes with that just deduced in the Copernican map of the 1533 Petrarch on p. 175. With Aldo, it seems, inner formes of octavo routinely had the last word—vividly so in the following example from another Aldine octavo, the 1503 Euripides, where, three outer-forme pages, AA3r, 4v, and 7r, provided blind type for the inner-forme 1v page of the same sheet.

AA3r   AA1v   AA7r   AA4v
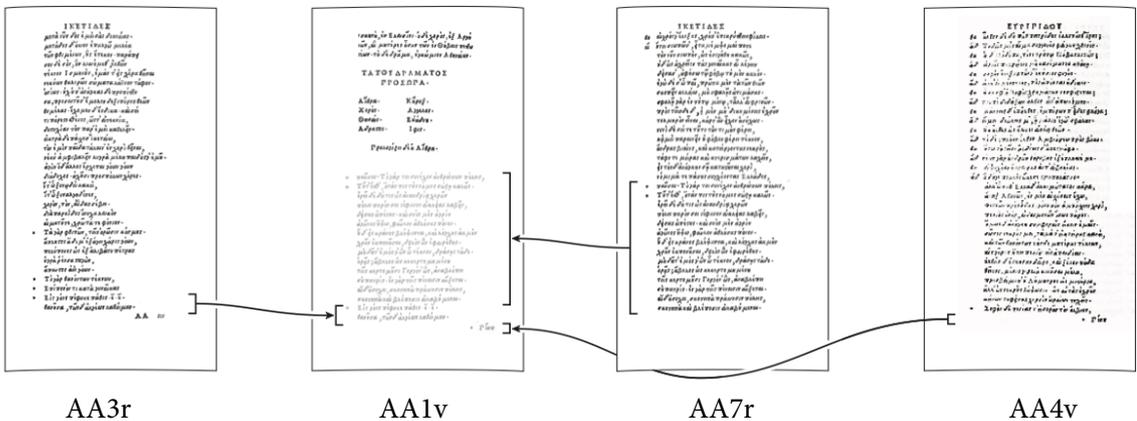
Usually in this edition, blind type migrates from the outer or inner forme of one sheet to the outer or inner forme of the next. That distance cannot reveal the sequence of formes within either sheet. But this instance from Ἱκέτιδες, *The Suppliant*s, luckily allows us to observe migration from the outer to the inner forme of the same sheet, and that's a very different story. There must have been a break or a slowing in the rhythm of composition of the Aldine Euripides just after the first forme of this play.

Second: This deduced sequence of formes through Aldo's press, of outer before inner, is supported by MS.336 in the library of Beatus Rhenanus at the Bibliothèque Humaniste in Sélestat. Disordered and lacking its outermost bifolium, it is what survives of Aldo's mock-up for the Latin translation c1497 of Musaeus' *Hero and Leander*, which he had printed in quarto c1495. Its quire, signed 'α', consist of five bifolia with twenty verses per page. The printed translation, signed 'b', consists of six bifolia, able to be arranged (or 'inter-bifoliated') so that the Greek and Latin versions face each other in every opening. This manuscript is relevant to our quest because at the base of each page is a direction for imposition, as in these two adjacent pages, text cast off for b10v and b11r, to be paired, respectively, with α9r and α9v.
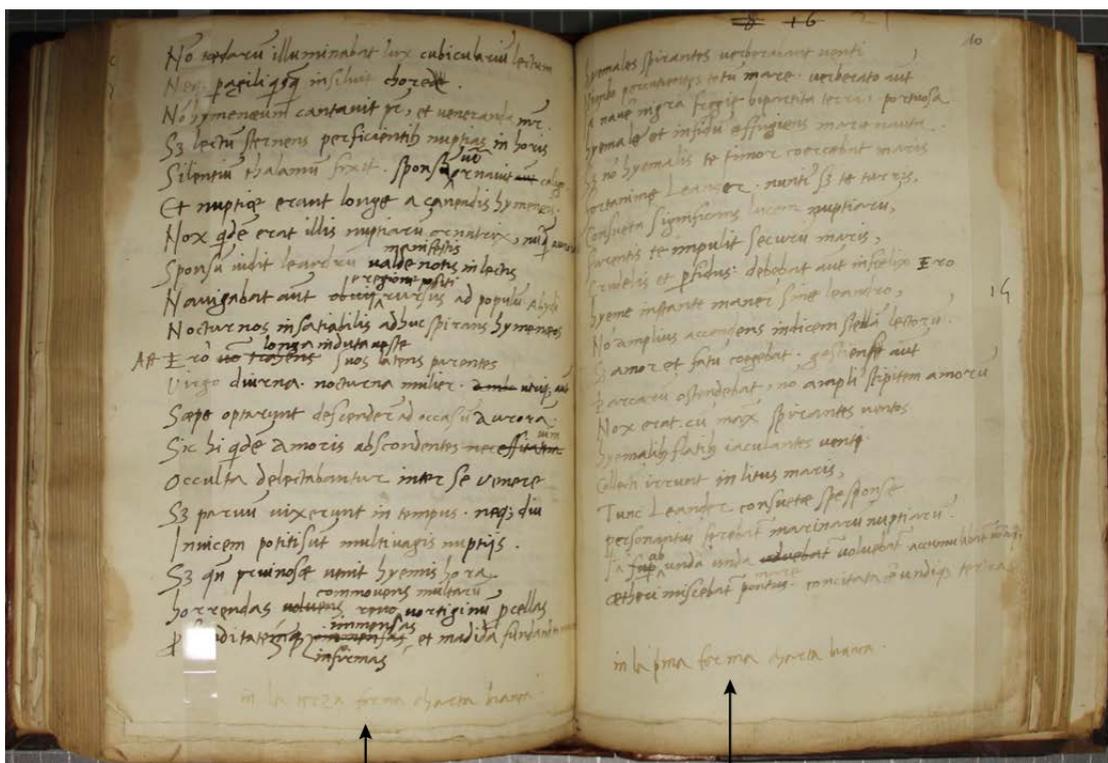
in la terza forma charta bianca.   *in la prima forma charta bianca.*

text for b10v, on the outer
bifolium of the third forme,
to face α9r

text for b11r, on the inner
bifolium of the first forme,
to face α9v

b10v and b11r are both outer-forme pages. Their directions, reading '*charta bianca*' or 'virgin sheet', indicate that the outer forme of a sheet was to be printed before the inner, directions for which, occuring in the alternating openings, read '*charta uolta*' or 'sheet turned over'. These annotations strongly support the tentative conclusion just arrived at with the 1505 Augurellus octavo: the outer, '*bianca*', forme of each sheet was printed before the inner, the '*uolta*', and not just by chance (as we might have supposed in the case of *Chansons*), these annotations assure us, but *by design*.[32]

Aldo ordered the six formes of the three sheets of Latin by numbering them ('prima' and 'terza' in this case) from the outside of the quire to the centre. In the opening photographed, b10v, on the third forme, meets b11r, on the first. Why not '*terza*' meeting '*seconda*, or '*seconda*' meeting '*prima*'? The following diagram shows why: the second forme is out of the picture because it is an inner forme. In this diagram, outer formes are odd-numbered ('first' and 'third' …); inner are numbered even ('second' and 'fourth' …). The two photographed pages are on the formes associated with the red arrows.

bα
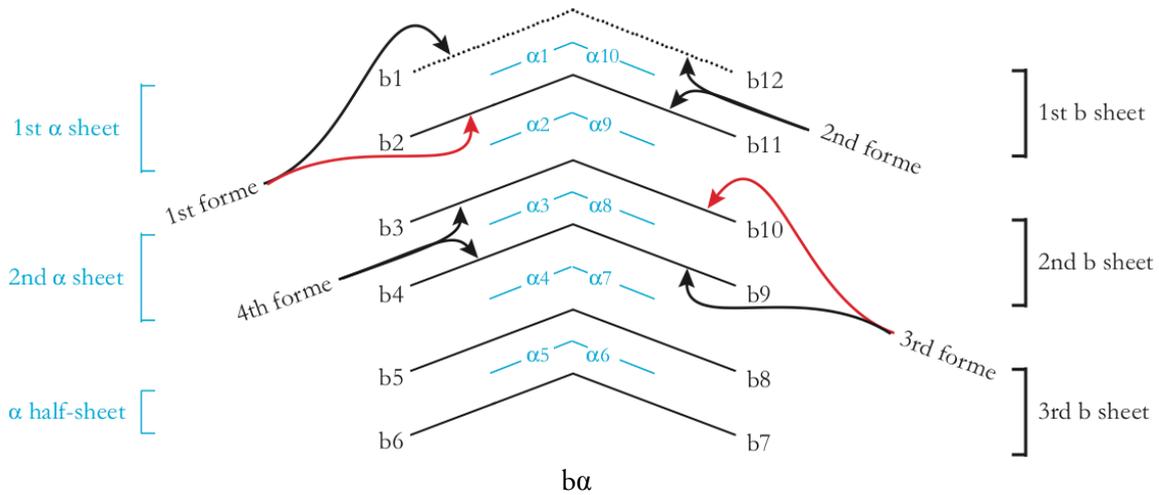
The positions of the five Greek bifolia of quire bα, all gathered in the interior, are here indicated in blue. The Greek text of the poem begins on α2r and the translation on b2v.

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[32] In the photograph on p. 181, there is numbering atop b11r: '8' and '16' (both deleted), and '21'. They are all correct according to one counting scheme or another. '21' is correct, because b11r is the 21st page among the 24 on the Latin bifolia. '16' is correct because b11r is the 16th page of the translation. '8' is also correct, but less obviously so: b11r is the eighth page of translation in the aft-quire. Since the centre of the quire, b6v–7r does not face any Greek, it cannot translate Musaeus. It consists instead of filler, two charming woodblocks and a poem on Hero and Leander in Greek by Antipater, plus Latin translation. This opening is left blank in the mock-up except for imposition directions and numbering. The first Latin text in the aft quire actually pertaining to Musaeus' poem is thus b7v, not b7r, and so b11 is the 8th page of that translation in the aft-quire, not the 10th. The undeleted numbers at the fore-edge of each b page in the mock-up count them accurately through the innermost sheet, after which many are off, as is the '15' at the side of b11r. (Recall the miscounting after the middle of H[10] in the Aldine second 1501 Juvenal–Persius edition discussed on p. 130.) For a more detailed account of 'interbifoliation' in another of Aldo's bilingual texts, the 1501 Prudentius, see Randall McLeod's 'Appendix X' in John Grant (2017), ed. and trans., *Aldus Manutius: Humanism and the Latin Classics*, Harvard University Press, 305–311. The integrated edition of *Hero and Leander* can be seen on the website of the Bayerische Staatsbibliothek. The UCLA copy consists merely of quire α.

Just as in octavo and quarto formats, already discussed, the outer forme of a folio sheet was printed before the inner, as exemplified in the following map from the four-sheet quire hθ in vol. 2 of the Aristotle.

hθ8r   hθ7r   hθ2r

1   8
2   7
3   6
4   h θ   5
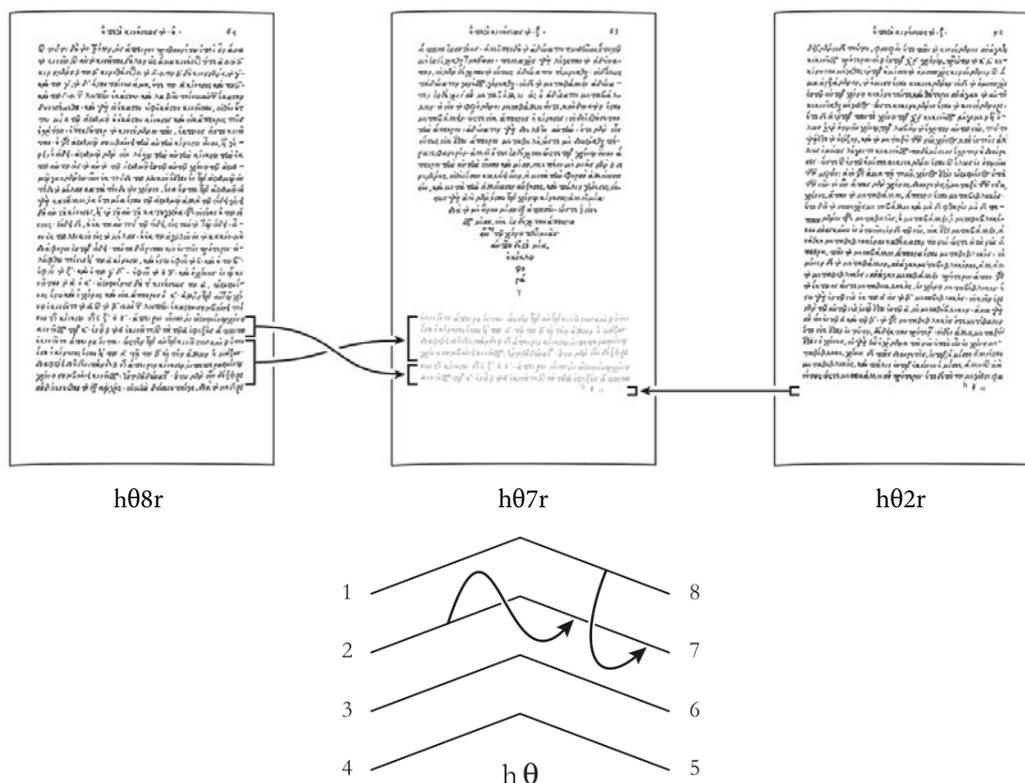
The accompanying meta-map makes clear (as does the diagram, on the previous page, showing the quire structure of the Latin bifolia translating Musaeus) what seems to be the routine order of printing a multi-sheet quire—from the outer forme of the outermost sheet to the inner forme of the innermost.[33]

Third, and last: Consider the staggered first appearances of some new italic sorts during the printing of Aldo's first octavo, the Vergil of April 1501, eight months before the Martial. (Aldo began printing in italics before his fount was complete.) The volume collates a–g⁸ A–V⁸ Y⁴. Ligatures *im*, *nt*, *ua*, and *uu* are not found in the early *Æneid* quires A–M or even in N(o), but they do appear in N(i), and then in all formes in alphabetical order thereafter, O–Y. Ligatures *in* and *nu* appearing first throughout O are then found in all formes thereafter, P–Y, whereas *no*, *um*, and *un* appear first only in O(i) and then in P and all subsequent formes. Finally, *ne* appears first throughout P and in all formes thereafter, Q–Y.[34] These facts show that composition

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[33] In this example, as in that from Euripides (on p. 180), one detects a break in or at least a slowing of the rhythm of production—in this case, after the third forme of quire hθ. Otherwise, the blind type for hθ2r would be expected no sooner than on hθ3r|6v.

[34] *Eclogues* and *Georgics*, bound at the front of the volume, in quires a–g, show all the ligatures introduced in quires N and O. Evidently, quires a–g were printed later. In the 1502 Cicero, the first of Aldo's prose octavos, the

occurred in the alphabetical order of the signatures in this range, as one expects, and that at least in quires N and O, the outer formes were composed before the inner, which fact shows that copy (an exemplar of some printed edition) for those quires (presumably for all quires of the Vergil) had in each case been cast off into page lengths and composed outer forme before inner.

M   N(o)   N(i)   O(o)   O(i)   P

————————— sequence of composition ————————→
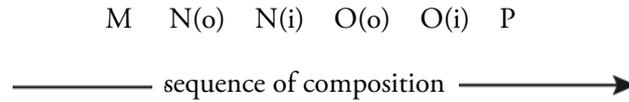
The printing of the outer forme of a sheet before the inner, seen in all these Aldine editions, of Aristotle, Musaeus, Euripides, Augurellus, and Petrarch, must frequently have followed the casting-off of copy and composition by formes, outer forme first.[35] In the 1502 Cicero, set seriatim, however, composition of the inner forme finished first. In that case, it is unsure whether the same sequence of formes through the press would have prevailed.

On the basis of these three kinds of evidence, we now come with some confidence to the following model for the production of the 1501 Martial:

A(o)   B(o)   C(o)   . . .   Y(o)   Z(o)   &(o)

A(i)   B(i)   C(i)   . . .   Y(i)   Z(i)   &(i)

————————— sequence of composition and printing ————————→

📖
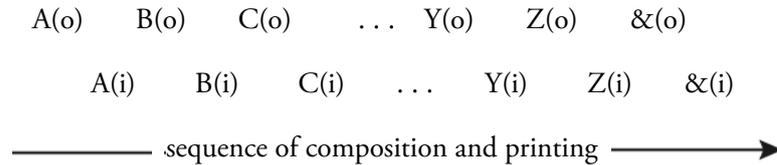
My thoughts on the rhythm of production of the Martial edition have been strongly shaped by Alba Page's pioneering 'Les égouts de Paris' essay, an uncut octavo insert in the Fall 2014 *Chicago Review* 59.1. There, she traces the sources of blind type in the August 1514 Aldine Petrarch—without the benefit of headline analysis (for there are no headlines in this octavo except the always-changing leaf numbers—which occur only on rectos, of course). The blind type flows along three 'sewers', as she wondrously calls them—and, in her highest flight, 'the Sewers of Hippocrene'. Alba's essay reveals that this Petrarch edition has two examples of intertextual blind type: the following diagram (reproduced here, slightly revised, with Prof. Page's kind permission)[36] shows the first of them,

new ligatures *as* and *is* first appear intermittently on late pages of the first quire, both inner- and outer-forme. This distribution points to seriatim composition rather than composition by formes, for which copy would not need to have been cast off. Casting off prose, which certainly took place in the Aristotle edition, but not here in the Cicero, is harder than casting off verse.

[35] One supposes that the formes were also printed in the order in which they were composed. But maps of blind type in the 1502 Dante soon to be shown (on p. 187) will suggest caution in asserting this sequence specifically at moments of transition from one literary part of a volume to another or at its conclusion.

[36] This map is for the first state of the 1514 Petrarch, before the late quires y, A and B were revised and C added, at a time when the 1515 Lucretius was being printed (as blind type from it appears in 2y, as Page has discovered, and as may be shown on the last page of this essay—*if* there's room). I have added to Alba's map on the next page an arrow from '*ri*' to '*so*'—i.e., from r(i) down to s(o)—to reflect her latest finding. For wide-ranging discussion of this important edition, see the essay that got me started with Petrarch and led me to *De natura rerum* (Richardson 1991).
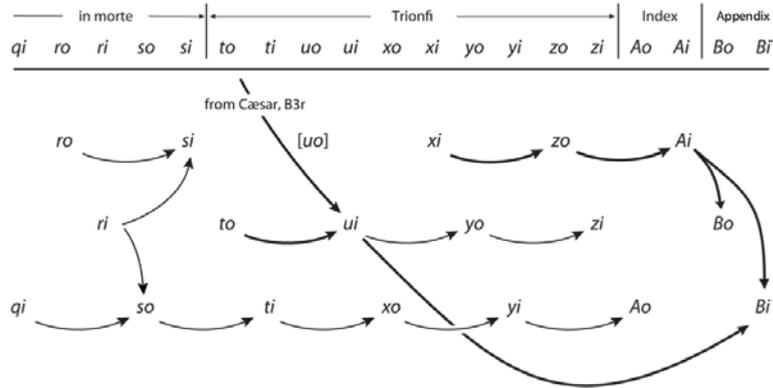
from a warning (another ineffectual gesture) to counterfeiters by Pope Julius in Aldo's December 1513 octavo edition of Caesar.

| t5r | u5v | B3r |
| Petrarch, 1514 | Petrarch, 1514 | Caesar, 1513 |

This map shows that the blind type at the base of Petrarch u5v came from B3r in the Caesar along with type from t5r in the Petrarch. Looking like the path of a comet in Alba's illustration at the top of this page, the blind type from Caesar enters the sewer system at u(i) in the middle, or second, sewer, and, much later—ten formes later, some of it ventures on to B(i) in the bottom, or third.[37] That type can move from one sewer to another neatly argues that the whole sewer system existed, as it were, 'under one roof'.[38]

In Alba's map, the movement of dead type is indicated by the short arcing arrows which generally connect every third forme and thereby reveal that there were that many 'trains of imposition' in the 1514 Petrarch, in contrast with two in the 1501 Martial.[39] So, confined to

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[37] I suppose that Aldo, thinking to use it again, kept the Pope's warning in standing type, but decided to dispense with it by the time, eight months later (if we trust colophon dates), he was printing his next octavo, the Petrarch.

[38] We are not dealing, therefore, with shared printing, as was common in Shakespeare's England, where, to pick an obvious example, *An Excellent Conceited Tragedie of Romeo and Iuliet* was printed in 1597 by John Danter, whose name appears on the title page, but also apparently by Edward Allde—under Danter's headlines '*The most excellent Tragedie,* | *of Romeo and Iuliet*' in quires A–D and Allde's '*The Excellent Tragedie* | *of Romeo and Iuliet.*' in quires E–K.

[39] Headline analysis shows that Aldo's first octavo, the 1501 Vergil, began with two sets of eight headlines in quire A (so, two 'trains of imposition'), but moved to three after H(i) and continued so into the 1501 Horace, but returned to two for the next octavo, the 1501 Petrarch.

the third sewer is a remarkable continual flowing of dead type to print blind from q(i) to s(o), then to t(i), to x(o), to y(i), and finally to A(o). Sometimes it is even the very same lines of blind type that flow from one to the next—the blind leading the blind—as here from s(o) to t(i).

q5v   s8v   t3v
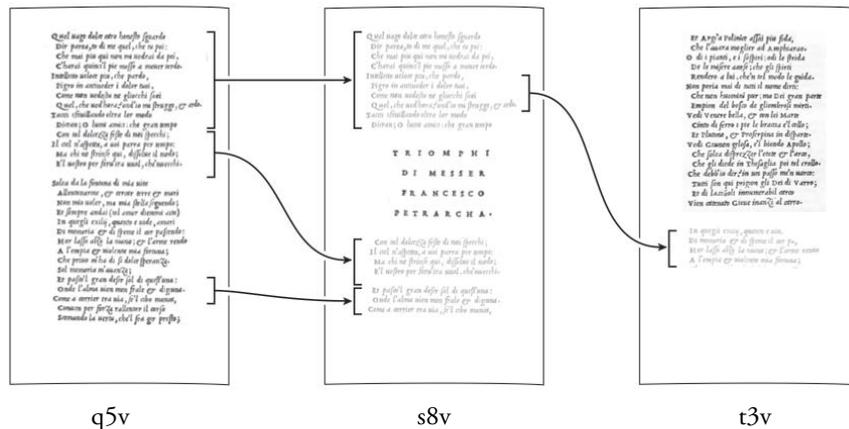
But you have already seen as much—have you not?—in the Copernicus map on p. 165. It may seem, by the way, that ten lines transferred from the top of q5v to the top of s8v is too much type to carry on a reglet. To address this problem, I need to revise the description of the work-pattern on the stone advanced on p. 179. Bear in mind that q5v (on the inner forme) and s8v (on the outer) occupy the very same position in a forme if one is rotated 180° relative to the other. Such rotation did not take place during headline transfers in the 1501 Martial, but it was not uncommon in Aldine octavos (it occurred first in B(o) → C(o), early in the composition of the 1501 Vergil). It does not signify a problem. If, let us imagine, the eight s(o) pages were imposed on the stone not *beside* forme q(i), but rather *into* it after the chase had been removed from around it, and its pages were being emptied. Imagine too, that to create maneuvering room around q5v, to consider this one case, the furniture surrounding this page could temporarily have been set aside. Then the ten lines of type atop q5v could simply have remained in place for printing blind in s(o); and the lower part of that page of type could merely have been drawn down the stone a distance sufficient to allow the eleven lines of type that express the *Trionfi* title on s8v and hold it in place—I'm adding the usual two blank lines above and two below these eleven—to be imposed in the gap just opened up. (These blank lines at top and bottom allow for some play in the registration of the frisket.)

The point to make about Martial in reference to Alba's map may have to do with the relationship of literary and compositional units: when Aldo came to a literary terminus, as, for example, the end of 'In morte di Madonna Laura' in s(i) in sewer 1 of the 1514 Petrarch, or to the end of the Index in A(i) in the same sewer, dead type did overflow the current sewer into one nearby—from r(i) in sewer 2 into s(o) in sewer 3 and later from r(i) to s(i) in sewer 1. And in a second instance, from A(i) in sewer 1 to B(o) in sewer 2, then from A(i) to B(i) in sewer 3.[40] For a vivid example of this notion that unusual patterns occur at literary termini, consider the blind type of quire l in the 1502 Dante, where *Inferno* ends, on 1v, before *Purgatorio* begins, on 2v of the same quire.

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[40] They were not obliged to flow that way, as we see in the case of z(i) in sewer 2, where *Trionfi* ends: it did not deliver the type to B(o) for printing blind in the same sewer. The blind type there came from sewer 1.

m1v   m2r   l1v   l2r
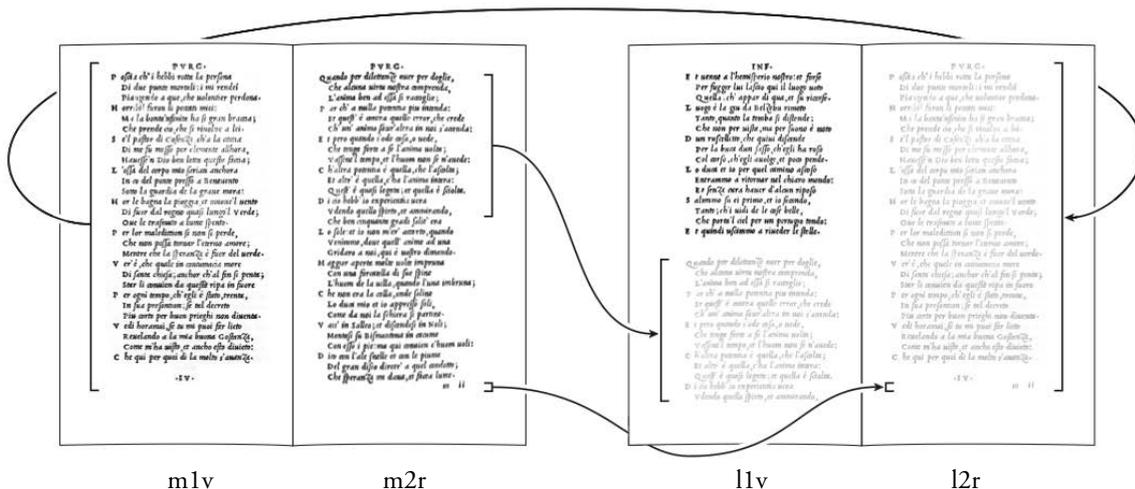
Obviously, m(i) was printed before l(i)—even before l(i) was fully imposed. The full set of sixteen 'PVRG.' headlines must have been newly composed for quire m—and only the eleven headlines relevant to l(i) were lent to it from m(i) after m(i) had been printed, before eventually being transferred from l(i) to n(i) along with the five headlines in m(i) that had lain dormant during the printing of l(i). The production sequence in this sewer was m(i) → l(i) → n(i). The junction of literary units is certainly a place to look for breaks in the usual rhythm of production. But there was also continuity in this example from Dante, as all three formes are in the same 'sewer', as Alba would have it, merely composed and printed out of alphabetical sequence.

This pattern was repeated in the 1501 Dante, when y1v—quire y is the first in which all the headlines read '*Paradiso*'—supplied nine headlines (plus type for printing blind on x3r) to the quire before, where *Purgatorio* ends. Obviously, y(o) was printed before x(o). As in the previous Dante example, both of these pages, y1v and x3v, are outer forme. (The migration of type from a 1v page to a 3v page suggests that there was rotation of one forme relative to the other in this case.) The unusual sequence of formes at this literary transition was y(i) → x(i) → z(i) .

y1v   x3v
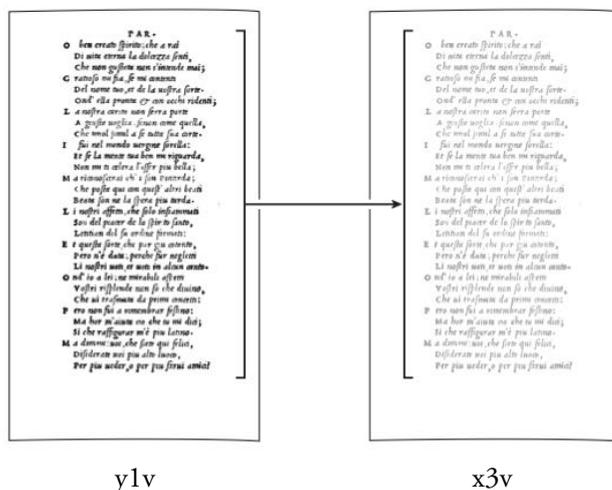
Back now to the 1514 Petrarch. The movement of blind type from r(i) in sewer 2 at the end of the literary unit '*in morte*' to both s(o) in sewer 3 and s(i) in sewer 1
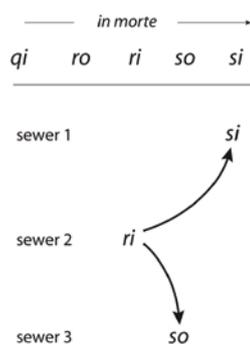
prepares us for insight into a similar action in the Martial edition, to which we return at last, where Z(i) in sewer 2 provided blind type to &(o) in sewer 1 as a first-order derivative, then to &(i) in its own sewer, and this is what is puzzling, seemingly as a derivative of a derivative:
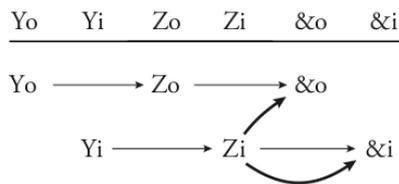
The thin horizontal arrows in this diagram recapitulate the two trains of imposition as established by headline transfers; and the bold and curved arrows represent the movement of blocks of type to print blind. (This supplying by one forme to the next two contradicts what we expect, except, as I have tried to make clear, at the end of a literary unit.) As production headed into the last quire of this edition, both formes of which would have required blind type, the headlines of Z(o) moved to &(o), as expected (except, perhaps, for the headlines on the 'blank' pages, whose sources, as I noted on p. 173, are too hard for me to identify), but the blind type for this forme came rather from Z(i), which forme must have arrived at the stone later, perhaps after Z(o), having transferred its headlines, had been totally stripped, so that there would then have been ample room on the stone to receive Z(i). The arrow in the following diagram
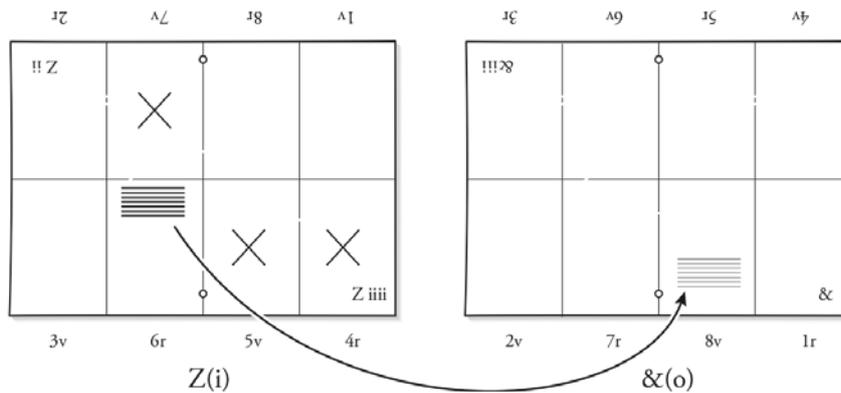
shows the movement of a block of type from the top of Z6r on the newly arrived Z(i) to the bottom of &8v. Supposedly, it was the last of four or five blocks to be imposed there from Z6r. (The three Xs in this diagram identify the three pages of Z(i) from which blocks of type would eventually appear in &(i), a forme not yet imposed.) This transfer from the top of the source to the bottom of the destination, as we learned on p. 169 and applied successful on pp. 171–174 in the reconstruction of the Sources, is the normal sequence for a first-order derivative, whereas the lines of dead type on the three 'X' pages that later went from Z(i) to &(i) were, puzzlingly, derivatives of derivatives.[41] Unfortunately, not enough of the blind type on &8v (or on &7r) has yet been read to confirm that the examples of blind type there are first-order derivatives. But when this plague is over, and if I live, I'll continue the quest and try to read more of the blind type on this forme.[42]

In the next section, I will propose an explanation for this difference in behaviour of blind type from the same source, Z(i), in its two destinations, &(o) and &(i). We're almost done.

📖

When the first transfer for blind printing took place from Z(i) to &(o), groups of seven or eight lines could have been lifted from the bottom of a page in the source-forme and placed at the top of a page in the destination-forme—and so on until the source page had almost completely filled the 32 lines of the destination-page. As copy for the final quire had already been completely cast off, the compositor could easily have known by now that there were three pages (&7v, 8r, and 8v) in the last quire to be filled with blind type and a fourth (&7r) to be mostly filled—specifically almost two pages on the outer forme (to be printed first) and fully two pages on the inner (to be printed second). (The need for a total of almost four pages of blind type would have been obvious early on in any case when the casting-off of copy assigned the end of verse to &6v, to be followed on &7r with the two lines of colophon and eight of printer's warning (already shown on p. 152). Therefore, it was known by virtue of casting off before composition of the penultimate forme began that another two pages of blind type would eventually be needed for the last forme, even though its six composed pages had not yet been imposed on the stone—since &(o), the prior forme, was still in preparation there. Consequently, I speculate, the final place was presently available to impose any of the lines soon to be required for blind printing in &(i).

The compositor, so my suggestion goes—see whether it is plausible—again drew groups of six or seven lines at a time from Z(i), the forme being stripped, to prepare to fill this need for blind type in &(i) when its pages would eventually be imposed, by building up two new pages of type at the edge of the stone, say, or on a nearby level surface (but not in a galley, from which it could easily be reimposed *without rearrangement*)—this would have been less that a minute's work)—until such a time as the six composed pages of &(i) could have been brought to the stone for imposition, whereupon he again would have transposed these two pages that were to print blind, into &(i) itself now (that's another minute), again in groups of six or seven lines at a time, but, happily, not exactly the same six or seven this time, for if he had, we would assume they appeared in &(i) as first-order derivatives, where they would have become—in contrast to the examples

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[41] As noted on p. 186, it was not a problem that this diagram shows Z(i) turned 180° relative to &(o). When the pages of &(i) were eventually put onto the stone beside Z(i) to receive headlines from it, it too could have been rotated, so that the headline of Z2r, for example, would have moved as usual to &2r, rather than to &4r.

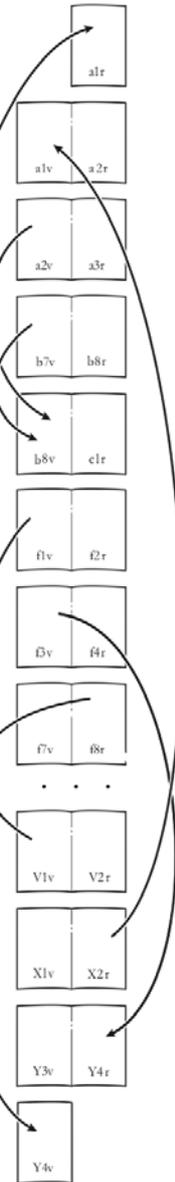[42] If I don't make it, maybe you'll do it? Now you know how.

of blind type on &(o), which are indeed simple derivatives—derivatives of derivatives. In my attempt at explanation, the lines destined to print blind in &(i) may have sat idle for a while at the edge of the stone after the rest of Z(i) had been stripped down to its chase, furniture, and headlines. Do you buy any of this?

Well, that is one way to explain why the blind type in Martial &(i) is not a first-order derivative. But what if, instead of sitting idle at the edge of the stone before being imposed in &(i), the type had actually printed blind somewhere, even in Martial itself, on its title page, say (if it had not yet been printed), which had room to accommodate some of it above and below the single line of inked typeface there that states the author's name? In returning from such a blind deployment, to print blind somewhere else, a block of type could appear as a derivative of a derivative. That type from the end of a book as bound could print blind on the title page is not as unlikely as it may sound, as the following account of the printing of the 1501 Vergil will show. (It will also offer insight into how to read Aldo's ligatures.)

It was possible to print a sheet with a page or part-page left blank and then print the sheet again to add text. Such occurred with Aldo's first octavo, the April 1501 Vergil, according to Randall McLeod, whose work I don't entirely agree with on this edition has already been referred to and which I shall now *gr= grafefully* draw on and expand. Although he is certainly correct that a forme can be multiply printed—he shows compelling examples of supplemental pressings of the title page of the 1503 Euripides and of h9v in the March 1501 portion of Philostratus—I think he is wrong about Vergil in his Rare Book School lecture.

Recall that this edition collates a–g^8 A–X^8 Y^4. Quires a–g include *Eclogues* and *Georgics*; quires A–Y, *Aeneid*. The sheets of this edition were certainly not printed in the order they were bound, as the meta-map of the sources and destinations of blind type in this edition reveals. Shown to the right, it looks like a tennis match, with volleys across the net ('. . .') that separates openings with lower-case signatures from those with upper-. Linking first and last things, this meta-map offers puzzling clues to the sequence of presswork.

Let us now descend into the details, where the angels of the argument lurk. The title page (a1r) bears blind type from ante-penultimate quire V of the book as bound, late in *Aeneid*, and the verso bears blind type from penultimate quire X, as the following two maps show.[43]

V1v   a1r   X2r   a1v

On the basis of such evidence, one might think either that production of the run of quires a–g took place at the eleventh hour (this is my view) or that quire a, having been cast off long before, composition and printing of quires b–g went ahead without it at some earlier time and composition and printing of *all* of quire a occurred later in production—starting after V(i) had come off the press and concluding after X(i) had come off the press. (Recall from the booking of Arnold's *Strayed Reveller*, that the preliminary quire, containing the index, was printed late.) Now, McLeod's idea combined parts of both scenarios: a–g was printed earlier, but with a1r and a1v left blank at that time and, later, both formes of a went to press again to print just a1r and a1v, as hinted by the two preceding maps. His scenario is possible, but a close reading of the ligatures of the first 7 quires of the Vergil as bound, a–g, and of the last 4, T–Y, raises problems. On V(i), Aldo introduced a new ligature, ſp (see 'conſpectu' in l. 26 of V1v, mapped above). ſp also occurs in both formes of quire X, but, very curiously, the ligature is absent in Y; nor does it appear anywhere, even blind, in quires a–g. And the next octavo, the May 1501 Horace (a–s⁸), has no ſp ligature until o(o), when one appears, but with a new design. Shown here are 1) ſp untied, as in early Vergil and early Horace; 2) ſp tied, late in Vergil; and 3) ſp tied, late in Horace.

In the first design of the ligature, the descender of *p* (without serif) lyrically parallels the curve of the ſ beside it. Was it this flourish that led to its suppression? Or was it the low-slung ſ ?

The extinction of a sort had already occurred twice by quire C, when the ligature-simulating long-tailed varieties of *i* (before *b, i, m, n, r, s,* and *u*) and *u* (before *c, i, m, n, r, s, t,* and *u*) employed over 200 times in A and B were discontinued. Some of these attempts to link letters were, of course, eventually fulfilled by the real ligatures introduced in quires N and O, two beginning with *i-* (*im* and *in*) and three with *u-* (*um, un,* and *uu*).[44] And *is* and *us* were added soon, in the 1502 Cicero. It is not as if Aldo's cases merely *added* sorts.

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[44] Ligatures were never devised for *ib, ir, iu* and *uc, ui, ur, ut,* in which long-tailed *i* and *u* had been employed in quires A and B (some, *ib* and *uc,* for example, likely by accident, as they occur only once), but a ligature was eventually created for *ij*. The combinations of long-tailed vowels with *ir* and *ur,* which occur respectively 21 and 12 time in A and Bs, were good candidates for ligatures, but there is no evidence they were ever produced.

This information about *ſp* is relevant to how we conceive of the schedule of the end of production of the Vergil edition. The absence of *ſp* in a–g and in Y cannot determine whether any of those quires were printed *before ſp* came, in V(i) or *after* it left, following X(i). When Randy advanced the idea that each forme of a went into the press twice, the first time before V(i), to print all but its first leaf, and after X(i) when both formes of sheet a were finally perfected, he assumed that once a ligature had joined the case, it stayed. Wrong! At that point in his research he had not realized (he tells me privately) that the *ſp* ligature went extinct after having been deployed only in three formes, V(i), X(o) and X(i), as he hadn't yet surveyed ligatures in the next edition, the Horace. That's why he assumed that all of b–g and Y must have been printed *before* the *ſp* ligature appeared. (Had he looked ahead, with his obvious interest in ligatures (I should think he loves them as I do), he could have avoided Occam's third razor, which is now about to cut him.)

Consider two other of his maps, the first one an immense achievement, as he had to range very far from b to find T. Bibliographers are indeed patient. We do put in the hours.

a2v   b8v   T4r

f3v   Y4r
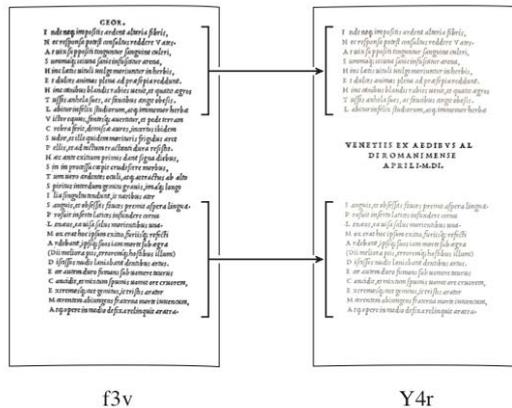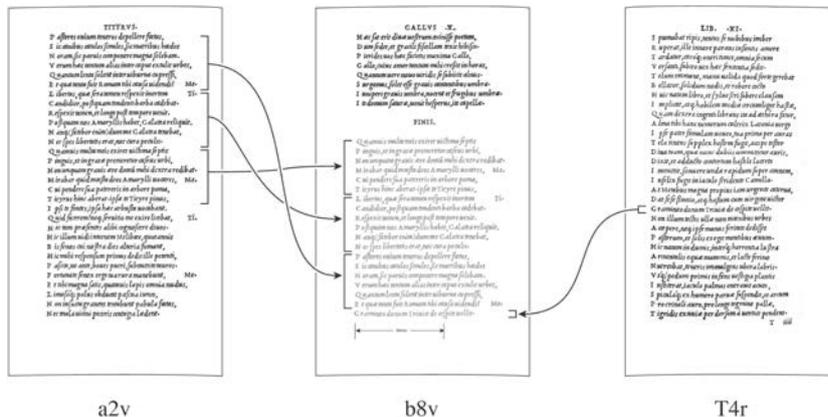
In his 2016 Rare Book School lecture, the first map encouraged Ranfy to locate the start of printing of a–g soon after T(i) and before V(i), when the *ſp* ligature arrived, and the second to attach the last quire, Y, to the end of production of *Eclogues* and *Georgics*—after which V(o) was printed, then V(i) and X, with the *ſp* ligature, when, finally, sheet a was reintroduced into the press to perfect each forme with the printing of its 1r and 1v pages. This ingenious scheme was an overly elaborate dance around his not understanding the short life-span of the first *ſp* ligature. Here comes William again.

There was something else that could have clued this scholar into the unlikelihood that a1r and a1v were allowed to be blank when a(o) and a(i) were printed. To see what that is, consider ²a1v in the first of three volumes of the works of Ovid. On the recto opposite begins *Metamorphoses*. Vol. 1 collates a–h⁸ ²a–z⁸ A–B⁸ C⁴ and is dated October 1502.

2k3v   ²a1v   ²b1v
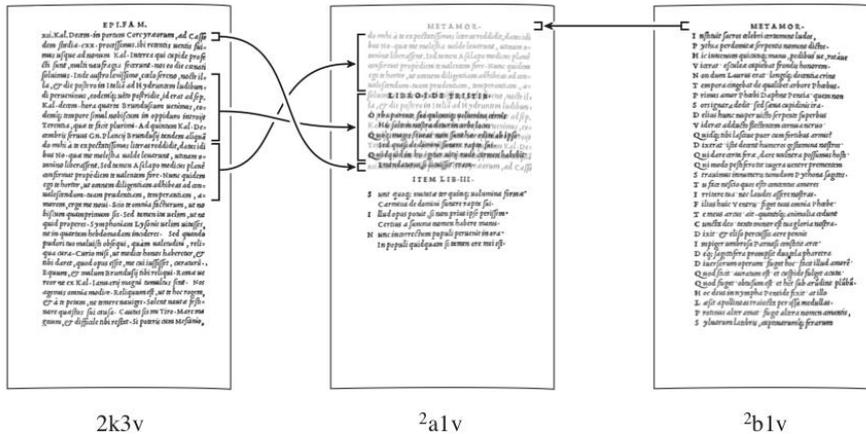
This page hosts blind type from Cicero's April 1502 *Epistolae Familiares* (a–z⁸ aa–kk⁸ ll⁴). I have not been able to read more than the top half of the page so far—but what I can make out suggests that all the type in the body of Cicero 2k3v moved to Ovid ²a1v in the usual fashion, in five or six blocks. Later, ²a(i) was put back in the press to print on top of blind Cicero, with ink this time, two passages from Ovid's *Tristia* (1.7.35–40 and 3.14.19–24), set differently here than they are in vol. 3. In these extracts, the poet laments the unrevised state of his text. (He certainly has my sympathy.) Belatedly, Aldo seems to have realized a literary use for a space that he had planned to leave empty. The bibliographic lesson here is that if Aldo had planned to print Vergil a1r and a1v later with *inked* text (or even to have left them 'blank' forever), we should expect him first to have printed them *blind*. Since there is no blind text underneath the inked text on Vergil a1r and a1v, those pages must, I argue, have been printed once only.

Note that the blind headline on ²a1v comes from a future Ovid page? How future, is hard to say as headlines are recycled from forme to forme. But I'm guessing ²b1v. As in the Dante examples (on p. 187), one suspects the formes of the second signature of the new title were printed before the formes of the first. As Alba showed us, the rhythm of production goes off —goes backwords—at the junction of literary units.

Why are pages printed blind anyway? Neil Harris always counsels me to tell readers right away the reason for printing blind, whereas I prefer to dwell in the wonder of blind type and my aesthetic response to it. But now—yes, Neil. (And welcome to you both. Neil, William, this is my friend Michael, a Book Man.) The reader *needs* to know now because it's part of an argument about why McLeod got it wrong. I'm with you on that. As the platen of an early press was unstable, it needed support over the whole of its area as it contacted the forme in order to print each page with equal pressure. On a two-pull press, a forme of octavo with a blank page would invite the platen to tip into the void at one corner and so not press equally the three pages under it. For McLeod's hypothesis to be credible, shouldn't the skin copies he consulted have revealed blind text beneath the inked? But they don't. He was wrong. Right?

Time now, then, on the next page, to sketch the end of production of the 1501 Vergil as Alba would frame it. McLeod's account isstrubbly. Can I fashion a kempt sewer system? Aldo began printing the Vergil with two trains of production. But at K(o) he opened a third, which continued through the end of the Vergil and throughout the Horace. So, I'll need three sewers.

The red arrows link the sources of blind type to their destinations, and, since they all occur at literary breaks, we should not be surprised that the majority of them leap sewers. The small black arrows chart the recycling of skeletons. They are absent, of course, wherever all the headlines in a quire change, as when *Eclogues* headlines change to those of *Georgics*—between a(i) & c(o), b(o) & c(i) and b(i) & d(o). Because of these breaks, my assigments of some formes to some sewers may be arbitrary. I am counting on regularity of rhythm in production—except at the ends of literary units, of course. Having experienced the 10-forme leap in the 1514 Petrarch of Pope Julius from u(i) in Alba's sewer 1 to B(i) in sewer 2, I am not really surprised by Vergil's 7-forme leap from T(i) in sewer 1 to b(o) in sewer 2. (It may have been common at literary breaks for compositors not immediately to strip formes with discontinued headlines.)

Late production of the opening quires of the Vergil edition as bound may explain why sheets at the beginning and end of the 1732 *Paradise Lost* often mutually set off. Having been printed close to each other, they may have been stored, gathered, and booked together. Such a practice must have been common. And one doesn't have to be an analytical bibliographer to detect such a seemingly inverted schedule. On just the second page of his 1502 octavo edition of Catullus, Tibullus and Propertius (or of 'Propetius' as he was misnamed in the earlier state of the title page), Aldo wrote to Marino Sanuto about what he had 'printed in the past few days' (so John Grant translates '*his diebus cura nostra impressum*', 2017, 22). Such a preface reads as a *post*face.

The last red arrow above, from Vergil Y to a(i) in Horace offers a contrasting example of a 'commonsense' beginning, one which is as far from the end as possible. In the following photograph (© British Library Board) of G. 9422, a copy of Horace printed on skin, is the evidence that supports the map that follows on the next page.

Vergil, Y3r   Horace, a1v   Vergil Y3v

The presence of blind type from both Vergil Y3r and Y3v on the same page of the Horace suggests that every page of Y was imposed in a single forme. (The fact that Aldo discusses diacritics on Y3r shows that he had more ambition as a textual scholar with Vergil than he did with Martial. The same can be said of Y3v, which lists several variant *Aeneid* readings in a manuscript in the Palatine Library. The UCLA catalogue wrongly describes this list as an errata). Y3v is the location of the laboured setting seriatim of the letters usual set as a ligature, which I referred to on p. 160. I was able to make room to show it after all, but only in a footnote, as there are only two pages left.[45]

Here is how the epistle to Marino Sanuto on Horace a1v begins: 'When I decided to publish in a very small format all the most famous poets, we first printed a short while ago the works of Vergil and then quickly turned to Horace.'[46] This preface, unlike that of the Catullus, Tibullus, and Propertius does read like a *pre*face.)

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[45] Note that '*ſuſtineamus*' appears twice in Vergil Y3r.29. The expected setting, with an *ſti* ligature, appears in the second example, but as Aldo devised a diacritic beneath the *t* in the first, he set all three letters of '*sti*' individually on that occasion (eschewing therefore an *ſt* or a *ti* ligature) and, moreover, with a unexpected round-*s* medially, rather than the usual long-*ſ* in that position. (The other ligatures in this word, *ſu*, *ne*, and *mu* were not affected; and ligatures *ce*, *eis*, *in*, *mi*, *mu*, *ne*, *ni*, *no*, *nt*, *ta*, *ti*, *ua*, *um*, and *un* appear as expected in the rest of the passages photo-quoted above.) In selecting a round-*s*, Aldo must have worried for the fore-kern of an *ſ* over the rejigged *t*, though as the latter letter does not have a full ascender, the kern of the *ſ* could perhaps have ridden over it without fouling. Better, he may have thought, to be safe than sorry. (The combining of *ſ* and *t* in a ligature seems not, by the way, to have been required to deal with potential fouling of *ſ* on *t*; rather, they were fused for elegance, as is especially implied by the tradition of the ligature in round-*s* and *t*—and so with the traditional tying of *c* and *t* in *ct* (Aldo's ligatures included the vowel (*cta*, *cte*, *cti*, *cto*, *ctu*) where there was no possibility of fouling.)
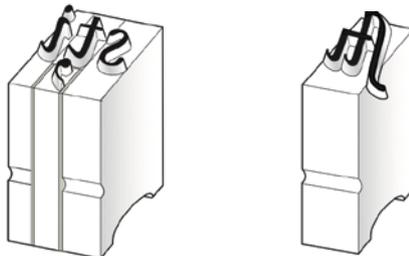
The diacritic may have been made by paring the shank front and back of a comma type; and room was made for it by also paring the front of the shank of the *t*. My model, above left, also shows (in grey) cut-down spacing types on each side of the diacritic, serving to supplement its width to that of the *t*. It is not very pretty, but it was intricate work; and it shows extraordinary effort for textual precision against a resistant medium.

[46] Grant, *op. cit.*, p. 21.

📖

Back, finally, to the question of where the blind type on &(i) might previously have printed blind. As the title page of the Martial edition reads merely 'M A R T I A L I S.', it had room to accommodate almost a page-worth of blind type from Z(i) before it migrated to &(i) (not that I have yet detected any blind text on the title page in the three skin copies I have seen). Some at least of the lines extracted from Z(i) could have sojourned blind on the Martial title page as a simple derivative before settling blind again on &(i), as a derivative of a derivative. But even if this were so, it could not have accommodated all the type in question. The problem remains.

So far, I have talked of the print-run of an edition as if it were an isolated event. But a busy press could have had several projects on the go at one time and on more than one press. Consider the following intertextual map, which reveals blind type from the middle of vol. 4 of Aldo's Aristotle on the colophon page of vol. 2 of the same edition.

qqqπππ7v, f. 127   K6r, f. 268   qqqπππ1v, f. 121   qqqπππ8r, f. 128
vol. 4   vol. 2   vol. 4   vol. 4
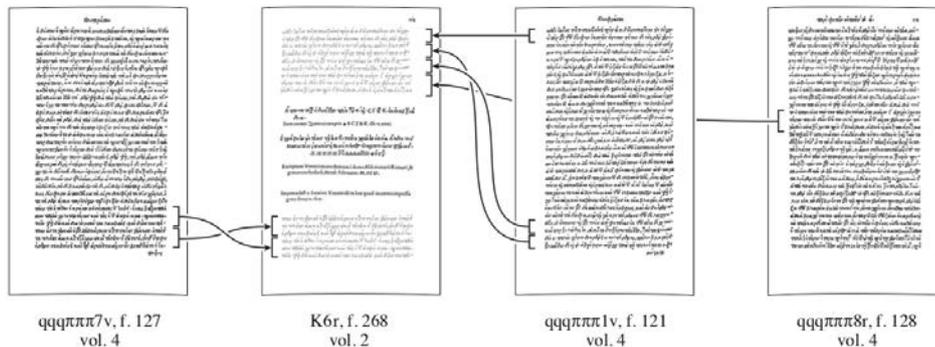
The colophon of vol. 4 is dated 'June 1497', that of vol. 2 'February 1497'. The February date must have persuaded the UCLA catalogue via *more Veneto* to assign the date of 149<u>8</u> to vol. 2—for the two months of January and February end the year in that Venetian scheme. But this map shows that Aldo could not have been using that calendar on this occasion; and so, vol. 2 must have been produced earlier than vol. 4. For Aldo, as for us, February 1497 preceded June of the same year.

The lesson here is that we should be on the lookout for other octavos that Aldo might have been printing alongside the Martial, into which blocks of types from Martial Z(i) could have printed blind. We should think intertextually. Consider, then, that in January 1502 (according to the colophon dates), one month after the Martial, Aldo published the octavo edition of Catullus, Tibullus, and Propetius recently referred to. As the quires for each author had their own signing, A–E⁸ F⁴, A–D⁸ E⁴, and a–i⁸, and as there was no through-pagination or -foliation, they could have been printed in any order. This edition has three 'blank' pages plus a title page with merely a single line printed on it with ink. Several of these pages could easily have hosted *all* of the two pages-worth of blind type from Martial before it returned 'home from the future', as it were, to &(i) as a derivative of a derivative—*if* production of these two editions of Latin poetry overlapped, as did vols. 2 and 4 of the Aristotle. Perhaps they did overlap. Consequently, one is advised to search for Martial in Catullus, or Tibullus, or Propertius—or in any two of them, or three. Such a randez-vous would be no stranger than finding vol. 4 of the Aristotle in vol. 2? Or finding *Purgatorio* in *Inferno*? Or *Paradiso* in *Purgatorio*? Or Statius before and after *Paradiso*? (What? I didn't tell you that already? Yes, indeed, Statius i appears in Dante o—between

Purgatory and *Paradise*; and Statius o appears in Dante H—beyond *Paradise*.)[47] Or Vergil in Horace? Or Horace in the 1501 Petrarch? Or Sannazaro in the 1514 Petrarch? Or Pope Julius in that Petrarch (as already shown on p. 185)—or, later, the 1515 Lucretius in that same 1514 Petrarch, as shown next? That's the future in the past (or the local masquerading as the remote).

₂Y3r   o1r   ₂y6v

Petrarch, 1514   Lucretius, 1515   Petrarch, 1514
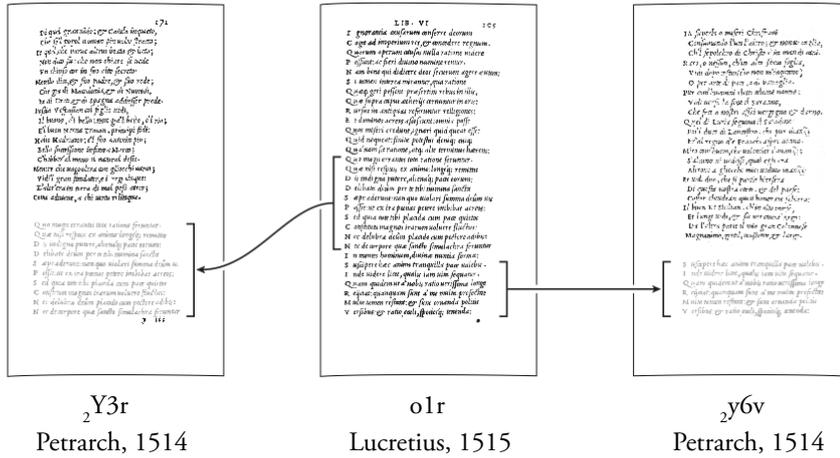
Or that 1515 Lucretius hosting the 1516 Ovid, which I recently mapped in the skin copy at the Bibliothèque Nationale in Paris? It's as complex, I like to think, as an organic molecule. *intertextual*

*1v   q7v   *4r   q1r   *2r   q6r   q6v   q5v   q4v   q5r

←—— Lucretius, 1515 ——→   Ovid, 1516   ←———— Lucretius, 1515 ————→
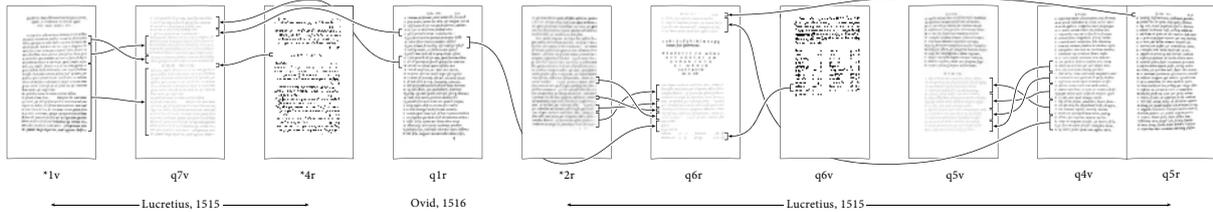
Or the 1501 Petrarch in Juvenal, then Juvenal immediately back into Petrarch, as if time ran backwords as well as forwords?—all of which I'll have to map out for you in the next install-ment, Michael, because it's complicated and, well, because having mapped it Ptolemaic, I now see that I have to revise it Copernicus, and because finally we've run out of time. This is the end. Or Cicero in Ovid? That too will have to wait. That combination is especially interesting because the inked text of Ovid is printed on top of the blind text of Cicero. That sheet *had* to go once more into the press. You'll see. Or time running ass-backwards in *Paradise Last*? Or even ass-forwords. Or both, my dear, happier, happier far— *you did this already. ??*

a library, a librarynth?

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[47] Both Dante and Statius have colophon dates of August 1502, but Statius has a second colophon, dated November 1502. (There are four independent signing sequences in this edition: a–e⁸ ²a–z⁸ A–F⁸ G⁴ ²A–B⁸ ²C⁴.)

Works Cited

American Institute of Graphic Arts (1927), *The petition of Aldus Manutius to the Venetian Senate on the seventeenth of October, fifteen hundred & two, imploring legal protection for his types, against base imitations of false counterfeiters* (Keepsake series, 24), trans. by P. Butler, Chicago, Ludlow Typographical Co.

Apollinaire Guillaume (1918), *Calligrammes. Poèmes de la paix et de la guerre (1913–1916)*, Paris, Mercure de France.

Arnold Matthew (1852), *Empedocles on Etna*, London, B. Fellowes.

Arnold Matthew (1849), *The Strayed Reveller*, London, B. Fellowes.

Bentley Richard (1699), *A Dissertation on the Epistles of Phalaris*, London, Henry Mortlock and John Hartley.

Béranger Pierre-Jean de (1821), *Chansons*, fourth edition, Paris, Les Marchands de Nouveautés.

Bray Dirk de (1977), *A Short Instruction in the Binding of Books* (a facsimile edition in English and Dutch of 'Onderwijs van 't boek-binden', 1658), Amsterdam, Nico Israel.

Cloud Random (2013), 'Fearful Asymmetry' in N. Freistat and Julia Flanders, eds, *The Cambridge Companion to Textual Criticism*, Cambridge, Cambridge University Press, 134–187.

Edgeworth Maria (1798), *Practical Education*, London, J. Johnson.

Fletcher H.G. (1988), *New Aldine Studies: Documentary Essays on the Life and Work of Aldus Manutius*, San Francisco, Bernard M. Rosenthal.

Grant John, ed. and trans. (2017), *Aldus Manutius: Humanism and the Latin Classics*, Cambridge-London, Harvard University Press.

Gulliver Lemuel (1726), *Travels into Several Remote Notions of the Word*, London, Benjamin Motte.

Leary T.J. (2016 [1996]), *Martial, Book XIV, The Apophoreta: Text with Introduction and Commentary*, London-New York, Bloomsbury Academic.

Lloyd William (1699), *A Chronological Account of the Life of Pythagoras and of Other Famous Men His Contemporaries*, London, Henry Mortlock and John Hartley.

MᵃᶜGeddon R. (2010), 'Hammered', in P. Langman, ed., *Negotiating the Jacobean Printed Book*, Farnham-Burlington, Ashgate Press, 136–199.

Martialis M. Val. (1929), *Epigrammata*, ed. by W. M. Lindsay, second edition, Oxford, Clarendon Press.

Martial (1993), *Epigrams*, ed. and trans. by D. R. Shackleton Bailey, Cambridge-London, Harvard University Press, 3 vols.

McLeod Randall (2016), 'The Birth of Italics', Rare Book School Lecture 604, 1 August, <https://www.youtube.com/watch?v=FTtYDgWSte4>, accessed 1 February 2022.

McLeod Randall (2017), 'Appendix X' in J. Grant, ed. and trans., *Aldus Manutius: Humanism and the Latin Classics*, Cambridge-London, Harvard University Press, 305–311.

McLeod Randall and Timothy Perry (2021), 'The Invisible Book', *New College Notes* 15, 4, 1–116, <https://www.new.ox.ac.uk/sites/default/files/2021-07/15NCN4%20%282021%29%20McLeod%20on%20Invisible%20Book.pdf>, accessed 1 February 2022.

Milton John (1732), *Paradise Lost*, ed. by R. Bentley, London, Jacob Tonson.

Moxon Joseph (1683/4), *Mechanick Exercises on the Whole Art of Printing*, London, Joseph Moxon.

Page Alba (2014), 'L̶e̶s̶ ̶é̶g̶o̶u̶t̶s̶ ̶d̶e̶ ̶P̶a̶r̶i̶s̶/*the sewers of* ' [a folded insert], *Chicago Review* 59, 1.

Peachy J.S. (2013), 'Beating, Rolling, and Pressing: The Compression of Signatures in Bookbinding Prior to Sewing', in J. Miller, ed., *Suave Mechanicals: Essays on the History of Bookbinding*, vol. 1, Ann Arbor, Legacy Press 316–381.

Richardson Brian (1991) 'The Two Versions of the Appendix Aldina of 1514', *The Library* 6–13, 2, 115–125.

Shakespeare William (1597), *An Excellent Conceited Tragedie of Romeo and Iuliet* [Q1], London, John Danter.

Siddons Sarah (1822), *The Story of our First Parents, Selected from Milton's Paradise Lost: For the Use of Young Persons*, London, John Murray.

Tasso Torquato (1724), *Gerusalemme Liberata*, London, Jacob Tonson.

UCLA (2001), *The Aldine Press Catalogue of the Ahmanson-Murphy Collection of Books by or Relating to the Press in the Library of the University of California*, Berkeley-Los Angeles-London, University of California Press.

Voorn Henk (1973), *De papiermolens in de provincie Noord-Holland. De papiermolens in de provincie Zuid-Holland: alsmed in Zeeland, Utrecht, Noord-Brabant, Groningen, Friesland, Drenthe, in opdracht van de Stichting voor het Onderzoek van de Geschiedenis der Nederlandse Papierindustrie,* Wormerveer, Meijer Wormerveer.

Aldine editions (with UCLA catalogue number)

Aesop (1505), no. 93.
Aristotle and Theophrastus (1495–98), nos. 4, 11, 21, 23, 24.
Augurellus (1505), no. 89.
Caesar (1513), no. 117.
Catullus, Tibullus, and Propertius (1502), no. 52.
Cicero (1502), no. 55.
Cicero (1540), no. 286.
Dante (1502), no. 59.
Euripides (1503), no. 69.
Horace (1501), no. 41.
Juvenal and Persius (1501), no. 44.
Juvenal and Persius ('1501'), no. 140.
Lucretius (1515), no. 130.
Martial (1501), no. 47.
Musaeus (c1497), no. 19.
Ovid (1516), nos. 133, 141, 142.
Petrarch (1514), no. 125.
Philostratus (1501, 1502, 1504), no. 82.
Prudentius (1501), no 38.
Psalterion (c1497), no. 29.
Sannazaro (1514), no. 126.
Sannazaro (1533), no. 265.
Sannazaro (1535), no. 279.
Statius (1502), no. 61.
Valerius Maximus (1502), nos. 65 & 71.
Vergil (1501), no. 39.

Undated Lyonese editions

Juvenal and Persius, no. 1113.
Prudentius, no. 1109.
Valerius Maximus, no. 1112 or 1118?

Manuscripts

Sélestat, France
MS.336 (Bibliothèque de Beatus Rhenanus), Bibliothèque Humaniste. Printer's copy for the Latin translation added to the Aldine edition of Musaeus, c1497.

Haarlem, Holland, Noord-Hollands Archief
Ms Stell 21B 201 (Hs. 201). Dirk de Bray, 'Onderwijs van 't boek-binden', 1658.

Bodleian Library, Untied Kingdom.
Broxbourne 97.40. A bifolium of canon law reused as a frisket cover.

Credits

Toute vue des choses qui n'est pas étrange est fausse.
Paul Valéry