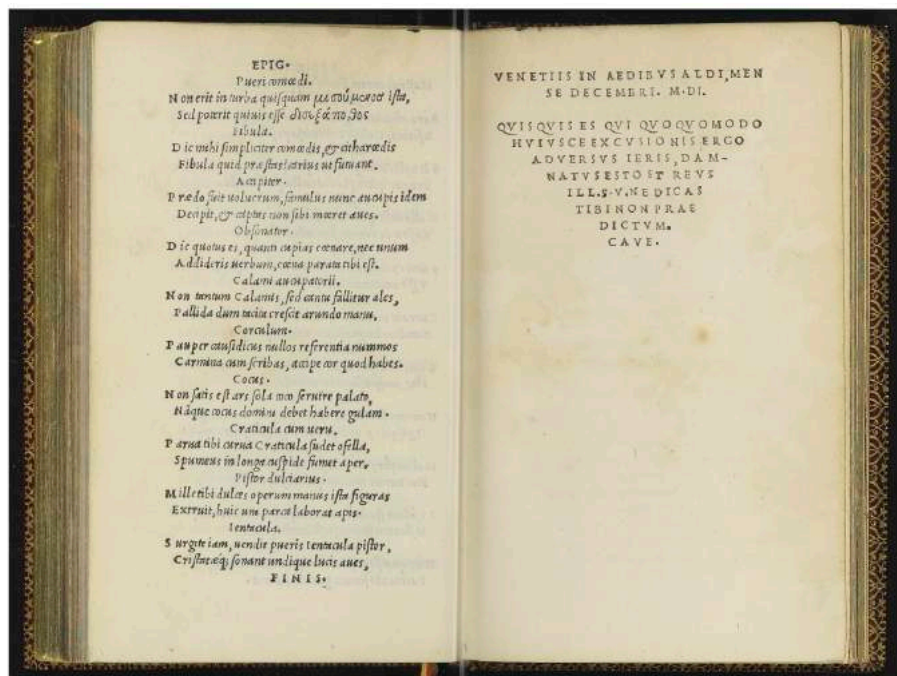


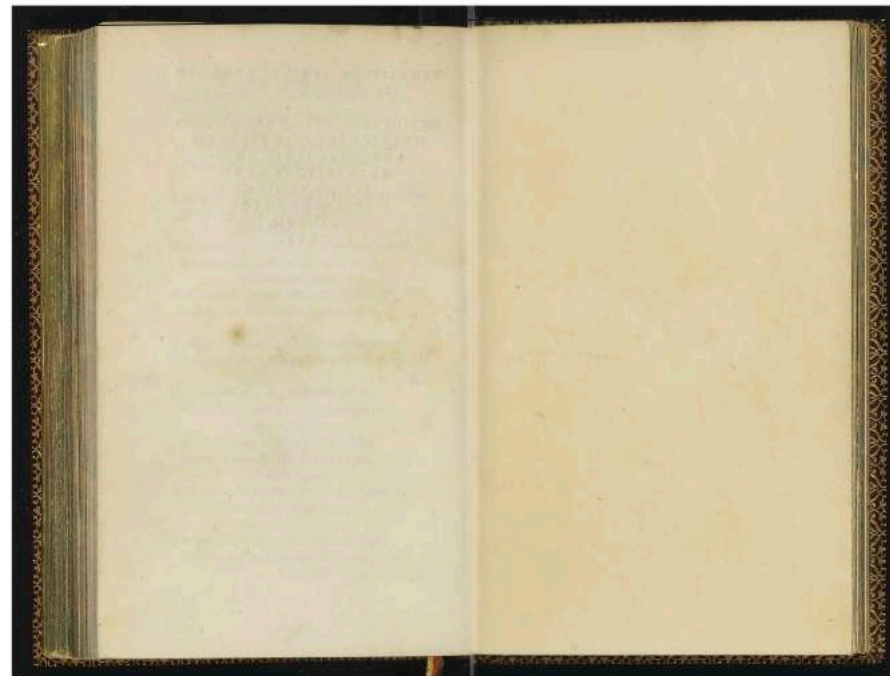
The Visible Book



&6v

&7r

THE 1501 ALDINE MARTIAL, an octavo, collates: A–Z⁸ &⁸. On &7v (shown opposite, above), the Simon Fraser paper copy discloses mirror-image traces of the colophon printed overleaf and of the warning that follows. Below them, right-image, looming through from the verso of &6, appear titles and verses of the last book of Martial's *Epigrams* (Bk. 14, *Apophoreta*), concluding with "F I N I S." By so late a page as &7v, one might think that the text is over. But text is still visible, is it not? Where *precisely* does this book end? Where does *any* book end?



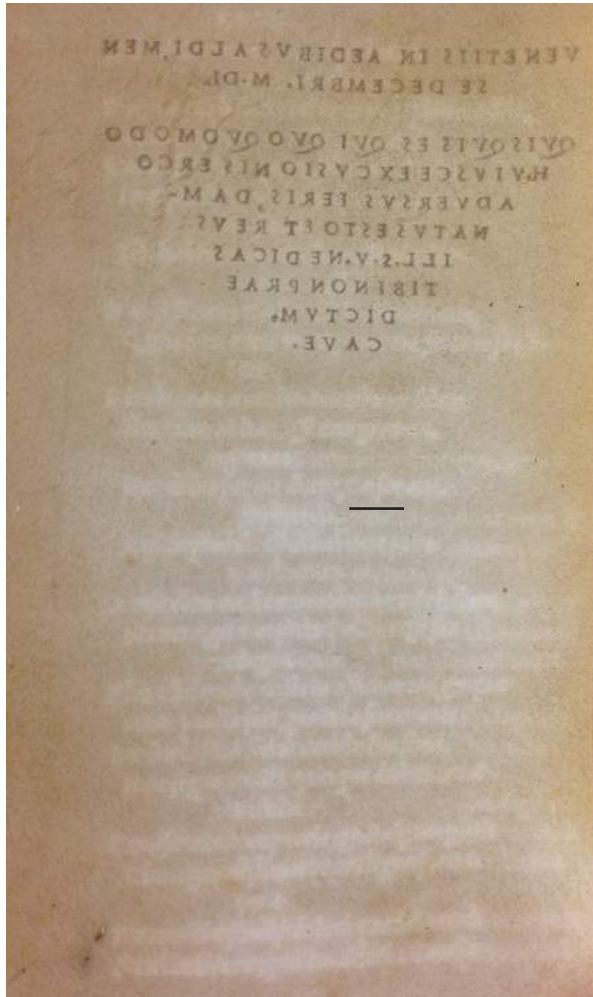
&7v

Opposite &7v lies a slightly darker page, without the staining visible at the top and middle of the previous leaves (though the lower stain on &7v has somewhat bleached the facing page). *Not* &8r, the facing page of this copy lies on the first of many adventitious leaves supplementing the text-block. (The front of the volume is similarly padded.) Without its last leaf, what text might this copy be missing? *Really*, what are we missing? *Nothing*, you might think?—because, as cataloguers report, the final leaf of this edition is blank? (But they also say that of &7v . . .

The Invisible Book

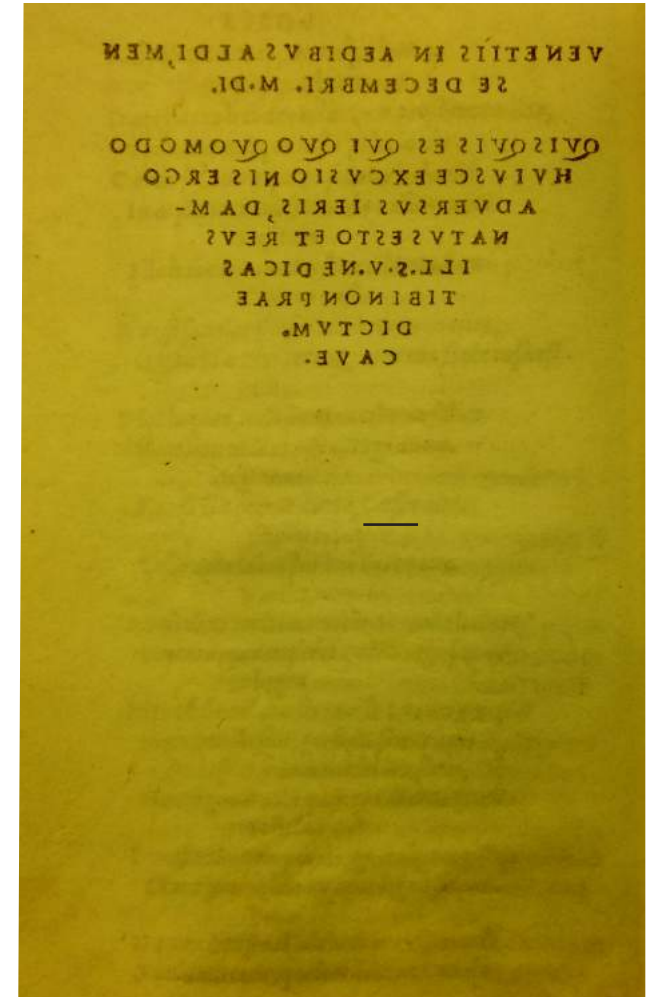
cum donat vacuas poeta chartas

for Michaël Cahn



&7v (in through-light)

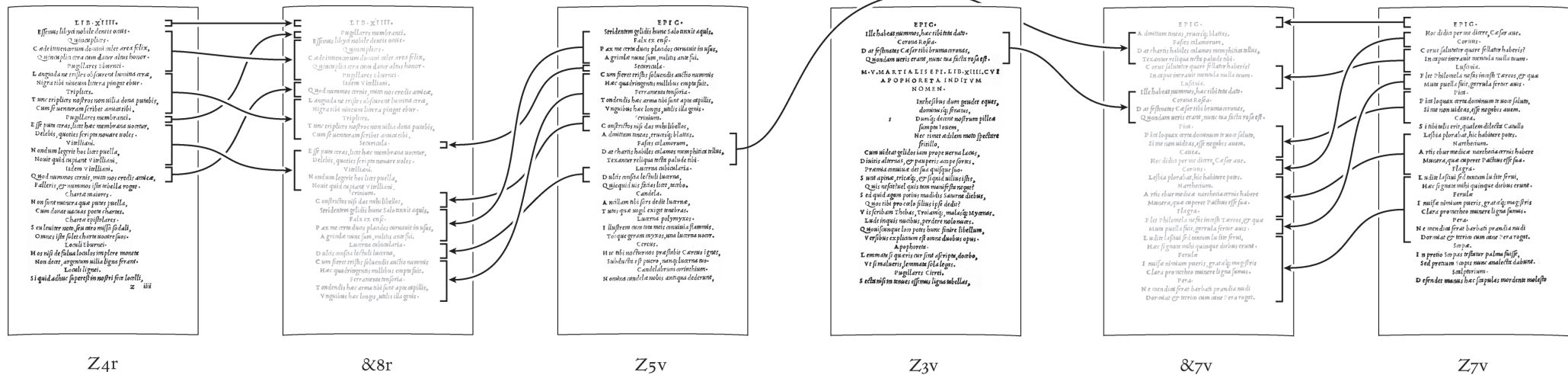
THE BLANK TOP OR BOTTOM of a page in an Aldine octavo, quarto, or folio—or an entirely blank page in just the two smaller formats—typically is *not* blank. That's right, *blank* is not *blank*. Consider penultimate leaf &7 in the Humanities Research Center's Uzielli-34 copy of the 1501 Martial. Printed on skin, this *not-blank* leaf illustrates what I mean better than most paper copies can. In the left photo, light shines through from the recto side: precisely where typeface bit blind into the verso, the skin became more translucent. On the right is the recto of this leaf photographed in reflected light, then flipped horizontally, so as to reveal the same blind typeface in the same orientation: the translucent areas are visibly darker now (because of a black sheet I placed overleaf). Darker or lighter, what we behold is scarcely legible, partly because type that printed blind on the recto side somewhat obliterates what was printed blind overleaf. (Can you discern *en miroir* the ghostly beginnings of several recto verses low on the right edge of each image, beyond the ends of the non-justified verse lines of the verso?) Nevertheless, by recognizing here on the verso which lines are flush left, which are indented, which are centered titles (all this is the gross *body language* of the Aldine Martial), and the particular locations of landmark spaces between words, ascenders and descenders within them, and even (occasionally) a whole word ("*Cæsar*", for example—which I've underlined in each photo and blown up, below), we can begin to decipher and untangle this textual revelation and trace it to its sources



&7r flipped (in reflected light)



Cæsar



and trace it to its sources—on the inner forme of sheet Z.

The sources of the blind type on inner-forme &7v and &8r are four pages on the same forme of the previous sheet. So, Z(i) → &(i). With this revelation, we come to read Martial's rearranged poetry for what it tells us of renaissance Venice, not of ancient Rome: we begin to sense something of the rhythm and schedule of Aldo's presswork. Now, the *outer-forme* pages &7r and &8v are also "blank". (Recall that we have already seen traces of blind type on the former page—and traces also appear on the latter, as the next screen, with its through-light photograph of &8r, will show.) From what we have now learned, we might speculate that the source of blind type on the *outer-forme* pages of & may be the *outer-forme* pages on the previous sheet. I can't test this speculation at the moment, as the traces in my photos are too faint to read, but having a hypothesis on what to search for is good preparation for one's next encounter with a copy on skin.

On the next two screens, I darken the blind poetry of &7v and &8r to make it legible for the first time ever. On the left, I add line numbers (for easy reference in the ensuing discussion), and, on the right, the sources of each by book-, poem-, and verse-number. The margins record readings in the 1993 Loeb edition of Martial that vary from Aldo's, which I underline. The question now is: How, for a lark, to read this dog's breakfast? (To skip the poetry, if you must, and continue with blind type, scroll ahead six screens.)

A dmittam tineas , truces'q; blattas.

I can think of two good ways to interpret the opening verse quoted above from the top of &7v: 1) read it, stripped from its context, with merely a dictionary as our guide to whatever sense (or nonsense) may be on offer:

I shall admit worms and savage cockroaches.

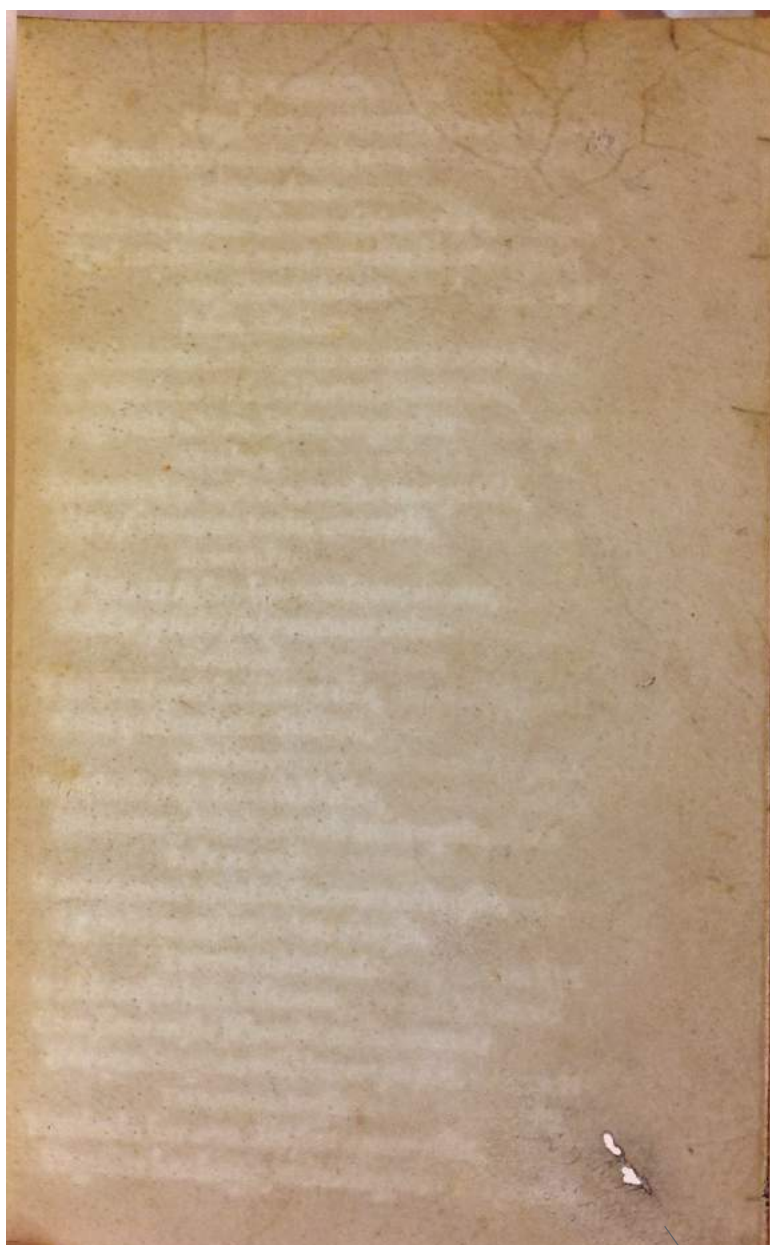
or 2), with the guidance of the Loeb edition, read these consecutive pages for Aldo's mutations of Martial's poetry. Let's start with the dictionary.

Lacking an identified speaker of this first line, we might well deem that the book—the book *in hand*—threatens its own destruction by admitting bookworms. (It has, in fact, already admitted at least one such – see the next screen.) And, as my mortal hand holding this book shall itself one day admit worms, I may feel wary of imminent contagion from this book.

Now for strategy 2, to trace this verse to its source—epigram 14.37.

37 Scrinium

Constrictos nisi das mihi libellos,
admittam tineas trucesque blattas.



tinea admissa

&8r in through light

LIB. XIII.		
1	Pugillares membranei.	14.7
	Essemus libyci nobile dentis onus.	14.3.2
	Quinquiplices.	14.4
	Cæde iuuenorum domini calet area felix,	14.4.1
5	Quinquiplica cera cum datur altus honor.	14.4.2
	Pugillares Eburnei.	14.5
	Idem Vitelliani.	14.9
	Quod nummos cernis, mitti nos credis amicæ,	14.9.1
	Languida ne tristes obscurant lumina ceræ,	14.5.1
10	Nigra tibi niueum littera pingat ebur.	14.5.2
	Triplikes.	14.6
	Tunc triplices nostros non uilia dona putabis,	14.6.1
	Cum se uenturam scribet amica tibi.	14.6.2
	Securacula.	14.35
15	Esse puta ceras, licet hæc membrana uocetur,	14.7.1
	Delebis, quoties scripta nouare uoles.	14.7.2
	Vitelliani.	14.8
	Nondum legerit hos licet puella,	14.8.1
	Nouit quid cupiant Vitelliani.	14.8.2
20	Crinium.	14.37
	Constrictos nisi das mihi libellos,	14.37.1
	Stridentem gelidis hunc Salo tinxit aquis.	14.33.2
	Falx ex ense.	14.34
	Pax me certa ducis placidos curauit in usus,	14.34.1
25	Agricolæ nunc sum, militis ante fui.	14.34.2
	Lucerna cubicularia.	14.39
	Dulcis conscia lectuli lucerna,	14.39.1
	Cum fieret tristis soluendis auctio nummis	14.35.1
	Hæc quadringentis millibus emptæ fuit.	14.35.2
30	Ferramenta tonsoria.	14.36
	Tondendis hæc arma tibi sunt apta capillis,	14.36.1
	Vnguibus hæc longis, utilis illa genis.	14.36.2

Libyci

Quinquiplices

quinquiplici, hons
eborei

minimos

quotiens

Falx

millibus

&8r

37. Bookcase

Unless you give me books packed tight,
I shall admit moths and savage bookworms.

From this title, the original speaker of our verse can now be identified: a *bookcase*, not the *book* itself. In so translating “*scrinium*”, Loeb passes over its English reflex, “*scrine*” (a cognate of “*shrine*”, with which it is partly synonymous). Though archaic, this word is familiar to lovers of poetry; it appears in the invocation to Clio at the beginning of *The Faerie Queene*:

Lay forth out of thine euerlasting scryne
The antique rolles, which there lye hidden still

Spenser’s reference to “*rolles*” exposes a potential anachronism in the translator’s “*bookcase*”. (It also exposes the *OED*’s shortcoming in not defining “*scrine*” as a container specifically of documents. (The dictionary’s definition of “*scriniary*” as “*archives*”, however, is on the mark.) What, in our first reading, without context, sounded like a suicidal threat, now appears as a merely practical admonishment for good housekeeping. Our two styles of reading have produced sharply contrasting interpretations.

Now, *all* of the “*Scrinium*” poem happens to print blind, but the title and first verse fall far away, on &8r (ll. 20–21), now with a new conclusion:

Scrinium.
Constrictos nifi das mihi libellos.
Stridentem gelidis hunc Salo tinxit aquis.

Bookcase
Unless you give me books packed tight,
Salo dipped this hissing in his icy waters.

Violently completing the couplet is a non-sequitor (14.33.2) about tempering a *pugio* or “*dagger*”—that’s the (absent) title of 14.33—in Lago di Garda. As in our reading of v. 2 of “*Scrinium*” in isolation, we find ourselves far in tone from the original moral. Also grammar and logic are quite out of joint: singular “*hunc*” (v. 2) does not match plural “*libellos*” (v. 1). And the sequence of tenses is wrong: in the *unless*-condition, present-tense “*das*” is absurd when the statement of consequence employs past-tense “*tinxit*”. (Compare this nonsense: “Unless you *kill* me today, I *died* yesterday.”

EPIG.			
1	A dmittam tineas, trucesq; blattas. Fasces calamorum. Dat chartis habiles calamos memphitica tellus, Texantur reliqua tecta valude tibi.	14.37.2 14.38 14.38.1 14.38.2	
5	Corue saluator quare fellator habetis? In caput intravit mentula nulla tuum. Lusania. Ille habeat nummos, haec tibi tota dato. Corona rosea.	14.74.1 14.74.2 14.75.1 13.126.2 13.127	Coronae roseae
10	Dat festinatas Caesar tibi bruma coronas, Quondam ueris erant, nunc tua facta rosa est. Pica.	13.127.1 13.127.2 14.76	erat
	Pica loquax certa dominum te uoce saluto, Si me non uideas, esse negabis auem.	14.76.1 14.76.2	
15	Cavea. Hoc didici per me dicere, Caesar aue. Coruus. Lesbia plorabat, hic habitare potes. Narthecium.	14.77 14.73.2 14.74 14.77.2 14.78	Cavea eborea potest
20	Artis ebur medicae narthecia cernis habere Munera, quae cuperet Paccius esse sua. Flagra.	14.78.1 14.78.2 14.79	habebis Paccius
	Flet Philomela nefas incestu Tereos, ex quae Muta puella fuit, garrula fertur avis.	14.75.1 14.75.2	Tereos
25	Ludite lasciui sed tantum ludite ferui, Haec si gnata mihi quinque diebus erunt. Ferulae	14.79.1 14.79.2 14.80	
	Inuisa nimium pueris, grataeq; magistris Clara prometheo munere ligna sumus.	14.80.1 14.80.2	Prometheo
30	Pera. Ne mendicis ferat barbati prandia nudi Dormat ex tetrico cum cane pera rogat.	14.81 14.81.1 14.81.2	pera

While on 8r, let me introduce a three-verse epigram “*Lucerna cubicularia*” (ll. 26–29). This melding of 14.35 and 14.39 offers a more coherent marriage than that of *scrinium* and *pugio*. (It also offers a clear demonstration of how Marti-
aldo’s verses can be dredged up from my murky photos.) I’ll begin by read-
ing these two epigrams from the Loeb edition, then turn to their confusion.

35 *Securicula*

Cum fieret tristis solvendis auctio nummis,
haec quadringentis milibus emptā fuit.

35. Small hatchet

When a dismal auction was held for payment of debts,
this was bought for four hundred thousand.

Poem 35 is perplexing because of the preposterous disproportion between the intrinsic value of so trivial an object as a *securicula* (a child’s trinket in the shape of a hatchet, the editor explains), and the vast sum paid for it. One inter-
pretive strategy is to understand that this item must really have sold at auction for the little it was worth — in a vain attempt to offset a creditor’s loss of four-
hundred thousand. Of course, no creditor figures in the poem, but the emo-
tional state of one may be surmised by reading “tristis” as a transferred epithet.

More straightforward is Poem 39, which treats a lamp. A confidante of the bedroom, her discrete silence will guard the addressee’s sexual privacy.

39 *Lucerna cubicularis*

Dulcis conscia lectuli lucerna,
quidquid vis facias licet, tacebo.

39. Bedroom lamp

I am a lamp, confidante of your sweet bed.
You may do whatever you will, I shall be silent.

Atop the next page are photos of Aldo’s blind melding of these two poems, first in through-light, second in light reflected (and conditioned by a dark sheet inserted overleaf). Third, and in the same scale for ease of comparison with the photographs, comes my cut-and-paste reading. In the top image, note a centered title of specific length. Below it come three verses, the last indented. Their varying lengths are also clear (despite interference on the right from the starts of lines overleaf): first (“*E f...*”) colinear with the title; second (“*D ...*”), indented,

|← title →|

↑
3 verses
↓



D —
C —
H —



Lucerna cubicularia.
*D*ulcis conscia lectuli lucerna,
*C*um fieret tristis solvendis auctio nummis
*H*aec quadringentis milibus emptā fuit.

with v. 1 (it’s followed by a hidden title, I suppose); and last, (“N...” or “H...”) with v. 3. The second photo reveals the first letter of each verse and the short lengths of each first word. It also shows that the first word of v. 1 has an ascender in the middle and ends with “s”; and the first of the next verse, “*C um*”, is followed immediately by “*f*” or “*f*”, which shape also appears in the following word. (Here we are noticing the “*fi*” ligature of “*fieret*” —also a ligature in the Dante fount of this essay—and the “*fi*” ligature in “*tristis*”.) Accumulating *just* such simple evidence, one eventually cracks the code.

How to translate this conflation of title and three verses into English?

Bedroom lamp

In a depressing auction to pay off debts,
this lamp, the sweet bed’s confidante,
was bought for four hundred thousand.

Now the million-dollar price tag implies a purchaser who expected value for money, big value for big money—expected access to the confidential. An original story of money lost thus offers to change to one of money that talks—or (ominously) will *make* talk. Obviously, the mere survival of a verse does not mean that it will read the same, for some of its original

meaning came from context, now lost. For example, the implied “you” behind “your sweet bed” in the Loeb’s translation of Poem 39 is gone now, for Loeb had read it in from the second-person verb “facias” in v. 2, which is absent from the blind-type version; and so, the addressee has vanished. (I have replaced “your” with mere “the”.) Also, with the absence of the second verse of the original poem, the conflation no longer sounds the note of sexual liberty (“You may do whatever you will”), though the bed remains “sweet”. But the “tristis” of Poem 35 certainly survives: and what is sad now (“depressing”, I translate it) is not financial loss, but the threat of buying and—to read between these invisible lines—the *selling* of sexual secrets: the bedroom Confidante may prove Faithless.

Now back to page &7r—where we left off—to treat some of the remaining high spots of Martial Rearranged. After the line threatening worms, with which we began, comes a four-verse poem with title. It begins by quoting all of 14.38, “*Fasces calamorum*”, which contrasts the reeds for writing (named in the title) with those for thatching roofs. But this new poem does not stop there: two more verses (from 14.74) addressed to a Crow (or *the* Crow), defend it against its reputation as a cock-sucker.

There follows the title from another bird poem (14.75), “*Luscinia*”, or “Nightingale”, but instead of expected verses pertaining to the rape of Philomela, there is a single verse from “*Vnguentum*” (13.126) advising—here I read in the creature of the title—advising the Nightingale, then:

Give these all to yourself, while he has the cash.

He? The only he who comes to mind is Tereus, the rapist. Why should he, of all people, get the money? *What* money? And what are *these* that she is to give herself? In 13.126, “these” are wine and unguent: it is these should be lavished on oneself, while *mere* money (for *nummos* can indicate a trifling amount) is for one’s heirs. On &7v, what these gifts are and the identity of the recipient-heir (Tereus’s get?) cannot be ascertained.

Two intact epigrams with titles follow, one on Garlands (13.127), one on a Magpie (14.76). Then come more laughable mix-ups—two examples of a title plus a lone verse from another poem. The first title “*Cauea*” (“Cage”) originally pertained to 14.77, which refers to Catullus 2 and 3 and to that poet’s beloved Lesbia and the death of her pet sparrow. The verse that now follows, however, is from 14.73, about a very different bird, a talking parrot, which boasts that, though it will have to be *taught* most names,

To say this, I have learned by myself: “Hail Caesar”.

The original poem flatters the emperor, as if by instinct Nature freely speaks his name. Here on &7v, however, where the voice from a cage is not identified by title and we therefore have no reason to associate this utterance with a bird, this “hail” may sound like the doleful acquiescence of a human prisoner. (This reference to Cæsar, by the way, was that word we learned to read by ourselves in the photos of blind type of this page.)

What follows is “*Coruus*”, the title of the Crow poem just mentioned (14.74), which defends this bird against its sexual reputation. What now follows is a single verse from the Lesbia poem, “*Cauea*” (14.77), originally an ivory cage, but Aldo omits that classy qualifier, “*eborea*”). This cage is fit, said Martial, for a worthy bird like Lesbia’s mourned sparrow: such another is able to dwell in it: “*hic habitare potest*”. But Aldo reads “*potes*” instead (the second-person singular of this verb, not the third-): thus, “*you* can live here”—and in this new context, “you” reads as Crow! But where now is “here”? In this one-verse poem, there is neither cage, nor sparrow to mourn.

Crow

Lesbia was crying: you can dwell here.

Did Lesbia weep *because* she could not exclude this bird of dubious reputation? Or does her weeping *permit* the Crow’s residence?—or even *call* for it?

There follows “*Flagra*” or “Whips” (14.79), but intervening between the title and the two verses are both verses of the Nightingale poem (14.75).

Whips

Philomela bewails the crime of foul Tereus,
And she that was mute when a girl is called garrulous as a bird.
Play, frisky slaves, do nought but play.
These I shall keep under seal for five days.

In this new context, the title “*Flagra*” invites one to see the rape victim’s lament as a metaphoric *whipping*—a whipping of *slaves*, we soon learn, in vv. 3 and 4. This form of domination of and violence against these other victims is not a great metaphoric stretch, of course. But how to react when these slaves are enjoined, when first we encounter them, to *play*—especially when the whips will soon reappear, as we learn at the poem’s close? Insult seems to be heaped on injury, with more damage in the offing.

The next two poems (14.80 and 14.81) are intact and follow directly on the last two verses of “*Flagra*”. The first of them, “*Ferulae*”, carries on the theme of hateful whipping, now of schoolboys at the pleasure of their masters.

Now we cross the gutter to &8r again. I'll start with lines 6 and 7:

Pugillares Eburnei
Idem Vitelliani

These two titles relate to writing—respectively on an expensive medium (like “eborea”, “Eburnei” refers to ivory) and a cheaper one (Vitellian tablets were petite). In the latter title, “Idem” (as it should be spelled), meaning “the same”) needs explanation; in its original context it made sense by referring to the previous poem, 14.8, “Vitelliani”, which associates this kind of tablet with *billets doux*:

8. Vitellian tablets
Although she may not have read them yet,
a girl will know what Vitellian tablets want.

This very poem, with title, happens to appear intact in the middle of the page, at ll. 17–19. But since this title is no longer before that of 14.9 on &8r, the paradoxical implication of this blind text is that these different kinds of tablet, the high and the low, are the same.

The second of these titles is followed by the first line of its poem (14.9), and then both lines of 14.5 (whose title was quoted first). Let's start with the unique line from 14.9, in the context of that whole poem.

Quod minimos cernis, mitti nos credis amicae.
falleris: et nummos ista tabella rogat.

9 The same
Because you see we are very small, you think we are
being sent to somebody's mistress. You are wrong.
This tablet asks for money also.

(The Loeb's “also” responds inadequately to “et” and “ista”. For the last line, John Grant suggests: “That tablet you refer to asks for money”).

In the first verse, Aldo (or his copy) reads “minimos” (“very small”) for Martial's “nummos” (“money” or “small money”); the ten minims at the start of each word make this an easy misreading. Though “nummos” utterly defeats the logic of Martial's poem, it gives new life to the relationship of money and mistress. The erroneous thought in the original poem is that the tablets are sent to a lover; but in Aldo's version, she impresses the reader as a prostitute. See whether you agree.

Martial:
Because you see that we Vitellian tablets are *very small*,
you think we are being sent to somebody's mistress.

Aldo:
Because you smell *money*,
you think we're being sent to a prostitute.

Now add to this interpretation the two verse lines of 14.5 that follow on &8r:

Martialdo:
Because you smell money,
you think we're being sent to a prostitute.
Lest somber wax dim your failing eyes,
let black letters paint snow-white ivory for your use.

In the last two lines of the Latin, there is no judgmental “falleris” (“you are wrong”), as there was in the last line of 14.9. But the reference to failing eyes does imply a like challenge, as if to say, “Why don't you get your eyes checked?”

How non-classical is such surreal marshalling of lineses from Aldo's edition? What would our poet have thought? Before you answer, look at 14.2.

Quo vis cumque loco potes hunc finire libellum:
versibus explicitum est omne duobus opus.
lemmata si quaeris cur sint ascripta, docebo:
ut, si malueris, lemmata sola legas.

You can finish this book at any place you choose.
Every performance is completed in two lines.
If you ask why headings are added, I'll tell you:
so that, if you prefer, you may read headings only.

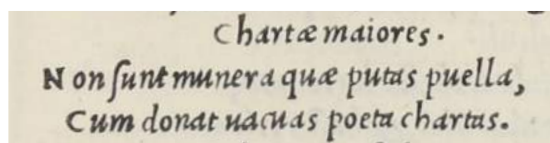
This introduction encourages readerly freedom: you can finish this book, Martial advises, wherever you please — even browse no more than its titles. True, he specifies that every performance is completed in two verses, a characterization at odds with the conflation performances. But the present poem, having stipulated completion at two, continues through a *fourth* verse, and by its own account, is out (as must also be the *twelve*-verse poem before it). Martial seems uncannily open to what the renaissance printer did in the dark (and also to our modern — nay, post-modern — voyeurism).

From Z4r, the title and first verse of 14.9 migrated blind to &8r, but the next poem, alas, the source of my epigraph, did not. Here is the Loeb version of 14.10.

Chartae maiores
Non est munera quod putes pusilla,
cum donat vacuas poeta chartas.

10. Bigger sheets
There's no reason for you to think it a petty present
when a poet gives you blank sheets.

Martial's poem hinges on the contrast of *maiores* ("greater"), in the title, and, just below it, at the end of the first verse, *pusilla* ("petty"). Not so, Aldo's version, which springs a new character out of the latter word:



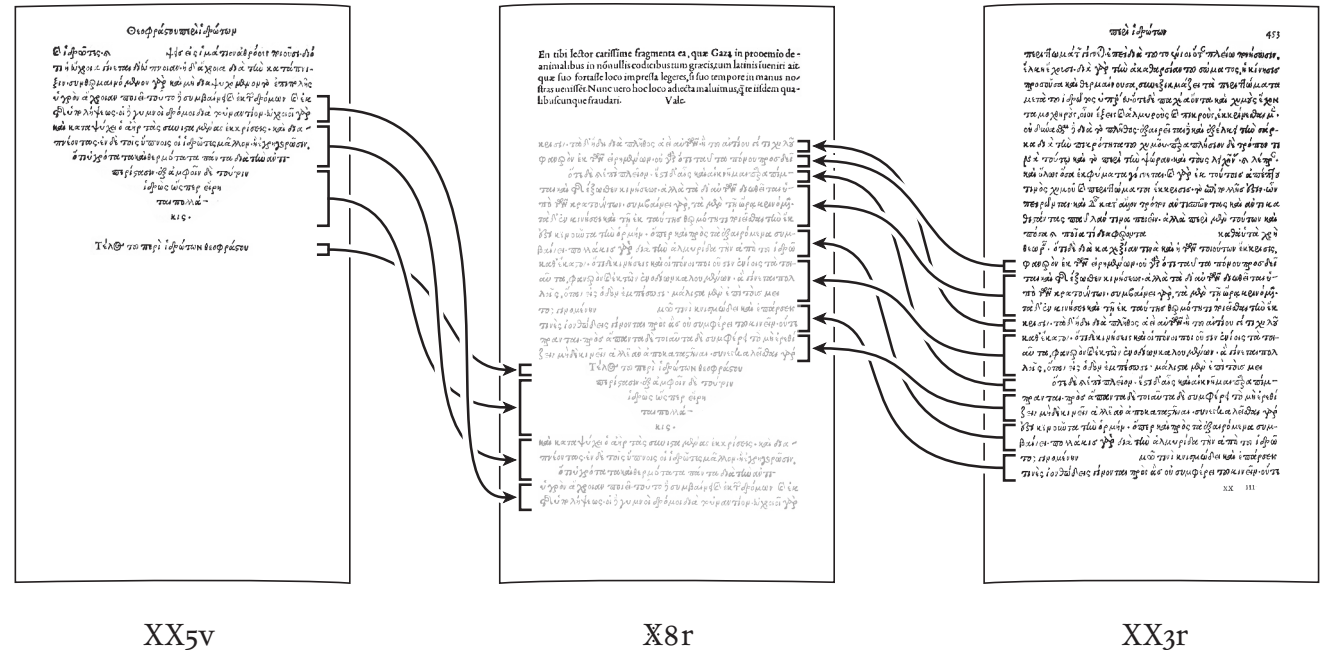
Bigger sheets.
They are not the presents you think they are, girl,
When a poet gives you blank sheets.

Unlike Aldo's *puella*, from Martial's little *pusilla* — we modern girls have a very grand and exact idea of what to think about the blank pages in renaissance books. For Aldo and for *us*, whatever the world may think, blank is *not* blank: these last *uacuas chartas* of the Aldine Martial, we now know, are full of *poetry*, full of *new* poetry, of new *classical* poetry — as the *uacuas chartas* of Aldo's Aristotle, to anticipate this girl's next topic, are full of *new philosophy* — new *classical* philosophy.

NOTE: *The reason for the following section will become apparent, belatedly, in the section that follows it, not yet written. The concept of "waystation" introduced on the next screen and developed on the last four must pertain to the diagram of blind type in Martial advanced on the third screen of the essay, as if it were the final word. It is not. There is more Martialdo poetry "out there" to read.*

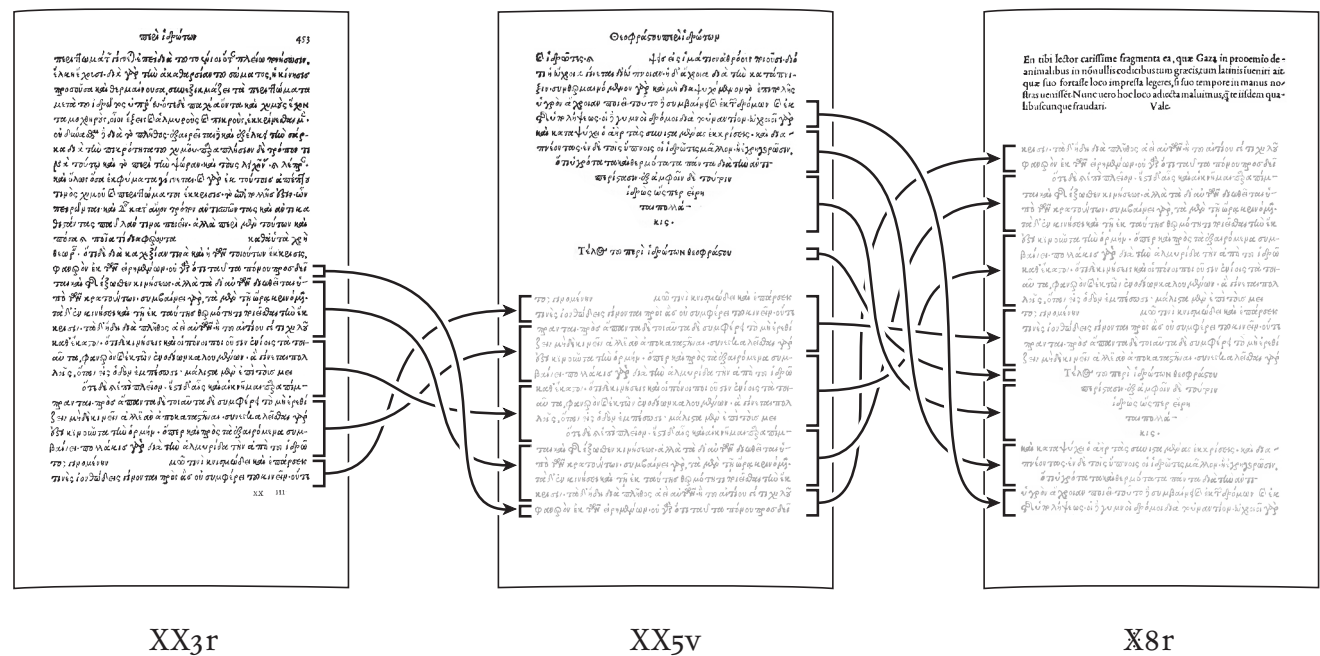
PTOLOMÆVS

To the right is a map – call it *Ptolemy* – of three pages at the end of vol. 3 of Aldo’s Aristotle, 1497. When I first sketched it, I was not yet able to decipher the blind text of the left-most page, 2X5v. Nevertheless, this map clearly shows twelve groups of lines of type migrating from two pages in quire 2X (3r and 5v—one from each forme) to print blind on the Apology page, Asterisk 8r. This material continuity implies, surprisingly, that Aldo must have known he was about to print quire Asterisk when the register, in 2X (the preceding quire), was at the press – even though the register does not refer to it. (But that’s another story.)



When, eventually, I read all of 2X5v, I had not only to supplement *Ptolemy*, but also to reconfigure it – as *Copernicus*. In this more complete, more elegant map of these three pages, Asterisk 8r receives blind type merely in eight groups from a single source. Although *Ptolemy* correctly correlates the ultimate sources and destinations of the blind type, it does not grasp that the uncharted space on 2X5v is a way-station for type en route from 2X3r to Asterisk 8r. Like *Ptolemy*, *Copernicus* maps the start and end of migration, but it also comprehends this middle stage.

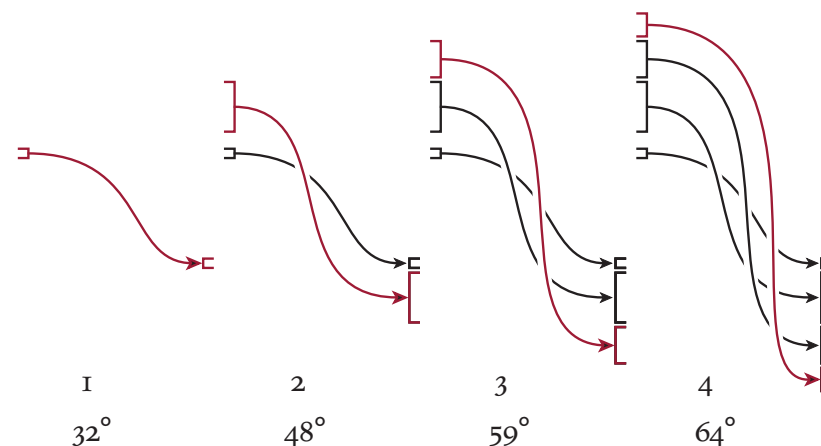
A corollary of this circulation of type is that Aldo appears to have printed quires from the outermost formes to the innermost. (Refining this picture, headline analysis can show the use of three skeletons recycled in strict rotation. But that too is another story.)



COPERNICVS

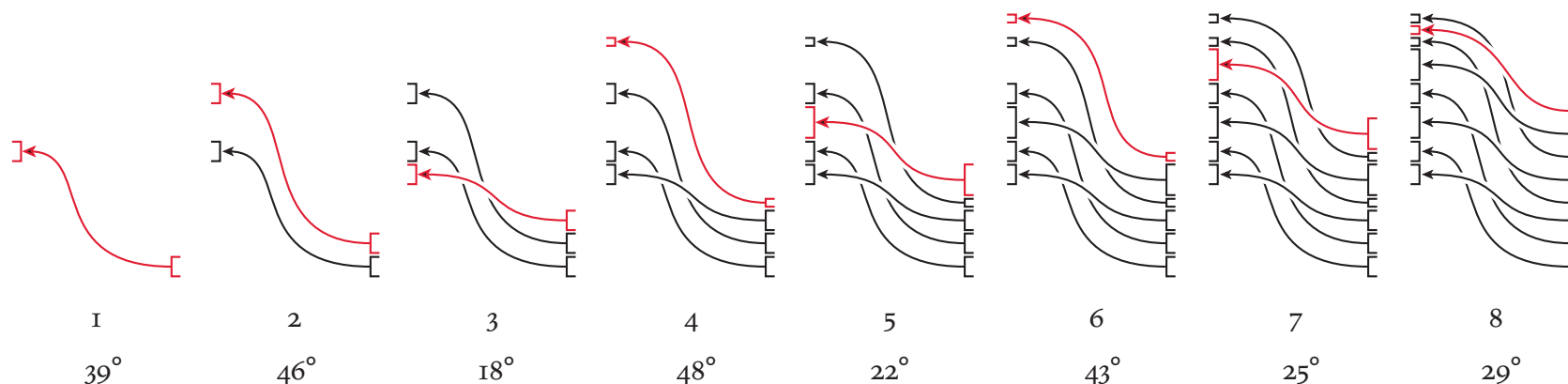
Upon observation, the orderly arrangement of arrows in *Copernicus* hints that the body of blind type was supplied from the source page in successive groups of lines of type taken from the top down or the bottom up and was assembled on the destination page in successive groups of lines deposited respectively one above the other or one below. It seems unlikely, however, that the compositor would have started transferring type from the top, at such arbitrary places as 1) the middle of 2X3r (l. 15), so as to fill the destination page *exactly* as his supply ran out; or 2) l. 4 on 2X5v, so as *exactly* to fill the destination page as supply ended on that source page. Much easier to think that, without any calculation of how many lines he might have needed, the compositor began moving type from the bottom of his source pages and simply stopped (respectively at ll. 15 and 4) when the destination pages were full.

Of course, these *Ptolemy* and *Copernicus* maps are abstract. For a fuller understanding of how type moves, we need to consider the concrete: the compositor's hands (*Where are his thumbs?*) and the galley in which he would have rearranged the blocks of type. Such practical matters, however, I will leave to an appendix (yet to be written), in order to turn now to what my having replaced the one map with the other can teach us. From the contrast of these maps, we can learn to recognize what the normal structure of arrows looks like. The left side of *Copernicus*, for example, demonstrates what to expect. Opposite, above, I show that side being built up step by step: Typically, a few lines of type from the bottom of the source page move to the highest place available on the destination page (as in 1, where the arrow's slope measures 32°). Thereafter (in 2), a few more lines of type, the bottom of which has now been exposed just higher on the source page, move onto the destination page directly beneath the lines of type previously deposited there, and the slope of the arrow increases—and so on with the next transfers of lines of type from lower to higher, and with a steady increase of slope in the arrows (in 3, 4, and 5). Thus, as the solid block of type



diminishes in stages *from* the foot of the source page, type on the destination page grows step by step *towards* its foot, with ever-increasing slope.

To this straightforward build-up in *Copernicus*, contrast (in the map below), the build-up on the right side of *Ptolemy*: notice its temporary gaps, alternating destinations of arrows, and limited range of its arrows' slopes: The arrows frequently change direction: the second one goes up (well above the first), but the third arrow goes down (just below the first). So, with the fourth (up well above the third), but the fifth (down just below the third); and so on with the sixth and seventh. Some arrows (as in 1, 2, 4 and 6) transfer groups of lines implausibly into empty space. Only later do they begin to cohere in a solid composition of type when new transfers come to abut them—now from below, as in 3 (that's easy enough), but then between, as in 5, 7 and 8 (the insertion of which blocks would be very awkward for a compositor if these in-between spaces were tight – yet not to have them tight makes them unstable). As a *Ptolemaic* map has it, the block of blind type builds up in epicycles, strayed-forwardly. *Ptolemy's* observations are keen, but its reference point is off.



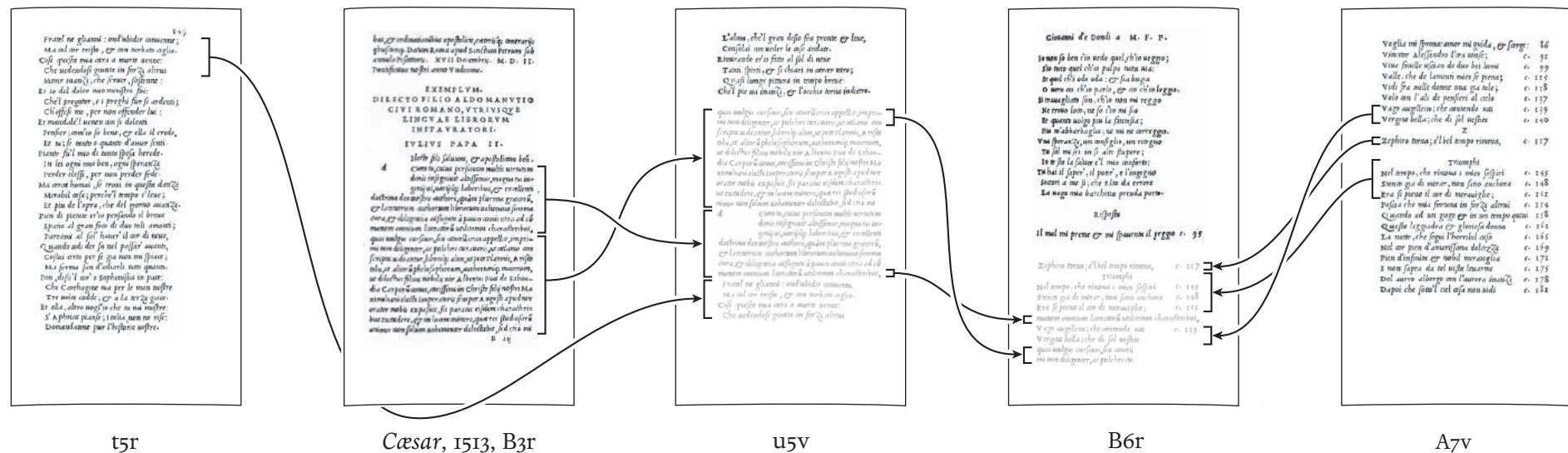
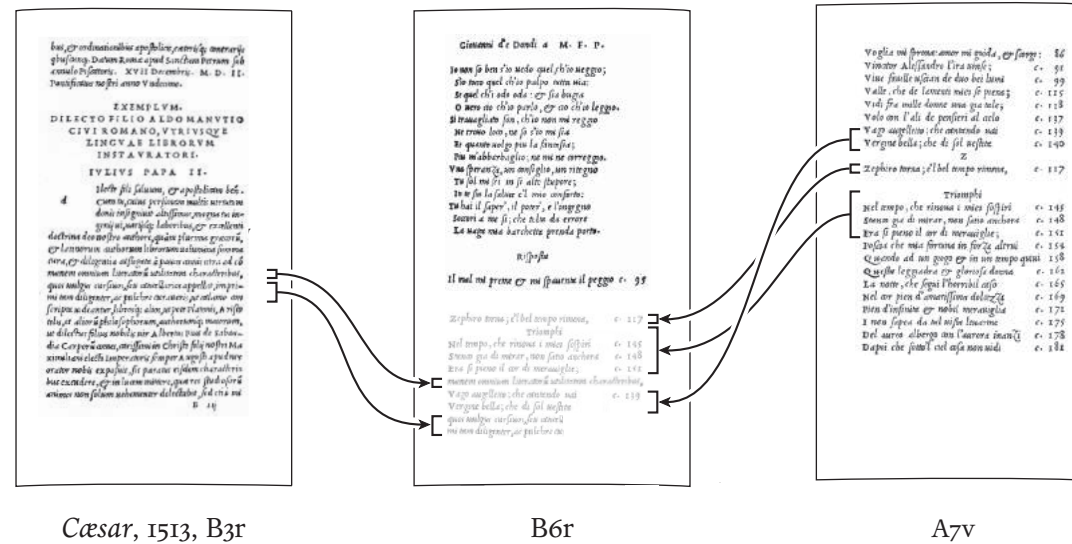
In the upper diagram, blind type on B6r of Aldo's 1514 octavo *Petrarch* (which collates a–z⁸ A–B⁸) comes not only from the same edition (A7v), but also from an admonition by Pope Julius (on B3r) of Aldo's *Julius Cæsar* (which collates A–B⁸ C⁴ a–z⁸ 2a–20⁸). Different dates in the *Cæsar* imply late printing of front matter: the colophon (208r) is dated April 1513, but the epistle date (on A6v) is December of that year.

In the top diagram, the two arrows on the left-hand page superficially resemble the lower two on the right-hand: each pair of arrows feeds blind type to B6r without the expected crossover. In the right-hand example, this anomaly can be explained: in Aldines, blank lines on a source page usually do not transfer to the destination (or are removed there before printing). It makes sense, therefore, to consider that the five lines grouped by the two lower brackets on the right-hand page are essentially one block—the arrow of which

would, as one might expect, cross the arrow from the block above it.

That the two arrows on the left-hand page do not cross over is suspicious, however. Why, one wonders, wouldn't these three adjacent lines on *Cæsar* B3r move as a unit? With the discovery that *Petrarch* u5v also bears blind type from the pope's admonition, we discern the complete picture at last. In the lower diagram, this new page, u5v, intervenes between the source in *Cæsar* and what we can now understand as the final destination, *Petrarch* B6r. So, *Cæsar* lines that appear blind through the way-station of *Petrarch* u5v. Instead of not crossing over at all, various papal lines crossed over twice.

The moral? When one derives the third and last stage of such a transfer directly from the first station (as in the upper diagram), not through the way-station (as in the lower one), two crossovers can appear as no crossovers at all.

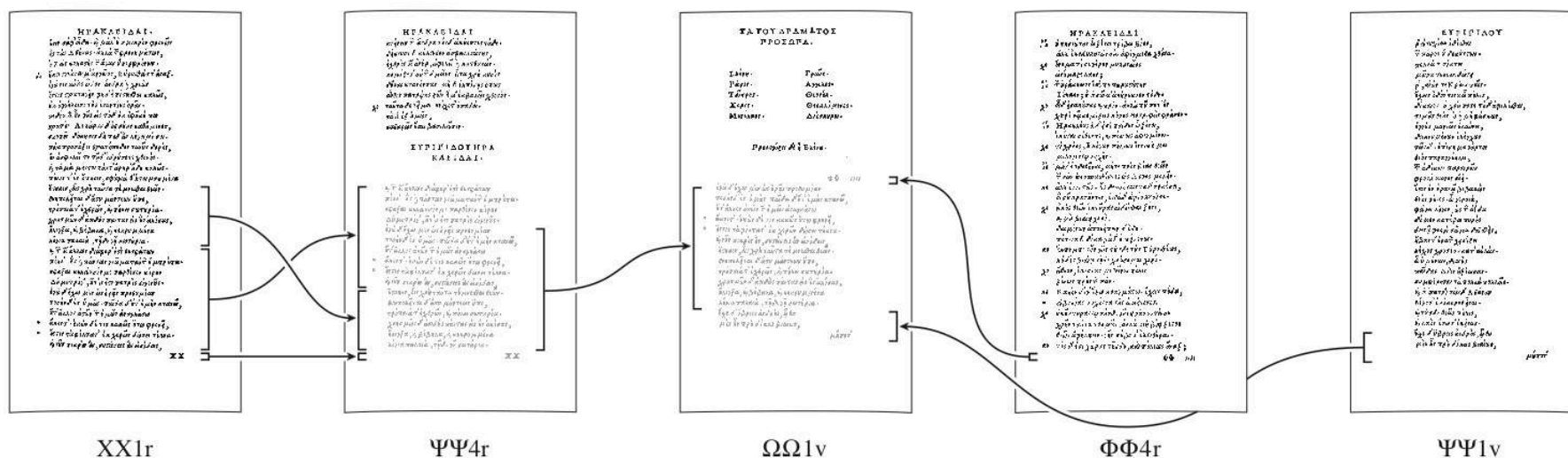
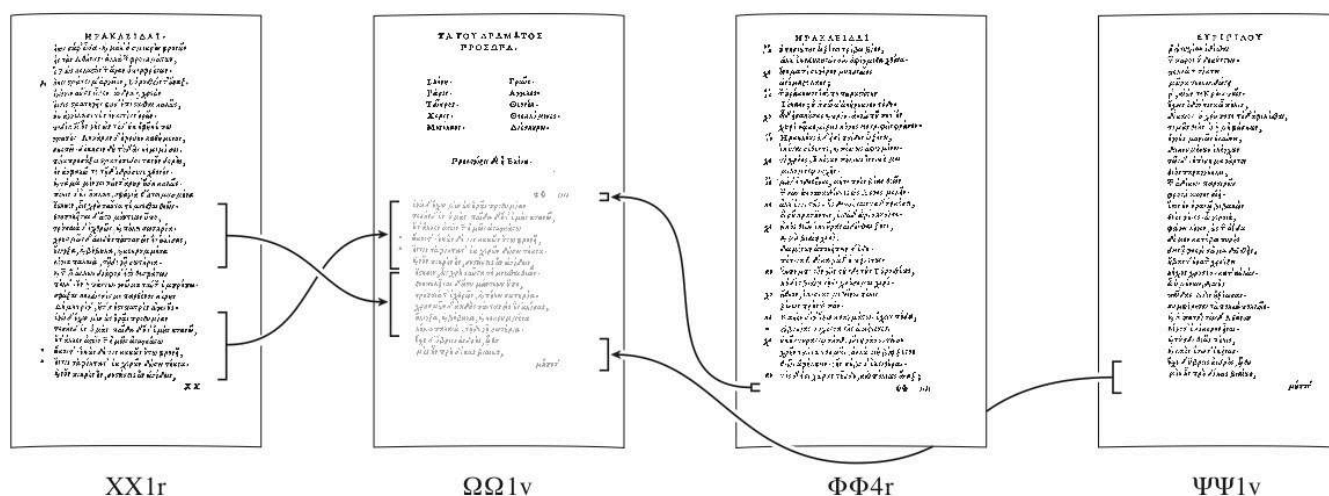


Aldo's 1503 octavo *Euripides* always starts a new play on a new sheet. With insufficient text to fill its last sheet, *Hercacidae* ends with a half-sheet, its last page and a half appearing blank. It collates: 2Φ-2X⁸ 2Ψ⁴. The next play, *Helena*, begins on 2Ω_{1r}, and its *dramatis personæ* falls overleaf.

The upper diagram shows two *separated* blocks migrating from page 2X_{1r} to print blind under the *dramatis personæ* of *Helena*. One supposes that the six bottom lines went first. But why did the four above them not follow? (Had they been distributed? Did they pie?) Lastly, the six

lines above these four moved to right below the previous six on 2Ω_{1v}.

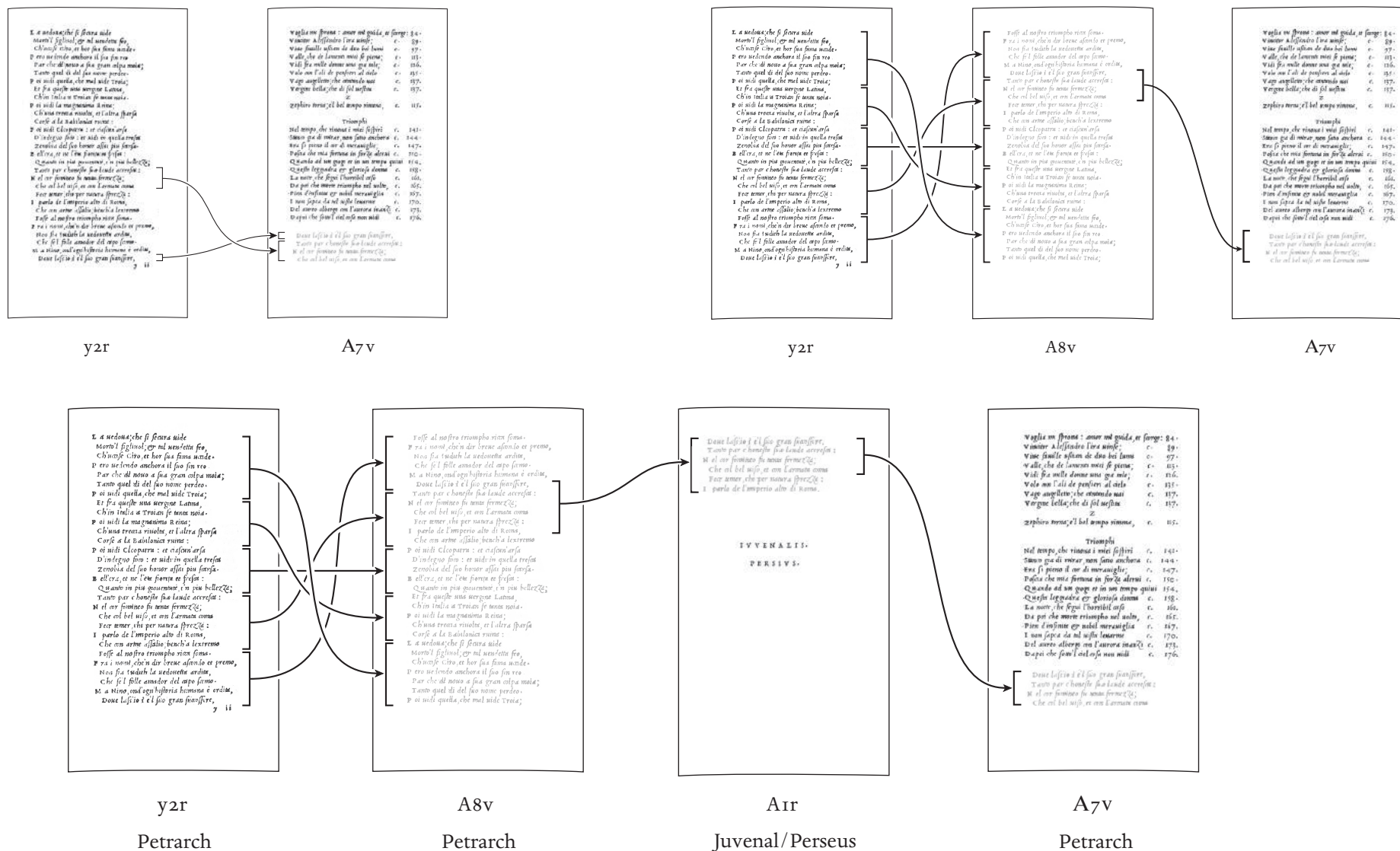
Fine, but the lower diagram undermines this story: between 2X_{1r} and 2Ω_{1r} lies way-station 2Ψ_{4r}. The upper diagram wrongly shows *separated* blocks and four *intervening* lines: but these four lines and the six following actually migrated to 2Ψ_{4r} in a single ten-line block, followed by the block of the six lines above: thus, *there were no intervening lines*. (When, *later*, our four *non-intervening* lines ceased to circulate, they stood *uppermost* among blind lines being quarried *from below*.)



Now with the *Petrarch* of July, 1501. In the first map, below, the *separation* of the two blocks of type that migrate from y2r to A7v looks suspicious, as do their small sizes, merely one line and three. With the discovery that all of y2r types migrate in five blocks to A8v (see the second map, on the right) one can treat A8v as a way-station and derive A7v from it, thereby consolidating the four lines on A7v into a single block. Problem solved.

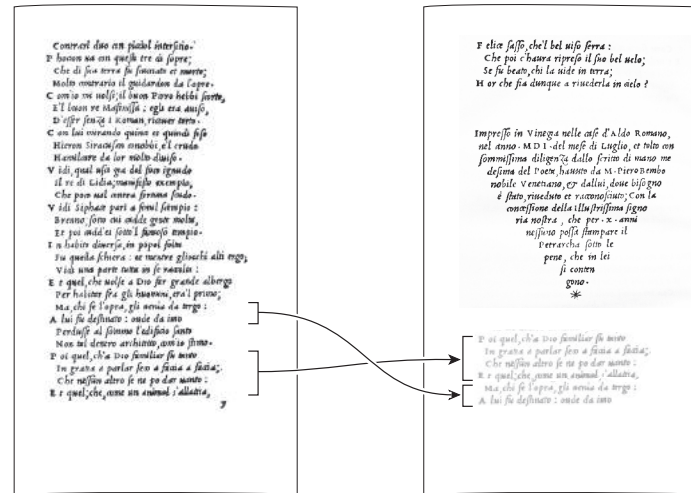
The problem is solved until one begins to analyze blind type on Aldo's edition of *Juvenal & Perseus*, printed, so its colophon claims, in August, the next month. Although I can read only the top six lines of

blind type on its title page, that is enough to send me back to the drawing board. The first four of the blind lines are the same as appear blind on A7v, and the next two are the very ones that appear directly under those four in way-station A8v. It seems unlikely that those two lines would have been set aside while the four went to print elsewhere and then reunited with them, in the same order, when they returned, to print blind again in *Petrarch*. The solution to our new problem seems to be to recognize *two* way-stations (see the third diagram), and to allow that composition of the end of *Petrarch* and the start of *Juvenal/Perseus* overlapped.



A stop-press variant occurs in the colophon (z3v) of the 1501 Aldine *Petrarch* (a-y⁸ z⁴ A⁸ B⁴): in ll. 5 and 6 of skin copies, after “Piero Bembo” (the owner of Aldo’s copytext), appears a phrase not in paper copies: “nobile Venetiano, & dallui, doue bifoigno è fiato, riueduto et racconofciuto”, which recognizes this local aristocrat as the editor. The upper diagram maps the migration of blind type to the base of this page in skin copies (where alone I’ve been able to read it). Two *separated* blocks (of four lines

and of two) migrated from y1r with the expected crossover. That a) the Bembo variant is two lines long and b) two lines separate blocks on the source page leads to a speculation: to *add* two lines to the colophon in skin copies, two blind lines must have been *deleted*. Surely, the migration to z3v (to print paper copies) was of two four-line blocks *without separation* between them (see the lower map). As I haven’t yet observed blind type in paper copies, this way-station is merely a (confident) prediction.



y1r

z3v (skin)

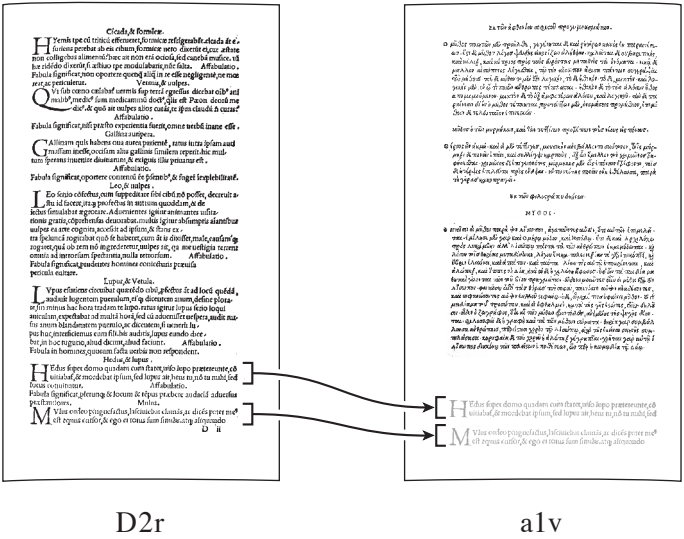


y1r

z3v (paper)

z3v (skin)

Blind-type variants need not depend on inked ones. Consider Aldo's *Æsop*, 1505. This folio is sometimes merely a Greek book: a-h⁸ i⁶ κ-ξ⁸ o⁴. But its register advertises an expanded volume, in which sheets a-d are inter-bifoliated with those of a Latin translation, signed A-D. I gather that the 18 Latin sheets were printed late, as blind type on both sides of ar (the recto of which is index to the *whole* volume) derives from two sheets in D.



Variant title-page bearers are the ones to watch. On the left side of the lower diagram, the starting words of the last two verses of D6v print blind – *horizontally* to the right of the anchor. But here in some copies, instead, the end of the first of these verses prints blind – *vertically*. (Another blind vertical line to the left of the anchor in this state has not been graphed, as I cannot read it yet.) Remarkably, the *inked* type on this page is invariant.

