

INFLUENCE OF OVID'S *REMEDIA AMORIS* ON *ARS AMATORIA* 3 AND *AMORES* 3

CHARLES E. MURGIA

THE TITLE is deliberately provocative. Most scholars believe that Ovid's *Remedia amoris* was composed after Book 3 of the *Ars amatoria* and hence also after all the *Amores* (whose second edition is mentioned in *Ars* 3. 343). Long ago, R. Sabbadini, noting that the *Remedia* addresses generally only the needs of the man ("turn to the forum, to law, to military service," and such), argued that the *Remedia* was composed between *Ars* 2 and *Ars* 3.¹ This has generally been rejected on two grounds: some lines do address *puellae*; some lines imitate lines of *Ars* 3, reversing advice in the same manner as the *Remedia* reverses advice found in *Ars* 1-2. The second argument begs the question, since those who use it (most recently A. A. R. Henderson)² fail to establish independently that it is not *Ars* 3 which imitates the *Remedia*. The first argument ignores the possibility of later additions to a poem originally composed to follow *Ars* 1-2.³ I have argued elsewhere that this is what has happened.⁴ It is generally recognized that *Ars* 3 was published later than *Ars* 1-2; as R. Syme has argued, the publication of *Ars* 3 must have been accompanied by a second edition of *Ars* 1-2.⁵ I argue that the new edition of *Ars* 1-3 was accompanied by a second edition of the *Remedia*, now revised to suit it to follow an *Ars* which ends with advice to women. Lines whose composition, in their extant form, is most likely to belong to this later stratum include at least 49-70, 591-608, 811-14

1. "Per la cronologia delle poesie amorose d'Ovidio," *RFIC* 37 (1909): 166-69.

2. P. Ovidii Nasonis "*Remedia Amoris*" (Edinburgh, 1979), p. xi. This is an edition and commentary, in most respects excellent. Though I disagree in matters of interpretation, I acknowledge my debt to his collection of parallels.

3. By "follow" I do not mean "follow in the same manuscript." Not even *Ars* 3 was composed to follow *Ars* 1-2 in that sense, but every "book" constitutes a separate papyrus roll. But *Rem.* 43 alludes to its status as a sequel to the *Ars*, and in that sense the poem was designed to follow an *Ars* of some sort.

4. "The Date of Ovid's *Ars Amatoria* 3," *AJP* 107 (1986).

5. *History in Ovid* (Oxford, 1978), pp. 13-15. I differ with Syme in my dating of the two editions (see my "Date") and in my reason for believing in a second edition. What convinces me that there was a second edition of *Ars* 1-2 is the concluding couplet of *Ars* 2, which could only have been added in a second edition to form a connection to *Ars* 3.

(which, because of their references to women, were probably composed after *Ars* 3),⁶ and the intrusive diatribe against criticism in 359–98.⁷

Without prejudice concerning the order of composition of the *Remedia*, consider the following passages. It is generally recognized that Lucretius 4. 1159–69 is the model for *Ars* 2. 657–62.

Lucretius 4. 1159–69:

nec sua respiciunt miseri **mala** maxima saepe.
nigra melichrus est, immunda et fetida acosmos,
 caesia Palladium, neruosa et lignea dorcas,
 paruula, pumilio, chariton mia, tota merum sal,
 magna atque immanis cataplexis *plenaque* honoris.
 balba loqui non quit, traulizi, muta pudens est;
 at flagrans odiosa loquacula Lampadium fit.
 ischnon eromenion tum fit, cum **uiuere** non quit
 prae **macie**; rhadine uerost iam mortua tussi.
 at tumida et mammosa Ceres est ipsa ab laccho,
 simula Silena ac saturast, labeosa philema.

Ars 2. 657–62:

nomnibus mollire licet **mala**: "*fusca*" uocetur,
nigrior Illyrica cui pice sanguis erit;
 si paeta est, "Veneri similis"; si raua, "Mineruae";
 sit "*gracilis*," **macie** quae male **uiu**a sua est;
 dic "habilem," quaecumque *breuis*, quae *turgida*, "*plenam*";
 et lateat *uitium* *proximitate boni*.

Lucretius satirizes the pet names which lovers give their beloved, and Ovid reverses the criticism to create advice. Ovid has changed Lucretius' Greek terms into Latin ones, but owes at least the four items of diction printed in boldface (**mala**, **nigrior**, **macie**, **uiu**a) to Lucretius (*mala*, *nigra*, *macie*, *uiuere*), or five if one includes Lucretius 4. 1159 *plenaque honoris* as the inspiration for *Ars* 2. 661 *plenam*.⁸ *Remedia* 315–40 (quoted below) is in turn indebted to *Ars* 2. 657–62, reversing once again the advice, so as to stress the faults, and borrowing at least twelve items of diction: 315 *uitiis*, 321 *breuis*, 323 *mala*, *uicina bonis* (cf. *Ars* 2. 662

6. There are also other possibilities. Lines 261–90 and 743–50, since they use mythological heroines as *exempla*, may also be thought to postdate *Ars* 3, but are not necessarily incompatible with composition before *Ars* 3. It should go without saying that if some lines may reasonably be identified as of later composition than the main body of the poem, there may be other lines (particularly in the immediate vicinity of the suspected lines) which, though clear evidence is lacking, may also be of later date. The poet's revision should also not be conceived as a mere scissors-and-paste insertion of new lines into an existing poem: the poet will sometimes insert, sometimes supplant old lines with new ones, and sometimes only make minimal changes in the old lines.

7. These passages are all discussed in "Date." For the intrusiveness of 359–98, see also Syme, *History in Ovid*, p. 14. My argument for the lateness of 359–98 is based on evidence that the lines postdate the second edition of the *Am.*, which, by the argument presented later in this paper, itself postdates the first version of the *Rem.* Another passage which seems likely to postdate the second edition of the *Am.* is the preface to Cupid (*Rem.* 1–40), composed in imitation of *Am.* 1. 1. These arguments apply conditionally: they may be rejected if the reader rejects also arguments that certain poems of the *Am.* were composed for the second edition.

8. See the Appendix, below.

proximitate boni), 327 *turgida, plena, fusca, nigra, uocetur*, 328 *gracili, macies*.⁹ Since *Remedia* 315–40 shares many elements of diction, concept, and structure with *Ars* 2. 657–62, including some but not all diction shared by *Ars* 2 with Lucretius (*mala, nigra, macies*, but not *uiua/uiuere*, while *plena*, though found in all three, enjoys the same sense and structure only in *Ars* 2 and the *Rem.*) and diction lacking in the passage of Lucretius (*uitiis, brevis, uicina bonis, turgida, fusca, uocetur, gracili*), but shares no distinctive diction uniquely with Lucretius, the direct influence on the *Remedia* is *Ars* 2 and not Lucretius.¹⁰

Lucretius himself is indebted (directly or indirectly) to Plato *Republic* 474D–E, which describes the euphemisms which a lover applies to the defects of his beloved. From Plato Lucretius got the elements “black” (*nigra* < μέλας), *melichrus* < μελιχλῶρους, *simula* < σιμός; but Lucretius shows no correspondence to Plato’s λευκούς (“white-complexioned”) or γρυπὸν (“hook-nosed”). Lucretius was also imitated by Horace at *Sermones* 1. 3. 43–53 on the pet names a father gives his son;¹¹ much of Lucretius’ diction, as suited to the relationship of a lover to a *puella*, was not usable by Horace, but he did generate three terms from the Lucretian passage: *male paruus* < *paruulus* (contrast Ovid’s *brevis*), *balbutit* < *balba*, *caldior* < *flagrans*; no diction which Horace borrowed from Lucretius is shared with the corresponding passages of Plato or Ovid (though *male paruus* corresponds conceptually to Ovid’s *brevis*). It should also be noted that *Ars* 2. 657–62 shares with the Platonic passage only one element (*nigra*, equal to μέλας); and so the pattern is maintained, for both Ovid and Horace, that the further removed a passage is from the earliest genetically related occurrence of a topos, the fewer resemblances will be found. Horace’s imitation of Lucretius resulted in accidental sharing of not a single element of diction which Ovid owed to Lucretius (where Ovid transmuted Lucretius’ *paruula* into *brevis*, Horace turned it by a lesser shift into *male paruus*,

9. These are the clearest examples of borrowing, confined within the 14 lines of *Rem.* 315–28. As I explain in the Appendix, *et* in *Ars* 2. 662 is also borrowed by *Rem.* 323. There are also 1 example of *male*, 3 examples of the relative pronoun, 4 of the verb “to be,” and 2 instances of *si* in *Ars* 2. 657–62, all of which elements recur in *Rem.* 315–40, but with insufficient distinctiveness in the use to present a case for borrowing. I also attach no significance to the occurrence of a form of *dicere* in both *Ars* 2. 661 and *Rem.* 317 (not to mention 329 and 330). Nevertheless, the total figure for correspondence, whether deliberate or by chance, is that of the 40 words in *Ars* 2. 657–62, 24 (more than half) enjoy some sort of correspondence in *Rem.* 315–40, 23 of them (all but *male*) within the 14 lines 315–28.

10. I except *saepe* in *Lucr.* 4. 1159 and *Rem.* 316 and 324, since the occurrences in the *Rem.* are not close in structure to *Lucr.* 4. 1159: rather, 316 belongs to a class of use introduced into the *Rem.* first at 227 *saepe bibi sucos . . . amarus* (on whose relations see below, n. 17), and 324 most closely resembles the use in 199–200. The occurrence within lines 315–40 therefore reflects the influence of Ovid’s recent composition earlier in the same poem, and not directly of Lucretius. Since *saepe* occurs 17 times in the *Rem.* (better than once every 48 lines), the occurrences within 315–40 are not statistically significant. By contrast, *macies* and *niger* occur only here in the poem, and 323 *mala* is one of only 3 occurrences of substantial *mala* (and the first referring to physical blemishes). For the sense in which I use the term “distinctive,” see “Date,” n. 4, and the Appendix.

11. Not all scholars agree that Horace imitates Lucretius here, and the evidence in terms of quantity of shared elements is marginal; but I doubt that Horace operated in ignorance of Lucretius’ memorable passage; and, though Horace had other inspirations besides Lucretius (I identify Varro below), none of the elements which he shares with Lucretius is attributable to any other known source.

and the other elements in Horace which owed their inspiration to Lucretius, as *balbutit* to Lucretius' *balba*, find not even conceptual parallels in Ovid's imitation).¹² This fact illustrates that independent imitation reveals its independence by exhibiting a different selection of elements: the laws of probability forbid two independent imitations, or two independent free compositions, from exhibiting the same selection.

Since everyone believes that the *Remedia* was composed later than *Ars* 2, and that *Ars* 2 was composed later than Lucretius, no one disputes that *Ars* 2. 657–62 was inspired by Lucretius, and that *Remedia* 315–40 was affected by *Ars* 2. 657–62. But if we had no other evidence for the date of the *Remedia* relative to *Ars* 2, these passages would provide it: if you tried to make *Remedia* 315–40 the source of *Ars* 2. 657–62, you could not explain economically the closer resemblances which *Ars* 2 has to Lucretius; if you tried to make *Ars* 2 the source of Lucretius, you could not explain economically the closer resemblances which Lucretius bears to Plato. Since the resemblances of Horace to Lucretius are fewer and less precise, you would be on shakier ground in arguing that Horace had to be later than Lucretius, but still, despite the marginal quality of the evidence, you would be right.¹³

Now compare *Remedia* 315–40 with *Ars* 3. 261–80.

Remedia 315–16, 321–24, 327–28, 337–40:

profuit adsidue **u**itiis insistere amicae,
idque mihi factum saepe salubre fuit.

"quam **breuis** est" (nec erat), "quam multum poscit amantem";
haec odio uenit maxima causa meo.
et mala sunt **u**icina bonis: errore sub illo
pro uitio uirtus crimina saepe tulit.

"**turgida**," si plena est, si fusca est, "**nigra**" uocetur;
in **gracili** "**macies**" crimen habere potest.

12. There is diction shared by Horace and *Ars* 2, but not diction borrowed from Lucretius. Horace (*male paruus*), *Ars* 2 (*male uiua*), and the *Rem.* (*male dentata*) all share a similar use of *male*. But, since each use of *male* is not closely juxtaposed to similar diction or concepts, the shared use is probably coincidence (though it might reflect subliminal remembrance by Ovid of Horace's use of the topos). The same may be said of the word *uitium* shared by *Serm.* 1. 3. 44 and *Ars* 2. 662. Horace and *Ars* 2 both display an imitation of Varro *Sat. Men.* 344 (or, if not, of a proverbial expression which Varro uses): *non haec res de Veneri paeta strabam facit*. This produced the *strabonem* and *paetum* of Hor. *Serm.* 1. 3. 44–45 *strabonem appellat paetum pater*, and the *paeta* and *Veneri* of *Ars* 2. 659 *si paeta est, "Veneri similis"*. Since Ovid and Horace have made a different selection of the elements in the Varronian sentence, the evidence is that they are independent of each other in the imitation.

13. The mode of argument which I use requires that passage C share with passage B at least three distinctive elements, including some but not all elements which B shares with an earlier passage A, and at least one distinctive element which is not in A. Horace shares with Lucretius three elements of diction which are not in Plato, but there is lacking any element of diction which is shared by all three passages (Plato, Lucretius, and Horace). The linking element which unites these three passages here is not diction, but structure: all are concerned with pet names given to euphemize the faults of a loved one. As I explain in the Appendix, the larger the passages under comparison, the greater should be the quantity or distinctiveness of the shared elements. Hence the case for Horace is substantially weaker than for the other passages discussed in this paper. Yet the structural link is a strong one, since passages which play on the names given a loved one are much rarer than passages which employ any single element of diction.

durius incedit, fac inambulet; omne papillae
pectus habent, uitium **fascia** nulla tegat;
si male **dentata** est, narra, quod **rideat**, illi;
 mollibus est oculis, quod flect illa, refer.

Ars 3. 261–63, 267–70, 273–74, 279–80:

rara tamen menda facies caret: occule mendas,
 quaque potes, **uitium** corporis abde tui.
si brevis es, sedeas, ne stans uideare sedere. . . .

quae nimium **gracilis**, pleno uelamina filo
 sumat, et ex umeris laxus amictus eat;
 pallida purpureis tangat sua corpora uirgis,
nigrior ad Pharii confuge piscis opem;

conueniunt tenues scapulis analemptrides altis,
 angustum circa **fascia pectus** eat;

si niger aut ingens aut non erit ordine natus
dens tibi, **ridendo** maxima damna feres.

In *Ars* 3 the girl is told to conceal generally the same list of physical blemishes which in the *Remedia* the lover is told to notice. This list, as we have seen, is mostly borrowed from *Ars* 2. As always, there are additions and subtractions. Since *Ars* 3. 261–80 shares many elements of diction, concept, and structure with *Remedia* 315–40, including some but not all diction shared by *Remedia* 315–40 with *Ars* 2. 657–62 and diction lacking in *Ars* 2. 657–62, but shares within corresponding sentiments no diction uniquely with *Ars* 2. 657–62 (or Lucretius), the direct influence on *Ars* 3. 261–80 is *Remedia* 315–40 and not *Ars* 2. That is, *Ars* 3 shares with both the *Remedia* and *Ars* 2 four items of diction: its (line 262) *uitium*, (263) *brevis*, (267) *gracilis*, (270) *nigrior*. But it lacks another eight items which those two passages share (*mala*, *turgida*, *plena*,¹⁴ *fusca*, *uocetur*, *macies*, and the correspondence of *proximitate boni* with *uicina bonis*), and so cannot be the *Remedia*'s source for these elements. Yet it shares at least five other elements uniquely with the *Remedia* (274 *fascia pectus* = *Rem.* 338 *pectus . . . fascia*; 279–80 **si niger aut ingens aut non erit ordine natus/dens tibi, ridendo maxima damna feres** = *Rem.* 339 **si male dentata est, narra quod rideat illi**),¹⁵ and these show that *Ars* 3 is more closely related to the *Remedia* than to the other passages mentioned: by the same processes as those explained above, *Ars* 3 should be judged to be influenced by the *Remedia*. How do

14. We do find in *Ars* 3. 267 *pleno uelamina filo*, which differs in use, structure, and juxtapositions from the *plenam* and *plena* of *Ars* 2. 661 and *Rem.* 327: that is, though Ovid may have been psychologically influenced by his model to use *pleno* in *Ars* 3. 267, the *plena* of *Rem.* 327 is indebted to *Ars* 2. 661 and not to *Ars* 3.

15. These are the most striking resemblances shared uniquely by the two passages in question. I have omitted the resemblance of *Ars* 3. 271–72 *pes malus in niuea semper celetur aluta/arida nec uinclis crura resolue suis* to *Rem.* 317 "*quam mala*," *dicebam*, "*nostrae sunt crura puellae*!" so as not to distract the reader with a weaker case. For more on these resemblances, see the Appendix.

we know that *Ars* 3. 261–80 is not independently influenced by *Ars* 2, and the *Remedia* a conflation of *Ars* 2 and *Ars* 3? The same way we know that *Remedia* 315–40 is not independently imitating Lucretius 4. 1159–69, and *Ars* 2. 657–62 is not a conflation of Lucretius and the *Remedia*: first, that explanation would be unnecessarily uneconomical; second, if the explanation were true, there would be clues to the independence and conflation in the presence of diction or other distinctive element shared uniquely by the passages of Lucretius and the *Remedia* in the one case, or of *Ars* 3 and *Ars* 2 in the other.¹⁶ We should conclude, then, that the composition of *Ars* 3 has been influenced by the prior composition of the *Remedia*, and that the lines of *Ars* 3 under discussion were composed later than the corresponding lines of the *Remedia*.

Reversal therefore is not a device confined to the *Remedia*. Here *Ars* 2 has reversed Lucretius, the *Remedia* has reversed the same passage of *Ars* 2, and *Ars* 3 has worked a reversal on that passage of the *Remedia*. So too in other passages where *Ars* 3 closely resembles the *Remedia* (209–14 = *Rem.* 353–56, 258 = *Rem.* 350, 329–40 = *Rem.* 757–66, 583–84 = *Rem.* 227–28,¹⁷ 673 = *Rem.* 685, 807–8 = *Rem.* 411–12), the reader should be prepared to see adaptation or reversal of the dictates of the *Remedia*.

It is generally believed that the second edition of the *Amores* (mentioned in the four-line epigram which begins *Am.* 1)¹⁸ was published later than *Ars* 1–2 (since *Am.* 2. 18. 19 seems to refer to the *Ars*), but before *Ars* 3 (since *Ars* 3. 343 refers to the three-book edition of *Am.*). If, as I have argued, the earliest version of the *Remedia* was also composed between *Ars* 2 and *Ars* 3, the relative dates of the earliest version of the *Remedia* and the latest version of the *Amores* still require establishment.

Besides Ovid himself, the most important poetic influences on the *Remedia* seem to have been Lucretius and Vergil's *Eclogues* and *Georgics*. A survey of the parallels collected by Henderson easily supports this,

16. As I pointed out above (n. 10), *Rem.* 315–40 does contain two instances of the word *saepe*, but in structures and combinations which do not permit arguing that the word entered under the influence of Lucretius rather than of Ovid's own previous use and habits of expression. There is one word which *Ars* 3. 261–80 shares with *Ars* 2. 657–62 and not with *Rem.* 315–40, *latere* in *Ars* 3. 266 (*lateant*) and *Ars* 2. 662 (*lateat*), but again in structures and combinations which do not establish imitation of the one passage by the other: see the Appendix below.

17. If *Am.* 3. 11. 8 is the earliest, its *saepe tulit lassus sucus amarus opem* seems to have led to *Rem.* 227 *saepe bibi sucos quamvis inuitus amarus*, and this to *Ars* 3. 583–84 *succo renouemur amaro: / saepe . . .* (where the different structure of *saepe*, now prefixed to the following sentence, prevents supposing an order *Am.* > *Ars* 3 > *Rem.*). But since the second edition of the *Am.* postdates the first edition of the *Rem.* (see below), we cannot be certain that *Am.* 3. 11 is prior to the *Rem.*, and it is possible that the descent is Lucretius > *Rem.* > both *Am.* and *Ars* 3 independently.

18. That this epigram attests a genuine reediting of five previously published books into a new three-book edition is required by the time span which Ovid's composition of the *Am.* must have occupied. According to *Tr.* 4. 10. 57–60, Ovid was famous for the composition of *amores* while he was still a teenager; yet by the time that he published the three-book edition he was probably a *senex* (see my argument in "Date"). The evidence fits original publication of five separate books, followed by a later collection into one three-book edition.

and the influence of the generic models, *De rerum natura* and *Georgics*, should prompt no surprise. So Henderson correctly identifies Lucretius (6. 769–72 and 1090–96) as the inspiration for *Remedia* 81 *mala semina morbi*, and *Georgics* 3. 454 as the inspiration for *Remedia* 133 *uitia irritesque uetando*. The last two passages warrant closer inspection.

Georgics 3. 454–57, 459:

454 . . . alitur **uitium** uiuit**que** tegendo,
 455 dum **medicas** adhibere manus ad uulnera pastor
 456 abnegat . . .
 457 **quin etiam** . . .
 459 profuit incensos aestus auertere . . .

Remedia 131–33:

temporis ars **medicina** fere est: data tempore prosunt
 et data non apto tempore uina nocent.
quin etiam accendas **uitia** irritesque uetando

Though the *Remedia*'s *quin etiam* is owed ultimately to Lucretius, the other resemblances of diction (printed in boldface), as well as the nearby similarities of sense and structure (e.g., *alitur uitium uiuitque tegendo/accendas uitia irritesque uetando*), show that the proximate source is *Georgics* 3. 457. The collective evidence of the resemblances of the passages also establishes that the alliterative locution *uitia irritesque uetando* was coined under the influence of Vergil's alliterative *uitium uiuitque tegendo*. Now consider *Amores* 3. 4. 10–11:

semina nequitiae languidiora facit.
 desine, crede mihi, **uitia irritare uetando**.

Line 10's *semina nequitiae* seems generated under the influence of *Remedia* 81's *mala semina morbi*,¹⁹ and line 11's *uitia irritare uetando* is too close to *Remedia* 133's *uitia irritesque uetando* not to be genetically related to it. One of these locutions must have been inspired by the other. Since the other correspondences of diction (*medicina/medicas*, *quin etiam*, *accendas/incensos*, *uitia/uitium*, *-que*) and the general didactic pose of providing a remedy for disease (in *Am.* 4. 11 *uitia* = *peccata*, not disease) show that *Remedia* 133's locution was inspired by *Georgics* 3. 454, it follows that *Amores* 3. 4. 11 was inspired by *Remedia* 133. One might try to explain *semina nequitiae*, with its Lucretian tone,

19. Elsewhere in the *Am.*, *semina* (or *semen*) occurs only in Book 3: 1. 59, 6. 16, 10. 11, 10. 33, 12. 35, of which the last four are used of literal seeds, and only 1. 59 (*prima tuae moui felicia semina mentis*) approaches the Lucretian use. As I point out in "Date," 3. 1 is one of the poems which may have been composed for the second edition; since it forms a preface for Book 3, it should at least postdate poems 2–14. Since the metaphorical use of *semina* does not occur in Ovid's *Heroides* (*Her.* 9. 83 is spurious), *Rem.* 81, *Am.* 3. 4. 10, and *Am.* 3. 1. 59 are the earliest occurrences in the Ovidian corpus, and were composed, I believe, in that order and in that line of influence. In the *Met.* Ovid returned to Lucretius again for his description of the creation of the world in Book 1 (1. 9 *semina rerum*), making a new line of influence available for his subsequent verse.

as coincidence, and the resemblance of *Amores* 3. 4. 11 to *Remedia* 133 as both coincidence (in that *Am.* 3. 4. 11, not otherwise indebted to *G.* 3, has an alliterative combination which the *Rem.* would gain in the process of imitating *G.* 3) and conflation (in that the diction *irrites* and *uetando* could not have come from *G.* 3. 454, and could not be shared coincidentally). But whatever improbability attaches to either attempt singly (and the explanation for *uitia irritare uetando* would be very strained), it becomes mere special pleading when both items of resemblance to the *Remedia* occur in adjoining lines of *Amores* 3. 4. The sole points of contact of this poem with Lucretius and *Georgics* 3 are locutions which it shares more precisely with a poem which unabashedly imitates Lucretius and *Georgics* 3: the *Remedia*.

We cannot tell whether the debt of *Amores* 3. 4. 10–11 means that the original final book of the *Amores* (Book 5) was composed after the *Remedia*, or that *Amores* 3. 4 was revised for the second edition of the *Amores*, or that the poem was originally composed for the second edition of *Amores*.²⁰ In support of the second possibility, note that the theme of *Amores* 3. 4. 5–8, “guarding is ineffective,” is illustrated by 19–24, “Argus was unsuccessful, and confining Danae did not work”; lines 9–18, on the theme “forbidding only makes the girl more eager,” could be seen as interrupting this sequence (Io and Danae are not paradigms of eagerness) and therefore as a later insertion. But whatever explanation is given for the debt of 10–11 to the *Remedia*, the minimum conclusion which must be drawn is that the second edition of the *Amores* postdates the first version of the *Remedia*. I have argued elsewhere that the early parts of the *Metamorphoses* (1–7 or so) were composed between the second edition of the *Amores* and *Ars* 3.²¹ Therefore the sequence of composition or revision which I see for these poems is the following: *Ars* 1–2 (first edition); *Remedia* (first edition); *Amores* (second edition); *Metamorphoses* 1–7; *Ars* 3 with the second edition of *Ars* 1–2; *Remedia* (second edition).²²

20. The second edition of the *Am.* contains selections from five original books, presumably books originally issued separately. We have no evidence when the original Book 5 was composed, other than that it antedates the second edition and postdates the original Books 1–4.

21. See my “Date.”

22. The arguments for relative dating which I have adduced establish directly only the existence of both an early and a late version of the *Rem.* Whether these two versions represent separate editions requires a separate step of reasoning. By my scheme there is a wide separation in date between the two versions, with at least the second edition of the *Am.* and the first half of the *Met.* intervening. The *Am.* and *Ars* provide models for Ovid’s use of a second edition. Indeed, the need for separate versions of the *Rem.* seems to be integrally linked with the change in ending of the *Ars* after the addition of *Ars* 3. The addition of *Ars* 3 prompted a reissuing of *Ars* 1–2, or at least of *Ars* 2, with the final couplet of *Ars* 2 added to bridge the way to *Ars* 3. There was even more need to alter the *Rem.* to take into account *Ars* 3’s advice to *puellae*, and since the first version of the *Rem.* seems to have closely followed the completion of *Ars* 2 (which should have been published before the second edition of the *Am.*, if the reference to the *Ars* in *Am.* 2. 18. 19 was to be intelligible to the general reader), it is most reasonable to suppose that each edition of the *Ars* was accompanied by, or closely followed by, an edition of the *Rem.*

APPENDIX: DISTINCTIVE DICTION

My use of the term "distinctive" is defined in "Date" (see n. 4).²³ As I there explain, the definition is a corollary of the claim that three distinctive elements shared within a brief space suffice to identify two passages as closely related. Therefore by "distinctive" diction I mean, not a word which by itself serves to link two passages (only a word newly coined could have that degree of distinctiveness), but a word which in conjunction with other elements in the same passage serves to establish such a link. This explanation indicates my intent in using the term, but probably some illustration is in order so that the reader may recognize what words do or do not qualify.

First, the meaning of the word "distinctive" must vary with the size of the passages compared, as must the number of words required to establish a genetic link. When I stated in "Date" that three distinctive elements shared within a brief space normally suffice to establish a close genetic relationship between passages, I referred to narrow units of comparison. For instance, *G.* 3. 454 *uitium uiuitque tegendo* and *Rem.* 133 *uitia irritesque uetando* share with each other approximately half of the units of sound in their respective hexameter endings, all in identical metrical positions. If these units of sound were distributed randomly over a ten-line passage, we would not have a case for claiming a genetic relationship: the minimal elements *uiti-*, *-que*, and *-ndo* would be too common to qualify as distinctive if they were not closely juxtaposed to each other. But we can estimate the chances of coincidental juxtaposition in identical metrical positions in the same hexameter. In the approximately 12,905 lines of Vergil, 35 end in *-ndo*, only 2 (including *G.* 454)²⁴ have *uiti-* forming the second half of the fourth foot, and 1184 (about 1 in every 11) have *-que* following the initial long syllable of the fifth foot. We should expect a chance recurrence of the given combination in Vergilian hexameter less than once in every 25,000,000 hexameters.²⁵ Since we have much less than 25,000,000 hexameters of Vergil, there is no recurrence within his works, nor are there any other examples in Vergil of the combinations *uiti-* and *-ndo* in the corresponding metrical positions (for which we should expect 1 every 2,380,000 or so Vergilian hexameters) or *uiti-* and *-que* (for which we should expect 1 every 70,000 or so Vergilian hexameters). Since *-que* occurs as the first short of the fifth foot once in every 11 lines in Vergil, we should expect slightly over 3 occurrences among the 35 instances in Vergil of terminal *-ndo*: we actually find 5, a statistically insignificant divergence (but see below).

23. See also my "Imitation and Authenticity in Ovid: *Metamorphoses* 1. 477 and *Heroides* 15," *AJP* 106 (1985): 460.

24. The other example is *G.* 2. 453 *uitiosaeque*. The search was for words beginning in *uiti-* and so ignores such as *Ecl.* 1. 40 *seruitio*, which would have a different effect on the sound of the verse, let alone the meaning. A form of *uitium* occurs elsewhere in Vergil only in *Ecl.* 7. 57 and *G.* 1. 88.

25. The statistics for occurrences in Vergil and in Ovid's *Met.* are derived from computer searching of those texts. Statistics for other works of Ovid are extracted from R. J. Deferrari, M. I. Barry, and M. R. P. McGuire, *A Concordance of Ovid* (Washington, 1939). The formula for estimating the chances of recurrence of a combination of occurrences requires multiplying the frequency of the individual occurrences, here $35/12905 \times 2/12905 \times 1184/12905 = .000000039$. This is a simplified formula, leaving out of account factors such as the space available (irrelevant here, since we happen to be comparing occurrences in a specific metrical position of a single hexameter, which automatically defines a single space as available for each element). As I explain below for Ovid, the chances would be somewhat greater for occurrence in a didactic poem, in which the word *uitium* would be more likely to occur, than in epic (there are no occurrences in the *Aeneid*).

But our concern is with the probability of chance recurrence in Ovidian hexameters. If we take the *Metamorphoses* as evidence for Ovidian hexameter, in its approximate 11,978 lines we find 66 occurrences of terminal *-ndo*, 13 of *uiti-* ending the third foot,²⁶ and 883 of *-que* forming the first short of the fifth foot (about 1 every 13.5 lines). We should expect 1 occurrence by chance of the combination in every 2,273,000 or so hexameters of Ovid, and accordingly find no occurrence in the *Met*. We should expect 1 occurrence in every 200,000 or so Ovidian hexameters of the combination *uiti-* and *-ndo* (in the specified positions), and accordingly find none in the *Met*. Among the 13 examples in the poem of *uiti-* ending the third foot we should expect to find 1 example in which *-que* forms the first short of the fifth foot, and we do find exactly 1. Among the 66 lines ending in *-ndo* we should expect to find 5 in which *-que* forms the first short of the fifth foot: we actually find 19. The reason has to do with the combination of the structure of the Latin language and the canons of Ovidian hexameter: most hexameter endings in *-ndo* are trisyllabic words, normally the only type of hexameter ending before which Ovid will end a word with *-que* in the prescribed position; endings in *-ndo* therefore are proportionally more likely to satisfy the requirements for placement of *-que* in the prescribed position, and Ovid more than Vergil has chosen the easy way to find a short syllable to prefix to the trisyllabic ending. With allowance for this characteristic, we might expect coincidental combination of the elements *uiti-* . . . *-que* . . . *-ndo* in the specified positions once in every 580,000 or so Ovidian hexameters, still a prohibitively large figure.

At least one other factor must be included: genre (the word *uitium* is much more common in didactic poetry than in epic) and subject matter. Although the word *uitium* is found in only 7 lines of the *Met*. (once in every 1,700 lines), it is found 10 times in *Ars* 1–3 (once in every 233 lines) and 8 times in the *Rem*. (once in every 102 lines), a poem highly concerned with *uitium*. The figures for occurrence of *uiti-* in the specified position of the hexameter are 2 in the *Ars* (1. 249 and 2. 641) and 2 in the *Rem*. (133 and 315). Although these figures are somewhat prejudiced by inclusion of occurrences in the *Ars* and the *Rem*. which we claim to be due not to chance, but to imitation (*Rem*. 133 is the line whose relationship to Vergil is in question, and 315 is at least potentially influenced by *Ars* 2. 662), if we took *uiti-* to occur in the prescribed position once in every 200 hexameters in the *Rem*., the chance of finding the combination in a given hexameter of the *Rem*. is about 8.5 times greater than finding the combination in a line of the *Met*. We might then expect to find the combination in a line of the *Rem*. about once in every 68,000 or so hexameters. Since there are only 407 hexameters in the extant *Rem*., the odds are about 168 to 1 against finding an accidental occurrence of such a predefined combination anywhere in the poem. But the occurrence is not found just anywhere in the poem. The combination is found within a line whose first words, *quin etiam* and *accendas*, also bear affinities to the same passage of the *G*. which appears to be imitated. The odds against chance occurrence of *uiti-* . . . *-que* . . . *-ndo* in that specific line are therefore about 68,000 to 1. If we multiplied the chance of finding the combination in conjunction with *quin etiam* and the verbal stem *-cend-*, not to mention the proximity to *medicina*, the odds against chance occurrence become astronomical.

The statistics above do overstate the case somewhat for the improbability of accidental correspondence of three distinctive elements, since they evaluate the probability of correspondence only of the three elements specified. A relationship would have been claimed if from Vergil's *aliur uitium uiuitque tegendo* we found repeated in a line of *Rem*. *aliur* . . . *uiuit* . . . *tege-* (probably an impossible combination if *-que* or *-ndo* is not also shared) or some other combination of the elements in the line. But such a combination would share

26. Five are forms of *uitium* (2. 679, 4. 200, 6. 460, 7. 533, 10. 244), the rest of *uitiare*. There are only two other examples of *uitium* in the poem (4. 67 and 5. 195).

no element with *Am.* 3. 4. 11 *uitia irritare uetando* and so provide no basis for establishing the relative dates of that line and the *Rem.* So to a certain extent the elements whose recurrence is at issue are predefined. Yet to the extent that any other combination is possible which would permit the same form of argument, the chance of any kind of correspondence between two lines or hemistichs is greater than the chance of a specified correspondence. When the units under comparison are small, or the proportion of corresponding to noncorresponding elements among the units is substantial, the difference is not critical: the chance of accidental correspondence is still prohibitively small. But when the units are large and the proportion of corresponding to noncorresponding elements is small we need to invoke other factors.

First, elements such as *-que* and *-ndo* no longer qualify as distinctive unless they are closely bound with other, more distinctive elements. In determining what is distinctive, experience is the best test. No one disputes that *Ars* 2. 657–62 imitates *Lucr.* 4. 1159–69, and so (one hopes) no one fails to recognize that *mala*, *nigrior*, *macie*, and *uiuua* entered the former passage under the influence of the latter's *mala*, *nigra*, *uiuere*, *macie*. We can observe that the switch between the positive (*nigra*) and comparative (*nigrior*) is not significant (and we see further such switching in the *Rem.* and *Ars* 3), and that the stem of a verb (*uiuere*) can be used for an adjective (*uiuua*). Since the shared elements (substantival *mala*, *nigr-*, *uiu-*, and the form *macie*) are separately of uncommon occurrence in the Ovidian corpus (occurring respectively once in every 700 lines, once in every 574 lines, once in every 181 lines, once in every 11,667 lines), the occurrence of all 4 elements within 4 consecutive lines of Ovid is most unlikely to be due to chance.²⁷ Yet the chance of some correspondence of four or more elements between *Ars* 2. 657–62 and *Lucr.* 4. 1159–69 is far less improbable than the chance of the specified correspondence. What makes the relationship of *Lucr.* 4. 1159–69 to *Ars* 2. 657–62 clear is not the mere sharing of four or five words, but the sharing within a very similar structure, in which not only these words serve the same conceptual function (*mala* refers not to misfortune or to other types of ills but to physical blemishes; *nigra* means not just black, but is a pejorative term for dark-complexioned; *uiuere non . . . macie* shares a conjunction of terms with *macie . . . male uiuua* which serves an identical, satirical function in both passages; even *plenaque honoris* shares with *Ars* 2. 661 *plenam* the use of *plena* in a pet name for a fat *puella*), but other words (*tumida/turgida*), concepts, and judgments show a general correspondence.

But we are trying to determine here not what the total elements are that may establish a relation between passages, but what qualities we look for in an individual word to identify it as worthy of our attention in establishing the relationship (what I have chosen to call "distinctive"). As a first step in reducing possibilities for coincidence in a comparison of extended passages, we may limit the comparison (as I have done in comparing Lucretius with Ovid) to words or stems which represent a concept and ignore the "glue" of the

27. By multiplying $4/700 \times 4/574 \times 4/181 \times 4/11667$, and multiplying again by 35,000 (the approximate number of lines in the Ovidian corpus), we determine that the chance of accidental occurrence of the combination in any 4 consecutive lines of the Ovidian corpus is approximately 1 in 94,700. The chance of accidental occurrence within the 746 lines of *Ars* 2 would be little better than 1 in 4.5 million. Again, this is a simplified formula, ignoring space available (which decreases with each correspondence, so that the odds are actually even less favorable to correspondence than specified). Other resemblances besides the mere recurrence of the words or sounds, such as the similarities of thought, would increase the improbability: for instance, occurrences of *mala* with reference to physical blemishes are far less frequent than once every 700 lines in Ovid (more than three-fifths of the occurrences of *mala* are in the *Tr.* and *Pont.*, and refer to Ovid's own misfortunes); and there are resemblances of thought in the two passages in addition to the shared diction. So the improbability of chance correspondence of the specific elements which do correspond is actually much greater than the calculations above present. Although shared topic would make shared diction less unlikely, shared topic is itself a point of resemblance which provides evidence of a relationship.

passage: conjunctions, copulas, pronouns, very common adverbs, and possessive, relative, and demonstrative adjectives. There occur within both *Lucr.* 4. 1159–69 and *Ars* 2. 657–62 *est* (1160, 1164 and 659, 660), *sua* (1159 and 660), and *et* (1160, 1161, 1168 and 662). These words are not in themselves distinctive, since their usage by the poets is too common. Yet even such common words become distinctive if at least one of two conditions is met: close proximity to other shared words which do qualify as distinctive; a similarity of structure or other usage which qualifies the use of the word as uncommon. Neither condition is met by the occurrences of *est*, *sua*, or *et* in Lucretius, but they are met by shared usages in some of the other passages. Although the word *et* by itself is common, uses of *et* to introduce the equivalent sentiments *Ars* 2. 662 *et lateat uitium proximitate boni* and *Rem.* 323 *et mala sunt uicina bonis* are uncommon (these are probably the only two such occurrences in extant Latin): therefore the occurrences in those two lines qualify as distinctive, and indicative of a relationship between the lines. Similarly, as I have pointed out above (n. 10), the uses of *saepe* shared by *Lucr.* 4. 1159 with *Rem.* 316 and 324 do not qualify as distinctive; but, as I indicate in n. 17, the occurrences in *Am.* 3. 11. 8, *Rem.* 227, and *Ars* 3. 584 qualify by their proximity to other related words as distinctive and indicative of a relationship. And the use of *si* in *Rem.* 339 and *Ars* 3. 279 is treated as distinctive, but not the other occurrences of *si* in the passages. The adverbs *non* and *male* are common adverbs of negation: they are not distinctive if found randomly in large passages, but are distinctive if found in the same conjunctions of words (with two or more other words). The word “common” is relative. When the size of passages under comparison is small (one line or less), any Latin word is sufficiently uncommon to qualify as distinctive, at least when conjoined with other words of even average frequency; when the length of the passages is long, the opportunity for chance correspondence increases, and a distinctive word should not be of very common occurrence, or should be used in a structure, meaning, or combination which decreases the commonness of the phenomenon.

Once we have eliminated the more common words, there is still some possibility of chance correspondence when the passages under comparison are of extended length. For instance, consider the six lines of *Ars* 2. 657–62:

nominibus mollire licet mala: “fusca” uocetur,
 nigrior Illyrica cui pice sanguis erit;
 si paeta est, “Veneri similis”; si raua, “Mineruae”;
 sit “gracilis,” macie quae male uiua sua est;
 dic “habilem,” quaecumque breuis, quae turgida, “plenam”;
 et lateat uitium proximitate boni.

These six lines contain forty words, more than half of which (as I indicated above, n. 9) find some sort of correspondence within the fourteen lines of *Rem.* 315–28. Even though there are fourteen lines within which the correspondences occur (and so the chance of accident is greater than if half the words of six lines were found within six lines of a similar passage), it should be obvious that it is vastly improbable for such a high proportion of words of a single six-line passage to be represented among fourteen lines of another passage unless some factor other than chance were at work. Once chance is eliminated, and other factors such as common authorship²⁸ or shared topic²⁹ are found to be inad-

28. In a sense common authorship is already factored out as an explanation when statistics for relative frequency of occurrences of words are drawn from the text of the author himself: if the author tended to join the given words together, they would be found so joined in unrelated passages elsewhere in the author's works. It is also factored out by the demonstration that some of the shared diction entered the first passage through imitation of an earlier treatment of the same or similar topic by a different author: one of the acts of using the earlier author's diction must have a temporal priority over the other, and the use of that diction cannot be explained as arising independently in the later author without denying that the later author has been influenced by the earlier author.

29. See my discussion above of the differences manifested among Plato, Lucretius, and Horace, even when they shared a genetic relationship. As I have mentioned above, shared topic is itself a reason for

quate to explain the quantity of resemblance, a genetic relationship (imitation or reminiscence) becomes the most likely explanation.

If we eliminate in *Ars* 2. 657–62 those words which would clearly be considered distinctive only if joined in close conjunction with other, more distinctive words (*cui, erit, si, est, si, sit, quae, male, sua, est, quae, et*), we are left with 28 potentially distinctive words, each found the indicated number of times among the 3,144 lines of the *Ars* and the *Rem.* combined: *nomen* (38), *mollire* (4), *licet* (29), nominal use of *malum* (10), *fuscus* (3), *uocare* (12), *niger* (8), *Illyricus* (1), *pix* (1), *sanguis* (9), *paetus* (1), *Venus* (54), *similis* (6), *rauis* (1), *Minerua* (1), *gracilis* (3), *macies* (3), *uiuus* (3), *dicere* (95), *habilis* (1), *quaecumque* (5 of that form in any gender and case), *brevis* (11), *turgidus* (2), *plenus* (16), *latere* (18), *uitium* (18), *proximitas* (1), nominal use of *bonum* (6). I include *quaecumque* since, although it is part of the "glue," it is a relatively uncommon form. Many of the other words occur in the *Ars* or the *Rem.* only in the passages in question and so have even less likelihood of chance occurrence than the statistics above might indicate. In order to facilitate comparison with *Lucr.* and the *Rem.* we can expand the statistics for *uiuus* to include *uiuere* (10 occurrences, therefore 13 total of the stem) and for *proximitas* to include all examples of the synonymous stems *proxim-* and *uicin-* (17 total), still within the range of the other words in frequency of occurrence. On the other hand, *dicere* is too common a word to be distinctive unless it is joined in a close conjunction with another distinctive word, or unless we limited our search to the form *dic*; *Rem.* 317 "*quam mala*" *dicebam* "*nostrae sunt crura puellae*" does not qualify, and no significance should be seen in that use of *dicere*; there is no example of *dicere* within *Ars* 3. 261–80. If we leave out *dicere*, we have within 6 lines 27 potentially distinctive words, forms, or concepts, an average of 4.5 per line. If we suppose a similar number of such potentially distinctive elements in the average line of the poems, we might expect 14,148 such elements within the 3,144 lines of the *Ars* and the *Rem.*, 63 within any 14 lines taken at random. Since the elements defined above occur a total of 265 times in the poems, the chance that any one word in the poem would be any one of those elements (rather than a specific one) is about $265/14148$, or 1 in 53. Although it is prohibitively improbable that 12 elements in a given 14-line passage would correspond through chance alone (and we do find in *Rem.* 315–28 *uitium* twice, *brevis*, nominal *malum*, *uicina*, nominal *bonum*, *turgida*, *plena*, *fusca*, *nigra*, *uocetur*, *gracili*, *macies*), odds actually favor chance occurrence of at least 1 of the elements. The chance of occurrence of at least 1 element is about 7 in 10.³⁰ The chance of occurrence of more than 1 such element is about 1 in 3.³¹ The probability of occurrence of more than 2 elements is less than 1 in 8.³² Chances of correspondence drop drastically thereafter with the number of correspondences.

suspecting a relationship and thus is a poor basis on which to reject relationship as the cause of shared diction.

30. The event that "at least 1 of 63 elements will correspond" is the obverse of the event that "not 1 of 63 elements will correspond." Since the latter has about 3 chances in 10 of occurring (52/53 to the 63d power), the former has about 7 chances in 10 of occurring. The formula for the probability of a specific number of correspondences (x) among a given number of words (n) requires multiplying the number of possible combinations that will produce x results among n words (only one combination, that none of the words correspond, will produce no correspondence among 63 words) times the probability (p) of a successful result for each word (1/53) to the x power (x is here zero, and anything to the zero power is 1) times $(1 - p)^{n - x}$ (here 52/53 to the 63d power): the formula is an adaptation of that given in the article on probability by M. Hausner, *Encyclopedia Americana*, vol. 22 (Danbury, 1984), p. 631 (right column).

31. That more than one element would correspond is the obverse of the event that neither zero nor a single element will correspond. As I indicated above, the chance of the former is about 3 in 10, more precisely .30118. The chance of the latter by the formula given in the preceding note is $63 \times (1/53)^1 \times (52/53)^{62} = .365$. The chance that either zero or a single element would correspond is therefore about 2 in 3, and the chance that more than one element would correspond about 1 in 3.

32. Calculations get more complicated now. If we ignore the restrictions of meter (which would reduce the possibilities), there are 1,953 different ways in which 2 elements can be distributed among 63

The total number of correspondences therefore can indicate a close relationship between passages even while it may not be possible to be sure whether an individual word corresponds by chance or through imitation. To have evidence for the individual word we must either reduce even further the list of words which would qualify³³ or weigh other factors, especially whether the words in question occur not randomly in the passage, but in close connection with other corresponding words.

So we find that eleven or more shared elements (they would be more than eleven if we counted the word *si*) are grouped within less than three of the lines of *Rem.* 315–28. First, *Rem.* 323 (*et mala sunt uicina bonis*) shares four elements with *Ars* 2. 662 (*et lateat uitium proximitate boni*). The advice of *Ars* 2 is reversed in the *Rem.*, but two elements of diction are shared (*et* and *bonum*) and two of concept (*uitium* = *mala*; *proxim-* = *uicin-*). Although *mala* occurs elsewhere in *Ars* 2. 657–62, and *uitium* in *Rem.* 315–28, the conceptual relationships found in these two lines, because of the proximity of four shared elements and the similarity of sentiment, present a stronger case for relationship than the mere sharing of identical diction *uitium* and *mala* somewhere within the two passages. Second, *Rem.* 326–27 (*"turgida" si plena est, si fusca est, "nigra" uocetur; in gracili "macies"*) shares the collocation of *turgida* and *plena* with *Ars* 2. 661 (*turgida, "plenam"*), of *fusca, nigra, uocetur* with *Ars* 2. 657–58 (*"fusca" uocetur/nigrior*), and of *gracili, macies* with *Ars* 2. 660 (*"gracilis," macie*), all in similar structure, presenting precisely opposite advice. Such a concentration of shared elements must indicate a relationship, and the case that each of these words reflects that relationship is much stronger than if the words had been randomly distributed over the passage, in different structures and functions.

This leaves two words in *Rem.* 315–28 whose indebtedness to *Ars* 2. 657–62 is not assured by close proximity to other shared diction: 315 *uitiis* and 321 *breuis*. The first of these (*profuit adsidue uitiiis insistere amicae*) seems to owe its main inspiration not to *Ars* 2. 662 *uitium*, but to *Ars* 2. 657 *nominibus mollire licet mala*, of which *Rem.* 315 is a reversal. I conclude that the variation between *uitium* and *malum* is not important: both are common words for what they express. What is important is that the idea is expressed, and as part of a comparable judgment (the same judgment or its precise opposite). The second word, *breuis*, is also connected with *Ars* 2 by its presence in the same meaning for a comparable purpose (the opposite) within a passage whose indebtedness to *Ars* 2 is clearly established by the conjunctions of words in 323 and 326–27.³⁴ Further, the selection of *breuis* clearly distinguishes the Ovidian passages from all other passages which exemplify

possibilities. Therefore the probability of exactly 2 separate correspondences among 63 words is approximately $1,953 \times (1/53)^2 \times (52/53)^{61} \times 26/27 = .2094$. The factor 26/27 reflects the fact that repetition of the same word twice from the 27 in question would not count. Since the chances of correspondence in 0, 1, or 2 words total about .875, the chance of correspondence in more than 2 words is .125.

33. For instance, if we defined as "distinctive" only words which occurred no more than once every thousand lines, the list of distinctive words above from *Ars* 2. 657–62 would be reduced to 12, found a total of 23 times in the two poems; the recurrences from this list in *Rem.* 315–28 would be reduced to 3 (*fuscus, gracilis, turgidus*), and of further recurrence in *Ars* 3. 261–80 to 1 (*gracilis*). By the formula given above, the chance of finding at least 1 of the 12 words within a given passage of 14 lines would be less than 45 in 1,000; the chance of finding at least 2 would be less than 1 in 1,000; the chance of finding at least 3 (as we do in *Rem.* 315–28) would be less than 1 in 10,000.

34. I mentioned above that probability actually favored chance correspondence of 1 of the 27 words listed above within a given 14-line segment of Ovid. But the figure for probability was based on an assumption that chance was the only factor at work. Suppose that it is conceded that, of the 12 words from those 27 for which a correspondence is found in *Rem.* 315–28, all but *breuis* reflect the influence of *Ars* 2. 657–62. What is the probability that 1 of the remaining 16 would occur in *Rem.* 315–28 by chance? By the formula given above, not 7 in 10, but less than 3 in 10 (more precisely, .284). In short, once a large number of correspondences have been shown not to reflect chance, the probability that any further correspondence reflects chance is sharply reduced.

the same general topos: all the Ovidian passages are linked by the shared use of *brevis* as a pejorative term for someone who is too small;³⁵ Plato makes no mention of the deficiency at all, and Lucretius and Horace, when they do, use different diction, *paruula* and *male paruus*. The use of *brevis*, therefore, truly distinguishes Ovid from other users of the topos and entitles the word as used in *Rem.* 321 to be called "distinctive."

With the above in mind, we can turn to the correspondences shared by *Ars* 3. 261–80 with *Rem.* 315–40. In my previous discussion, I omitted from the list of nine shared elements three elements of diction which probably do qualify as shared distinctive elements, but for which the case is not as clear as for the other nine. *Ars* 3. 271–72 *pes malus in niuea semper celetur aluta, / arida nec uinclis crura resolue suis* is not so close in meaning and structure to *Rem.* 317 "*quam mala*" *dicebam* "*nostrae sunt crura puellae*" that we would have to find a relationship between the two if there were not other similarities between the larger passages in which the lines are found. But once all the other resemblances are taken into account, the conjunction of both adjectival *malus* and *crura* within the same couplet is unlikely to be owed to chance. The case would be uncertain for a close relation with *Hor. Serm.* 1. 3. 47–48 *hunc uarum discinctis cruribus, illum / balbutit scaurum prauis fulum male talis*, where the form *cruribus* differs from *crura*, *male* is adverbial (a usage far more common in the poets than the adjectival *malus*), and the surrounding lines lack other distinctive resemblances, with the possible exception of *Serm.* 1. 3. 43–44 *amici / si quod sit uitium non fastidire*, whose resemblance to *Rem.* 315 *profruit adsidue uitii insistere amicae* might be used to argue that the passage of the *Rem.* was influenced by Horace as well as by *Ars* 2. But here the shared topic (a given because the passages are remotely related through ultimate descent from Lucretius) would increase the chance of coincidence.

Again, the *pleno* of *Ars* 3. 267–68 *quae nimium gracilis, pleno uelamina filo / sumat* probably is owed to *Rem.* 327–28 "*turgida*," *si plena est . . . / in gracili macies crimen habere potest*. Though the sense and construction of *plenus* are now changed,³⁶ two other elements suffice to link these lines: the shared contexts—not only the general context concerning physical blemishes, but the specific context concerning fatness and thinness; and inclusion within the same couplet of the word *gracilis*.

Whether a word qualifies as distinctive also varies with the purposes for which the word is being used, whether to establish that some sort of genetic link exists between passages, or to make a fine distinction about the ordering of passages whose general relationship is already established. In the latter use, it is necessary that the word actually serve to distinguish related passages, as I indicated above that *brevis* distinguishes the Ovidian versions from the pre-Ovidian. So we can observe that not all treatments of the subject of female blemishes, not even all those that mention breasts, use the words *pectus* and *fascia*: Lucretius uses *tumida et mammosa*, while *Ars* 2 stops at *turgida*; therefore when the *Rem.* and *Ars* 3 share the words within the same sentences amid passages already linked by

35. There is another related occurrence in *Am.* 2. 4. 36, although *brevis* is there not used as an insult. It is beyond the scope of this paper to explore the relationship of *Am.* 2. 4 to *Ars* 2. 657–62—a complicated question, since the status of the *Am.* as a collection of early poems potentially revised after the composition of *Ars* 1–2 makes it possible for a poem in the collection to be simultaneously earlier and later than *Ars* 2.

36. The change of meaning and structure is not inconsistent with imitation by *Ars* 3 of either *Ars* 2 or the *Rem.* Words occurring in a passage under imitation frequently trigger in the imitator a completely different use of the word or stem. So, as I indicated above, *Lucr.* 4. 1163 *plenaque honoris* probably influenced the *plenam* of *Ars* 2. 661: though the meaning and structure differ, both uses present euphemistic names for an overweight *puella*. Again, Horace at *Serm.* 1. 3. 48 imitated Lucretius' *balba*, but not only changed the adjective to the verb *balbutit*, but attributed the lisping not to the boy (who would correspond to the *puella* in Lucretius), but to the father; yet it would be very strange if Horace's use of the relatively rare word *balbutit* were unconnected with the occurrence of *balba* in the passage of Lucretius which he appears to imitate.

other shared diction, they display a diction which truly "distinguishes" them from other treatments of the general topic.

We can now observe that the distinctive agreements of *Rem.* 315–40 and *Ars* 3. 261–80 are confined to six discrete units: (1) *Rem.* 315 *uitiis insistere amicae* > *Ars* 3. 263 *uitium corporis abde tui*; (2) *Rem.* 317 *mala . . . crura* > *Ars* 3. 271–72 *malus . . . crura*; (3) *Rem.* 321 *brevis est* > *Ars* 3. 263 *brevis es*; (4) *Rem.* 327–28 *plena . . . gracili* > *Ars* 3. 267 *gracilis pleno*; (5) *Rem.* 338 *fascia . . . pectus* > *Ars* 3. 274 *fascia pectus*; (6) *Rem.* 339 *si . . . dentata . . . rideat* > *Ars* 3. 279–80 *si . . . dens . . . ridendo*. The second and last three of these are distinctive by the sharing not merely of individual words (used in the last two in similar senses and structures, and in comparable functions), but of conjunctions of words. Unit 1 is made distinctive by occurrence within statements which are opposites of each other. Unit 3 presents the weakest case for a conjunction of words, *brevis est* and *brevis es*, a conjunction expressing opposites in reference (from the changed perspective of referring to the *puella* in the third person in the *Rem.* but the second in *Ars* 3), as *amicae* of *Rem.* 315 corresponds to (*corporis*) *tui* of *Ars* 3. 263; but the resemblance is distinctive at least in the sense that the shared *brevis* of *Ars* 2. 661 and *Rem.* 321 is distinctive.

If we consider the units separately, it is to my eye easiest to suppose that in the first unit the order of influence is *Ars* 2. 657 *nominibus mollire licet mala* > *Rem.* 355 *profuit adsidue uitiis insistere amicae* > *Ars* 3. 262 *uitium corporis abde tui*. *Insistere* is the opposite of *mollire*, both referring (though *insistere* is less clear in the reference) to the names given certain characteristics. But when *insistere* is reversed in *Ars* 3. 262, the concept is changed from concern with names to hiding the defects themselves. This produces a smoother transition than supposing that *mollire* of *Ars* 2 passed directly to *abde* of *Ars* 3, while an arrangement which makes the topic of the related passages pass from concern with names (*Ars* 2) to concern with appearance (*Ars* 3) back to concern with names (*Rem.*) is highly improbable; yet the *amicae* of *Rem.* 315 is the opposite (in reference) of the (*corporis*) *tui* of *Ars* 3. 262: if one of these lines arose by the reversal of the other, and if it is improbable that *Rem.* 315 reversed *Ars* 3. 262 (since this would present a progression from concern with names to concern with appearance back to concern with names),³⁷ probability favors the explanation that *Ars* 3. 262 arose through reversal of *Rem.* 315.

In the second unit, if *Rem.* 317 is influenced by Hor. *Serm.* 1. 3. 47–48,³⁸ this would support the probability that *Ars* 3. 271–72 is a reversal of *Rem.* 317 rather than vice versa; otherwise either could have influenced the other; but neither could have been influenced by *Ars* 2, which has nothing comparable.

In the third unit, *Ars* 3. 263 *brevis es* can easily be understood as a reversal (in reference) of *Rem.* 321 *brevis est*, but this is not the only construction which can be placed on the relationship considered singly. In the fourth unit, *plena* and *gracilis* are used in both *Ars* 2 and the *Rem.* with reference to names, and in precisely the same senses; in *Ars* 3. 267 the play on the opposition of name and reality is missing, and *pleno* (now modifying *filo*) has a different sense and structure. Again, as with the first unit, an order *Ars* 2 > *Rem.* > *Ars* 3 presents an easy transition, while an order *Ars* 2 > *Ars* 3 > *Rem.* is most improbable. The third possibility, that both are independently influenced by *Ars* 2, is also improbable. If we look only at the unit, a supposition that the *Rem.* and *Ars* 3 are here

37. The improbability would be increased if we take *Rem.* 315 to have arisen by conflation of *Ars* 2. 657 with Hor. *Serm.* 1. 3. 43–44, since this would present a progression *amici* to *amicae* to *corporis tui*. But as I have indicated above, the identification of influence of Horace is insecure.

38. As I have indicated above, this is an insecure identification, but it has greater strength than a supposition that *Ars* 3. 271–72 is so influenced, since there are two nearby lines of the *Rem.* (this and 315) which have possible affinities with the passage of Horace, and since both Horace and the *Rem.* (but not *Ars* 3) are concerned with the opposition of names and reality.

independently influenced by *Ars* 2 has to deal with the improbability that an independent imitation (*Ars* 3) would select from a common source two words, and only the same two words, selected by another independent imitation (*Rem.*), and ignore all words which the second passage ignored. If we look beyond this unit, we find that units 2, 5, and 6 cannot be explained as resulting from independent imitation by *Ars* 3 and the *Rem.* of *Ars* 2 (since there is nothing comparable in *Ars* 2) and that this explanation would be improbable for units 1 and 4. The only explanation which will satisfactorily explain resemblances between the *Rem.* and *Ars* 3 in all six units, and the most likely explanation for some of the units considered singly, is an ordering *Ars* 2 > *Rem.* > *Ars* 3. The principle followed is that when a single, simple explanation is available which will explain all of the data, that explanation should be preferred to a series of different and complex explanations.

Ars 2. 657–62 can itself be divided into fourteen units or subunits: (1) *nominibus mollire licet mala*; (2a) *fusca uocetur*; (2b) *nigrior . . . erit*; (3a) *si paeta est*; (3b) *Veneri similis*; (4a) *si raua*; (4b) *Mineruae*; (5a) *sit gracilis*; (5b) *macie . . . male uiua . . . est*; (6a) *dic habilem*; (6b) *quaecumque breuis*; (7a) *quae turgida*; (7b) *plenam*; (8) *et lateat uitium proximitate boni*. Of these, the *Rem.* has correspondences to a total of nine: 1, 2a, 2b, 5a, 5b, 6b, 7a, 7b, 8. *Ars* 3 has no correspondence to any of the five subunits to which the *Rem.* lacks correspondence (3a, 3b, 4a, 4b, 6a), nor to four subunits to which the *Rem.* corresponds (2a, 2b, 5b, 7a), or to the sentiment of unit 8 (the *puella* is told to hide her faults, but not *proximitate boni*). *Ars* 3 does have correspondences to 1 (but in a way which suggests the mediation of *Rem.* 315), 5a and 7b (now grouped together), and 6b. It is obvious that *Rem.* 315–28 is influenced by *Ars* 2. 657–62, since only that relationship explains all the correspondences between the two passages. What are the chances that *Ars* 3 is independently influenced by *Ars* 2. 657–62? Note that *Ars* 3 shares close to half of the units which the *Rem.* shares with *Ars* 2 (4 out of 9), while sharing no unit with *Ars* 2 which the *Rem.* omits. If *Ars* 3 were completely independent of the *Rem.* in imitating *Ars* 2. 657–62, we should expect it to share with that passage about half of the units (2 out of 5) which the *Rem.* ignored. Our protection against a combination of independent descent (or chance correspondence) and contamination as an explanation is the improbability that an independent imitation (or a passage which bore similarities to another passage by sheer chance) would be so selective that its resemblances would be confined to units shared with a third passage.

If we direct attention not to units, but to separate words, there is one word among the 27 defined above as potentially distinctive in *Ars* 2. 657–62 which recurs in *Ars* 3. 261–80 but not *Rem.* 315–28. *Rem.* 315–28 has correspondences to 12 of the 27, while *Ars* 3. 261–80, or, more narrowly, *Ars* 3. 261–70, has correspondences to 5, all but *latere* shared with the *Rem.* If *Ars* 3 were completely independent of the *Rem.* in imitating *Ars* 2, we should expect as high a proportion of words which it shares with *Ars* 2 to correspond to the 15 words which the *Rem.* lacks as to the 12 which the *Rem.* shares: as *Ars* 3. 261–70 shares 4 of the 12 potentially distinctive elements which *Rem.* 315–28 shares with *Ars* 2. 657–62, it should be expected, if independent of the *Rem.* (or if random chance could produce so much correspondence), to share about 5 of the 15 which *Rem.* 315–28 lacks. It is conceivable that if the *Rem.* was influenced by both *Ars* 2 and *Ars* 3, reinforcement might ensure that words found in both passages would be more likely to be adopted by the *Rem.* (though such a supposition is not supported by the many agreements of the *Rem.* with *Ars* 2 but not *Ars* 3 and with *Ars* 3 but not *Ars* 2). We must therefore consider whether the occurrence of *lateant* in *Ars* 3. 265–66 *hic quoque, ne possit fieri mensura cubantis, / iniecta lateant fac tibi ueste pedes* presents a case for direct influence of *Ars* 2. 662 *et lateat uitium proximitate boni*. The sentiments in which the words occur are completely different ("feet" are not a *uitium*, but the hiding of the feet is the means of concealing the true *uitium*, height), and so are the collocations (at least within the same couplet). As I indicated above, chance favors the random occurrence of one (or more) of

27 such words within an extended passage (or 23, if we exclude the 4 words which we claim to be owed not entirely to chance, but to the mediation of the *Rem.*). Further, the theme of *Ars* 3. 261–80 is that blemishes should be hidden; starting with 261 we have 5 separate jussive words for “hide”: *occule*, (262) *abde*, (266) *lateant*, (271) *celetur*, (284) *tegant*. *Lateant* did not arise under the influence of an outside passage, but as part of a *variatio* for the initial words for “hide.” In this context, with a high proportion of available words for “hide” employed, there was a high probability that a jussive form of *latere* would occur, and the mere presence of the word, without close conjunction with other shared elements, presents no case for independent imitation of *Ars* 2. 657–62 by *Ars* 3. 261–80. The mere occurrence of the theme “hide” in *Ars* 3. 261–80 is no more a resumption of the same theme in *Ars* 2. 657–62 than a reversal of the theme “expose” of *Rem.* 315–40.

To sum up, the case for the influence of the *Remedia* on *Ars* 3 is a combination of the following: (1) arguments that the *Remedia* as a whole must be later than *Ars* 3 are inadequate, and the address of the advice to the needs of men alone presents a *prima facie* case that the earliest elements in the *Remedia* were composed before the *Ars* was designed to end with advice to women; (2) *Amores* 3. 4. 11 was clearly influenced by *Remedia* 133, and so, since *Ars* 3 refers to the three-book edition of the *Amores*, the completed *Ars* 3 must postdate the earliest parts of the *Remedia*; (3) an order of influence *Ars* 2. 657–62 > *Remedia* 315–40 > *Ars* 3. 261–80 provides the simplest explanation of the patterns of agreement among these passages; all other explanations are improbable.³⁹

*University of California,
Berkeley*

39. A briefer version of the first part of this paper was presented at the meeting of the American Philological Association in December of 1984. I am grateful to the John Simon Guggenheim Memorial Foundation, whose Fellowship Grant made possible the leave to work on the initial stages of this research.