

ESCORIAL MS. O III 2 AND RELATED MANUSCRIPTS OF SENECA'S *NATURAL QUESTIONS*¹

I

The contents of Escorial O III 2 (thirteenth century), which will be called R,² are as follows:³

- 1 Seneca, *Natural Questions* (fos. 6-72; fos. 1-5 are blank).
- 2 Adelard of Bath, *Natural Questions* (fos. 72-88).
- 3 Falconia Proba, *Virgilian Cento* (fos. 88-97^v).
- 4 Miscellaneous Latin poems (fos. 97^v-102^v).
- 5 Hildebert, *De dissentione exterioris et interioris hominis* etc. (fos. 103-10).⁴
- 6 Simon Aurea Capra, *De excidio Troiae* (fos. 110-14^v).⁵
- 7 Seneca, *De Beneficiis* (fos. 115-85).
- 8 Seneca, *De Clementia* (fos. 185-97).
- 9 (in a fifteenth-century hand) *De IX poenis inferni* (fo. 197^v).
- 10 (in a fifteenth-century hand) a minnelied (fo. 198^v).⁶

Löwe and von Hartel (loc. cit. in n. 3) have drawn attention to the striking similarity between R's contents and those of a lost manuscript bequeathed by Philippe d' Harcourt (bishop of Bayeux, 1142-64) to the library at Bec. This manuscript is described in a twelfth-century catalogue as follows:⁷ 'in alio Seneca de naturalibus questionibus et Adelermus Batensis [Adhelardus Bathonensis Becker], Proba vates, Aurea Capra, et liber Hildeberti Turonensis archiepiscopi de dissensione interioris et exterioris hominis, et sermones eius et uita ipsius.' The fact that five of the items in the Bec MS., some of which are quite rare, also occur in R, makes it extremely likely that R is a close relative, maybe even a direct descendant, of the Bec MS. Gercke has gone further, and argued that P (Paris lat. 6628, twelfth century) also derives from the Bec MS., because P too

¹ This article is based on parts of chapters 2 and 3 of my Oxford D. Phil. Thesis, 'An Edition with Commentary of Seneca Natural Questions Book Two' (1976). I am grateful to Mr. D. A. Russell, Mr. L. D. Reynolds, and Dr. R. W. Hunt for all their help and advice, and to my examiners, Professor A. A. Long and Dr. M. Winterbottom, for their comments and criticisms. Of course none of them is responsible for errors which remain. I also have to thank all the Librarians who so obligingly allowed me to consult their manuscripts or provided me with microfilm of them.

² 'R' was at first used by A. Gercke, *Studia Annaeana* (Greifswald, 1900), pp. 21 ff., to denote Geneva lat. 77 (12th cent.), but since then the Geneva MS. has been known as Z.

³ For fuller descriptions see: G. Löwe and W. von Hartel, *SB Wien*, Phil.-hist. Cl. 111 (1885), 512-13; G. Antolín, *Catálogo de los códices latinos de la Real Biblioteca del Escorial*, 3 (Madrid, 1913), 225-7.

⁴ The *De dissentione* etc., is in PL 171, cols. 989 ff., under the title *Liber de querimonia et conflictu carnis et spiritus seu animae*. In R this is followed by one or more poems of Hildebert, for the *explicit* ('Angelus exultat homo gaudet tartara merent') given by Löwe-von Hartel and Antolín as though it comes from the *De dissentione* is in fact the last line of Hildebert *carm. min.* 40 (ed. A. B. Scott); I am grateful to Mr. A. B. E. Hood for helping me to track this down.

⁵ R has the shorter version; see A. Boutemy, *Le Moyen Âge* 52 (1946), 243-56.

⁶ Text in Löwe-von Hartel, op. cit., p. 513.

⁷ Text in G. Becker, *Catalogi Bibliothecarum Antiqui* (Bonn, 1885), p. 202; *Catalogue général des manuscrits des bibliothèques publiques de France: Départements*, Octavo series, Vol. 2 (Paris, 1888), p. 398 (ed. H. Omont).

combines the *Natural Questions* of both Seneca and Adelard.⁸ Hence he inferred that in the text of Seneca's *Natural Questions* R, like P, derives from ρ , the common ancestor (according to Gercke) of PST.⁹ But neither Gercke nor anybody else has yet tested this inference by examining R's text; all that has been done is to note the titles of the individual books of the *Natural Questions* in R.¹⁰ I have collated all of R's text, using microfilm.¹¹

R has the eight books of the *Natural Questions* in the *Grandinem* order, i.e. IVb–VII, I–IVa.¹² Upon inspection its text proves to be composite, falling into five distinct sections, derived from three different sources, as illustrated in the diagram on p. 311. The sections are arranged symmetrically, 'onion-fashioned', that is, the first and fifth sections derive from one source, the second and fourth sections from a second source, and the central section from a third source. These three sources will be dealt with in turn.

(a) *The ρ -sections of R*

From IVb.3.1 to VII.15.2, and from III.pr.18 to IVa.2.30 (the first and fifth sections, which will be called R_ρ), R shares numerous significant errors with P. To illustrate this, here are the omissions unique to PR:

III.16.2 *sunt*; 17.3 *piscem* (post *garo*); 20.1 *est* (post *prima*); 25.7 *quae*; 26.8 *illa*; 28.6 *aestus* (post *solet*); 28.7 *desuper*; 29.5 *erit*; 30.4 *ora*; IVa.pr.19 *a me*; *non in hoc*; 2.5 *ex* (post *non*); 2.9 *fluminis*; 2.10 *ac iungit*; 2.12 *aestimari*; 2.18 *est* (post *calidissimus*); VI.7.5 *illos*; 8.2 *non* (post *paulatim*); 17.2 *suum*; 18.1 *impellitur*; 22.3 *cutem* (*glutem* Badstuebner); 23.3 *exempla*; 27.3 *nihil*; 28.2 *aera*; 29.1 *metus*; 31.2 *uiam*; 32.6 *expectat*; VII.8.2 *uagus*; 14.3 *potest dici*.

There happen to be no omissions of PR in Books IVb and V, but in Book IVb they share significant errors of other kinds, e.g.:

IVb.3.3 *omne*] *esse*; 5.4 *frangente*] *fungente*; 11.3 *sibi*] *ibi* add.; 13.7 *muniant*] *minuatur*; 13.9 *officinas*] *officia*.

In Book V the relationship is obscured, but only slightly, by corrections in P, which occur throughout P, but with greater frequency in the early books, IVb and V (for P has the *Grandinem* order). These corrections are perhaps by the original hand, but more likely by a second contemporary hand, or there may be some of each kind. In Book V the following words or phrases are omitted by R

⁸ A. Gercke, *Seneca-Studien*, *Jahrb. f. class. Phil.*, Suppl. 22.1 (Leipzig, 1895; repr. Hildesheim, 1971), p. 37; id., *Studia Annaeana*, p. 20; id., *L. Annaei Senecae Naturalium Quaestionum Libri VIII. Edidit Alfred Gercke* (Bibliotheca Teubneriana, Leipzig, 1907; repr. Stuttgart, 1970), p. xxxv.

⁹ On the true relationship of ST to P, see pp. 307–10 below.

¹⁰ See G. Müller, *De L. Annaei Senecae quaestionibus naturalibus* (Diss. Bonn, 1886), pp. 12–13; Gercke, *Seneca-Studien*, pp. 37, 40–1, 49.

¹¹ I have also collated the whole of ADFGHPSTUVWZ, parts of E, and all or parts of certain other manuscripts. FW have been collated from the manuscripts them-

selves, the remainder from microfilm. I have been unable to obtain microfilm of B, so for its readings I am reliant on the reports of Fickert, Gercke, and Oltramare; and for λ I generally rely on Gercke. My sigla are the same as those of the editions of Gercke and Oltramare, with the following additions: D = Dublin, Trinity College 514 (13th cent.); W = Venice, Biblioteca Marciana, Lat. Z.268 (1548) (14th cent.).

¹² I follow P. Oltramare in his edition (*Sénèque, Questions naturelles* (Budé edn., Paris, 1929; repr. 1961), pp. xii ff.), in calling this the *Grandinem* book order, after the first word of Book IVb. The order of our editions (I–IVa, IVb–VII) I call the traditional order.

and the first hand of P, but are added in the margin or between the lines by the corrector of P:

V.3.3 *ortu suo*; 5.1 *-que* (post *uerior*¹³); 18.12 *scio* (ante *bic*).

And the following errors, among others, are found in the first hand of P and in R, but are corrected in P:

V.11.1 *incitari*] *recitari*; 13.1 *cur*] *cum*; 15.4 *ulli*] *illi*; 18.16 *cum*] *et*.

So in Book V the uncorrected P has the same relationship to R as it does in the rest of R_ρ.¹⁴

All these errors are conjunctive errors of PR, and so separative errors of their common ancestor, which I shall call *ρ*, because it is similar to Gercke's '*ρ*'; but it differs in certain important respects, as will appear later (pp. 307-10). P must be a fairly accurate copy of *ρ*, possibly a direct copy, for although there are a fair number of errors in P from which R is free, most of them are slight, e.g.:

III.11.4 *fluminum*] *fulm-*; 11.5 *desertissimis*] *disertissimum*; 12.1 *altius*] *alterius*; *flumen*] *fulm-*.

Significant separative errors of P against R are few, e.g.:

IVa.1.2 *suam* om.; IVb.8 *terris* om.; VI.8.3 *ex* om.; VII.13.2 *bis* om.

Frequently R's reading is evidently derived from an error found in P, e.g.:

III.11.3 *siluas*] *silcias* P: *sicilias* R; 15.8 *ieicit*] *erecit* P: *erexit* R; 18.5 *uenas*] *uinas* P: *uineas* R; 20.2 *nitro an*] *inter an* P: *in terram* R.

One ought to consider the possibility that R is not a twin of P, but rather a contaminated descendant; especially since in the case of a composite text like R's, which draws on two sources besides *ρ*, there was ample opportunity for contamination. In fact R_ρ is probably not contaminated, or if there was contamination, it must have been extremely slight, for there are still hundreds of errors shared by PR¹⁵ which have eluded the contaminator; and if R_ρ were contaminated from either or both of the sources of the other sections of R (R_a and R_f), one would then expect to find significant agreements between R_ρ and *δ* or Z or both, but as it happens such agreements are not found.¹⁶ In the nature of things one cannot give clinching arguments for R_ρ not being contaminated, but the case for its sincerity is strong.

(b) *The a-sections of R*

Before discussing the second and fourth sections of R, which are related to *δ*, I need to say something about *δ* itself, for there remains some confusion about the relationships of the manuscripts in this group. I use '*δ*' not as Gercke uses '*δ*' or '*Δ*', but to denote the consensus of ABV.¹⁷ These are the only three *δ* manu-

¹³ The scribe of R omitted *uerior* at first, but then inserted it in the margin.

¹⁴ I have excluded from the above evidence those errors of PR which are also in STX, contaminated relatives of R (see below, pp. 307-10). If such errors are included, the evidence of R's relationship to P becomes clearer: e.g. PR and t (as defined on p. 307 below) share the following transpositions in Book V: 4.2 *exonerat cum sono*; 10.2 *et niues ponuntur* (*ponuntur et niues* P²); 16.2 *potest modo*.

¹⁵ PR agree in error over 300 times, if

errors also found in STX are included; and there are also numerous errors shared by R with STX which must have eluded the supposed contaminator.

¹⁶ The conclusions of the examination of the other sections of R must necessarily be anticipated here. The comparison with STX, relatives of R which are contaminated, is instructive (cf. pp. 303, 307-10 below).

¹⁷ A = Leiden Voss. lat. 0.55 (12th cent.); B = Bamberg IV.16 (12th cent.); V = Vatican Pal. lat. 1579 (12th cent.).

scripts used by Oltramare in his Budé edition, but he does not adequately state his reasons for selecting them,¹⁸ so some reasons will be given here.

The conjunctive errors of ABV are legion, as a glance at Oltramare's apparatus will reveal. For instance, all three share the same large lacuna from III.25.6 *efferantur* to the end of Book IVa. As a sample of their other errors here are a few transpositions:

I.pr.13 *extra et intra*; 1.6 *mediocriter collisae*; 2.4 *potest fieri*; 2.11 *sidera cetera*; 3.6 *imaginem unam*; II.1.4 *uidebitur mirum*; 3.2 *manus ossa nerui oculus*; III.7.2 *postest imber suggerere*; 7.4 *aqua pluuiialis*; VI.20.3 *tellus madefacta*; VII.2.3 *statu rerum*.

Such errors are also separative errors of their common ancestor, δ . A, B, and V derive independently from δ , for AB, AV, and BV agree in significant error with roughly equal frequency. For example, in the first twenty chapters of Book II, and in Book IVb, one finds the following:

ERRORS OF AB. II.2.4 *mibi refer*] inu. ord.; 12.5 *conglobatusque*] *con-* om.; 16 *late ignis*] inu. ord.; 20.2 *paucas*] -os; IVb.3.1 *aliquam*] *quamque*; 7.1 *quaerunt*] *quaeritur*.

ERRORS OF AV. II.3.1 *aut*] *uel*; 6.1 *ibi*] *sibi*; 11.1 *ac turbidus est*] *est ac turbidus*; 12.4 *fulmina tonitrua*] *tonitrua et fulmina*; 14.2 *etiam* om.; IVb. 3.6 *debet*] -eret; 5.4 -que (post *umidum*) om.; 6.3 *tu* om.; 11.3 *montes*] *sunt* add.; 11.4 *cogitauerit tenere*] inu. ord.; 13.2 *inspectionem*] -tationem; 13.11 *calore*] *col-*.

ERRORS OF BV. II.10.1 *est* (post *diffusus*) om.; 12.3 *illum aliunde*] *illum a lumine* AW: *a lumine illum* BV; 13.2 *cadere leuitas*] inu. ord.; IVb.4.3 *pluuias habet*] inu. ord.; 5.4 *frangente se*] inu. ord.; 7.2 *illam*] *eam*; 8 *quattuor*] *tribus*; *feruidi aridique*] *aridi feruidique*.

These samples are typical of ABV's behaviour throughout.

There are many discrepancies between the three manuscripts which are best explained on the hypothesis of marginal or interlinear corrections, conjectures, variants, and glosses in δ . Consider, for instance, the following passages from Book II:

II.8 *aliquid per semet*] *aliquid per semet ipsum* B: *per semet ipsum aliquid* A: *per semet ipsum* (*aliquid* om.) V; *tecta murosque magnas cum populis urbes*] *tecta murosque et magnas cum populis plures urbes* A: *tecta murosque et magnas cum populis urbes* B: *tecta murosque plures et magnas cum populis urbes* V; 10.4 *flagrant semper*] *flagrant et obscuro semper* AV: *flagrant semper et obscuro* B.

The variants would appear to result from *aliquid*, *et plures*, and *et obscuro* respectively being in the margin or between the lines of δ . This hypothesis is confirmed by the presence of variants and corrections in A and V which must derive from δ , e.g.:

I.3.6 *determinatus* A¹B rel., V u(aria) 1(ectio): *circumscriptus* V¹, A u.1.; III.pr.17 *uerso* BV¹ rel.: *uiso* A, V u.1.; IVb.13.7 *sensum* V rel., A u.1.: *animum* A¹B; V.15.1 *ingentia* A¹B rel.: *uehementia* V, A u.1.; VII.30.5 *aeui*] *aetas* BV¹, A u.1.: *era* A¹, V u.1.

¹⁸ He says merely (op. cit., p. xxx),
'J' ai collationné moi-même . . . A, B, V, qui
sont les meilleurs témoins de Δ .'

If the published collations of B can be relied upon, B rarely preserves variants from δ , but A and V do so fairly regularly. Quite often the true reading is only found as the original or variant reading in A, e.g.:

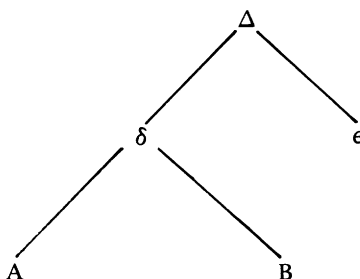
I.12.1 *competit* A¹ rel.: *contigit* BV, A u.l.; 13.1 *effigiem* A¹ rel.: *imaginem* BV, A u.l.; V.6 *et* (post *purgat*) A¹ rel.: *expunxit* A^C: om. BV; 18.6 *componit* A¹ rel.: *compellit* A^CBV; VI.1.3 *excutiamus* A¹ rel.: *discutiamus* A^CBV; 2.1 *quidem* (ante *sine*) A¹ rel.: *quod* A^CBV.

Occasionally the true reading is only found as a variant in V, e.g.:

VI.17.1 *abripit* V u.l., rel.: *abrumpit* ABV¹ E¹ R; 17.2 *inuenit* V u.l., rel.: *accipit* ABV¹

A preserves variants more often than B or V, and more often has the true reading where they have not, so it appears to be closest to δ , and possibly a direct copy.

Be that as it may, A, B, and V are three independent descendants of δ . Gercke, however, arrived at a rather different picture of this branch of the tradition, as in the following diagram:



ϵ is the reconstructed ancestor of numerous late Italian manuscripts. V does not appear because Gercke discovered it too late to make use of it, but he immediately detected its affinity to ϵ .¹⁹ His evidence for distinguishing ϵ from δ is essentially that AB share various errors of omission from which ϵ is free (cf. the list of seven lacunae in AB given by Gercke, *Seneca-Studien*, pp. 12–3). However, the true explanation of this is that ϵ originally had these errors, but its text has been contaminated. This is made quite clear with the help of V, for V and ϵ share unmistakable conjunctive errors,²⁰ and V has all the lacunae which Gercke thought separated AB from ϵ . Furthermore, there are clear signs of contamination in the text of ϵ itself, the clearest being at I.3.1–2:

haec inaequalitas . . . exprimit illam mirabilem arcus uarietatem. Altera causa arcus eiusmodi redditur: uidemus, cum fistula aliquo loco rupta est, aquam per tenue foramen elidi, quae sparsa contra solem oblique positum faciem arcus repraesentat.

Here ABV read just: *haec inaequalitas . . . exprimit illam mirabilem arcus repraesentationem*. What appears to have happened is that first of all a scribe jumped from the first *arcus* to the second, giving *exprimit illam mirabilem arcus repraesentat*;

¹⁹ Cf. Gercke's edition, pp. xxxi–xxxiii, xxxviii.

²⁰ e.g. the following transpositions: I.pr.2 *caliginem in qua uolutamur*; 3.7 *bebes et infirma est acies*; II.21.4 *Fulmen est quiddam plus quam fulguratio*. *Vertamus istud: ful-*

guratio est paene fulmen; IVb.3.1 *Grandinem hoc modo fieri quo apud nos fit glacies gelata nube tota si tibi affirmauero*; 7.1 *uim quandam potentem auertendae nubis ac repellendae esse in ipso sanguine*. For more detail see my thesis, pp. 108–14.

then *repraesentationem* was conjectured to restore some kind of sense. Now in ϵ there is no lacuna, but instead of *uarietatem* there is *repraesentationem*. The most plausible explanation is that ϵ 's is a text like ABV's which has been contaminated.²¹

The phantom of ϵ has lingered on. H. Geist,²² discovering that V had, if anything, greater similarity to AB than to ϵ , suggested that V derives from Gercke's δ , and ϵ is still a second branch of Δ . This view is proved inadequate by the conjunctive errors of V ϵ . L. Castiglioni²³ suggested, for no good reason, that AB and V might form two distinct branches of δ . Oltramare, however, wisely forgets ϵ , and uses only ABV; though his citations of them are incomplete and inaccurate, and he gives a misleading impression by reporting V more consistently than A or B.

Having examined δ , we may now return to R, which, from VII.15.2 to the end of Book VII, from the start of Book I to I.13.1, and from II.53.2 to III.pr.18 (the second and fourth sections, which will be called R_a), frequently agrees in significant error with δ . This proves that R δ must here derive from a common ancestor, which I call a . For example, here are a few of the errors of R δ , taken from passages close to the boundaries of R_a :

I.8.6 *repercuti*] *percuti*; 11.2 *eius* om.; 11.3 *reddat*] *-it*; 12.1 *eius* om.; II.53.3 *artium* om.; 55.1 *non* (ante *uniuersus*) om.; III.pr.10 *ista* om.; *maior nulla*] inu. ord.; pr.17 *sibi*] *se* add.; VII.15.2 *caeli* (post *longum*) om.; 17.2 *est* (post *ceterum non*) om.; *post* om.; 17.3 *sincera*] *sine causa*; *omen*] *crimen*.

These errors are characteristic of the whole of R_a .²⁴

Since R is of later date than A, B, and V, δ is of course independent of R_a . As for the possibility that R_a is derived from δ , there are many separate errors of δ against R_a , for example (the following come from the same sections of text as the conjunctive errors of R_δ in the list above):

I.12.2 *in* (ante *terris*)] *a*; 13.1 *a uero*] *uera*; II.53.3 *quam*] *quantum*; 54.1 *fumida*] *remanet* add.; 54.2 *aeque* om.; 54.3 *ualentissimum*] *uehementissimum*; 55.3 *fortuitamque*] *et fortuitam*; III.pr.12 *et gemere*] *ingemere*; pr.13 *sed infestus*] *sed et infestus*; pr.16 *Quiritium liberum*] *quiriti ut liber* A: *queri tibi ut liber sit* B: *quiriti ut sit liber* V; *assidua*] *seruitus* add.; pr.17 *est seruitus*] inu. ord.; *licet prima sit* om.; VII.16.2 *quae*] *queror*.

These are representative of the errors of δ which occur throughout the whole extent of R_a . Therefore R_a cannot be a straight descendant of δ , but either it is a contaminated descendant, or it is a twin of δ .

At I.3.1–2, discussed on pp. 300–1 above, R reads *exprimit illam mirabilem arcus repraesentat*, which was assumed to be the initial stage of δ 's corruption; so that assumption is confirmed by R. This is not the only place where R preserves the initial corruption, and δ has a conjecture based upon that corruption, for compare:

²¹ Gercke, to judge from his apparatus ad loc., took a different view of the course of the corruption in δ and ϵ : first *uarietatem* was altered to *repraesentationem* in Δ ; then a scribe jumped from *repraesentationem* to *repraesentat*, producing δ 's text. This view is implausible, for it gives no motive or explanation for the original alteration of *uarietatem*. The view taken above is confirmed by R's text; see below.

²² H. Geist, *De L. Annaei Senecae Naturalium quaestionum codicibus* (Diss. Erlangen, publ. Bamberg, 1914), pp. 25–7.

²³ L. Castiglioni, 'Contributo alla storia del testo delle Naturalium Quaestiones di Seneca', *AFLC* 18 (1951), 81–102; his suggestion is on p. 87, n. 2.

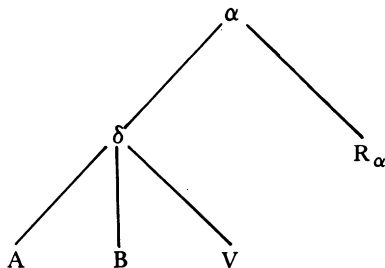
²⁴ Again I exclude errors also found in STX; cf. above, n. 14.

I.pr.13 *ferat uentus*] *uentus* R: *uentus impleuit* AV: *impleat uentus* B; 3.6 *insertis parietibus*] *insertis* R: *in plures* δ ; 8.6 *minus habet uirium*] *minus* R: *minus calidus est et* AV: *minus est calidus* B; 13.1 *in illis alteram solis imaginem esse alteram imaginis*] *in illis alteram imaginem* R: *unum esse solis alterum imaginis* δ .

In each place R omits a word or phrase, thus destroying the sense, and δ 's text can at once be recognized as a conjectural attempt to remedy the same omission. A similar process, involving not omissions but other errors, can be seen at work, for example, at:

I.pr.17 *mensus deum*] *mensus deinde* R: *sed haec deinde* δ ; VII.21.1 *circa septentrionem*] *creari septemtrione* R: *in* (om. A¹) *septemtrione* A^CV: *ex septemtrione* B.

In such passages R cannot be derived from δ , nor can it be a derivative of δ contaminated from elsewhere, for in that case we should expect it to have the correct text. R and δ must therefore have a common ancestor, α , which R generally represents more sincerely than δ does. The relationship may be depicted thus:²⁵



It has been shown above that δ contained marginal and interlinear variants and so on. Some at least of these were in α , for there are places where R sides with variants in A, B, or V; for example:

I.pr.1 *banc* V, A u.l., rell.: *illam* RA¹B; pr.6 *perdens*] *ardens* RA¹B¹: *amittens* V, A u.l.: *spargens* B²; 2.7 *densus* V, A u.l., rell.: *depressus* RA¹B; VII.27.3 *illum* AB, V u.l., rell.: *ipsum* RV¹.

Furthermore, R often agrees with one or two of ABV, e.g. (to take a few examples from Book VII):

VII.17.2 *cursus sui*] inu. ord. RA; 17.3 *loco propiore*] inu. ord. (*priore* R) RAB; 19.1 *imaginem*] *image* A: *imaginale* RBV; 19.2 *nomen*] *nomina* RAB; 20.1 *ignium concipi*] inu. ord. RAB.

Variants and corrections in α provide the best explanation of such behaviour.

One must consider carefully whether R_α could be contaminated, since the composite nature of R means that at some stage there was good opportunity for contamination. In fact one can be confident of R_α 's sincerity, because it preserves so many gross errors from α , which a contaminator could scarcely have passed

²⁵ Of course there may well have been various lost intermediaries. One might consider the hypothesis of a fluid exemplar, i.e. that δ was not a copy of α , but was α itself, with corrections and conjectures added (after an ancestor of R_α was copied, presumably). Some of the errors of ABV are neatly

explained by this hypothesis, but the numerous transpositions found in ABV but not in R_α are only explained adequately on the assumption that δ was a copy of α . For examples of such transpositions cf. those from Book I in the list on p. 299.

over. Most strikingly, in the sections corresponding to R_a , δ has thirteen lacunae of more than a few words, mostly caused by homoeoteleuton.²⁶ All thirteen are also in R; by contrast, STX, close relatives of R which are contaminated (see below), preserve none of these lacunae. Furthermore, R_a has no significant agreements with Z, though we should expect them if R_a were contaminated from the source of R_β . There are, however, a number of agreements between R_a and P which deserve attention. The following list of them aims to be complete:²⁷

I.pr.16 *sit om.*; 1.7 *calentia quaedam* (post *quaedam*) *om.*; 6.6 *est* (post *nube*) *om.*; II.56.1 *pluraliter*] *plures* P: *plurimi* R; *Caecinam*] *cennam* P: *ceniam* R; 58.1 *iactatione*] *iactione* P: *actione* R; III.pr.1 *consequar*] *-or*; pr.16 *ac* (post *et per diem*)] *et per*; VII.25.7 *-que* (post *quales*) *om.*; 27.2 *quamuis similia . . . aeternos esse* (post *esse*) *om.*; 27.3 *est* (post *quid*) *om.* PR; 30.2 *creentur*] *-antur*; 30.6 *Eleusin*] *eleus* P: *eleusina* δ : *eleus eleusia* R.

Some of these are not true agreements, but only similar-looking errors, so they should be discounted; nor are the omissions caused by homoeoteleuton of significance, because they could have occurred independently in P and R. This leaves just over half a dozen agreements of PR, most of which are fairly trivial errors, but two of them do deserve attention. At VII.30.6 R's *eleus eleusia* looks very much like a corruption of δ 's *eleusina* with a variant *eleus* introduced from P or a related manuscript. That, however, is not the only possible explanation; for instance, *a* might have had the variants *eleus* and *eleusina*, of which δ selected the second, while R preserves both, with a slight corruption. The other deserving attention is III.pr.16, where PR have *et per* for *ac*; but, after *et per diem*, the error might have arisen independently in the two manuscripts;²⁸ and in any case this passage is very close to the boundary of R_a and R_ρ , where slight contamination is possible (see below, p.306). Since the many big errors of *a* which remain in R_a provide such weighty evidence against R_a 's being contaminated, it is best to regard these few coincidences of PR $_a$ as due to chance, rather than contamination.

Gercke (*Studia Annaeana*, p. 37) says of the descendants of δ , 'quot uero interpolatorum manus in his codicibus distinguendae sint, prorsus latet semperque latebit, nisi forte integrioribus illius classis codices in lucem protrahi erunt: tales enim desidero, non exspecto.' He had not examined R, but R_a provides just what he was seeking, for considerable portions of the *Natural Questions*.

(c) The ξ -section of R

Between I.13.2 and II.53.2 R shares numerous significant errors with Z (Geneva lat. 77, twelfth century), for example:

²⁶ The omissions are: I.1.6 *sic quanto . . . leuiora fulmina* (after *fulmina*); 2.9 *temperatum . . . intercisae est apparet* (after *apparet*); 3.1–2 *uarietatem. Altera . . . faciem arcus* (after *arcus*); 3.6 *specula sunt totidem* (after *totidem*); 5.2 *figura solis neque* (after *neque*); 5.8 *ortu solis . . . rubere uidemus* (after *uidemus*); 5.11 *ab eo a quo . . . quamuis non uideatur est* (after *uideatur*); *ita non est ergo et color* (after *ergo et color* (ergo color et AB)); 6.3 *conuenit colores . . . unum inter nos* (before *non conuenit*); II.55.3 *sed cum hoc fieret tonitrua facta sunt* (after

facta sunt); 59.3 *nos posse. Quemadmodum . . . contempta sunt*; VII.23.1 *nescio duo nostra aetate fecerunt* (after *fecerunt*); 25.2 *concentuni quendam . . . animae alius* (after *alius*).

²⁷ I ignore the fact that in a few cases PR's reading is found in one or two other manuscripts (not, of course, in A, B, or V); though cf. n. 28 below.

²⁸ *et per* is also in TX and in E; in the latter perhaps by chance coincidence, or perhaps because of contamination in E from a text like STX's; cf. my thesis, pp. 52–8.

(i) OMISSIONS. I.14.6 *id*; 16.7 *a* (ante *conspectu*); II.12.4 *et* (ante *in imbres*); 13.3 *de*; 26.2 *ut*; 43.1 *est* (post *placabile*).

(ii) OTHER ERRORS. I.14.1 *effossae*] *-a*; 15.3 *tacta*] *acta*; II.20.2 *quis autem*] *aut quis autem*; 28.2 *findit*] *fingit*; *sonet*] *solent*; 29 *item*] *idem*; 40.2 *ingressum*] *egressum* (*-a R*); 40.5 *nec* (ante *combustum*)] *non*; 43.2 *bi quicumque*] *inquit quicumque*; 45.2 *inoffensus*] *in offensis*.

These errors prove that RZ derive from a common ancestor, which will be called ζ.²⁹ (Accordingly this section of R is referred to as R_ζ.)

R_ζ cannot be a straight descendant of Z, for there are over seventy errors of Z (some of them minor) from which R_ζ is free, for instance:

(i) OMISSIONS. I.15.1 *ardor*; 15.8 fin. *corporum*; II.4.2 *ex*; 16 *ipso*; 28.1 *sed* (ante *palma*).

(ii) TRANSPOSITION. II.37.2 *admotae dis*] *addis motae*.

Such errors could not all have been emended away in R_ζ, but there remains the possibility that R_ζ is a descendant of Z from which such errors have been removed by contamination. This explanation is ruled out by the presence in R_ζ of at least one authentic reading which cannot have been derived from Z nor from any other surviving manuscript, at II.44.2:

Illos uero altissimos uiros error iste non tenuit, ut existimarent Iouem <modo grauioribus,> modo leuioribus fulminibus et lusoriis uti. Sed uoluerunt admonere eos quibus aduersus peccata hominum fulminandum est, non eodem modo omnia esse percutienda: quaedam stringi debere, quaedam tād elegi ac distit, quaedam admoneri.

stringi] *frangi* δ *quaedam ad elegi ac disti* R: om. Z: *quaedam eligi ac* (et δ: *ad F*) *distingui* (distringi E: *distñgi* P) *rell*.

Seneca is here offering an allegorical interpretation of the three grades of lightning (*manubiae*) with which the Etruscans said Jupiter was equipped. After the metaphorical *fulminandum* and *percutienda* applied to punishment, one might expect him to continue with language which is appropriate to lightning and to punishment alike. Certainly *stringi*, 'to be grazed', is applicable to a light thunderbolt or to a light punishment. (δ is so unreliable that its *frangi* cannot be trusted.) *Admoneri* here is unusual, because normally *admonere* only takes a personal object; strictly speaking, one cannot *admonere peccata*, which is what we have here, but only *admonere hominem*. But the abnormality is slight and understandable, in view of the requirements of brevity and of a construction parallel to that of the two preceding phrases.

Quaedam admoneri corresponds exactly to the description of the first *manubia* in II.41.1: 'Prima, ut aiunt, monet et placata est, et ipsius Iouis consilio mittitur.' And *quaedam stringi debere* must correspond to the second *manubia* of 41.1, which produces a mixture of good and harm: 'Secundam mittit quidem Iuppiter, sed ex consilii sententia; duodecim enim deos aduocat. Hoc fulmen boni aliquid aliquando facit, sed tunc quoque non aliter quam ut noceat; ne prodest quidem impune.' So the third and most dangerous of the *manubiae* as

²⁹ Oltramare, *RPhil* 45 (1921), 43-4, in another connection, uses ζ to denote an ancestor of Z.

described in 41.2 ought to be represented by the second phrase in 44.2.³⁰ In the only manuscript text hitherto known one reads basically *quaedam eligi ac distingui*, which is sound Latin, but quite irrelevant to the context. Numerous alterations of the two infinitives have been proposed: for *eligi*, *elici* (Schott), *elidi* (Curio), *allidi* (Gronovius), *effligi* (Leo); for *distingui*, *distringi* (E), *exstingui* (Schott), and *destringi* (Gronovius). Against most of these conjectures it can be said that either they do not describe violent action at all, or they are not appropriate to lightning, which is not noted for crushing, still less for stretching or pulling apart. *Destringi*, 'to be grazed', suits lightning, but it will not do beside *stringi*, with which it has to be contrasted. In fact I doubt whether any compound of *stringi* could follow the simple verb here: the collocation, whether deliberate or (implausibly) accidental, would be infelicitous. Of the conjectures the most promising is Leo's *effligi*, but even that proves dubious, for the verb has a limited range of uses (see *ThLL* or *OLD* s.v.), taking only animate objects, and meaning 'beat, cudgel' or 'kill (usually by beating or cudgelling)'.

These comments are intended to arouse suspicions about what is now the established text, *quaedam effligi ac distringi*, and about other conjectures based on *quaedam eligi ac distingui*. However, whereas Z omits the whole phrase, presumably because of the repetition of *quaedam*, R has *quaedam ad elegi ac disti*. This nonsense is more valuable than the quasi-sense offered by the other manuscripts, for R's reading is not a ready corruption of *quaedam eligi ac distingui*, whereas this could well be a feeble attempt to restore sense to something like R's reading. Starting from the latter, I propose *quaedam adfligi ac discuti*. *Adfligere* has a much wider usage than *effligere*, often meaning simply 'to destroy'. *Discutere* is used of the effect of lightning at *Natural Questions* II.40.1 and elsewhere (see *ThLL* 5.1.1372.62-5).

Even if this particular proposal is not accepted, so long as R's reading is recognized as a more sincere and reliable starting-point than *quaedam eligi ac distingui*, then R_z's independence of Z (which omits the phrase) is proved. Furthermore, the reading of the other manuscripts is a conjunctive error, indicating that they derive from a common ancestor.³¹

Thus far the affiliations of the various sections of R have been described. Next the problems of establishing the boundaries between the sections will be discussed in more detail. The two boundaries between R_p and R_a cannot be fixed with complete precision. Around the start of VII.15 the readings of RP and Rδ are as follows:

VII.14.4 *inuenirent* [-nerunt PR; *quia*] *quod* PRW: *eo quod* δ; 15.1 *exortus*] *ortus* RAV: *et ortus* B; *Demetrius*] *demetritus* P: *democritus* R; 15.2 *caeli* (post *longum*) om. Rδ.

Up to this point R has regularly agreed with P, and from this point it regularly agrees with δ (except for the agreements with P discussed above, p. 303).

³⁰ We might have expected the three *manubiae* to be in simple ascending or descending order at 44.2 (as at 41.1-2), but they are not. If this is thought unacceptable, one might conjecture that the three phrases, all beginning with *quaedam*, have somehow been transposed in the tradition. But the apparently anomalous order could have an ethical intention: Seneca (perhaps with half

an eye on Nero) may be deliberately playing down the use of severe punishment by sandwiching it between light punishment and mere warning; cf. his pointed exhortation (43.2) to take advice before punishing.

³¹ For a demonstration that the manuscripts other than ZR_z derive from a common ancestor (Ψ) see my thesis, pp. 70-81. This will be fully dealt with in another article.

The transition cannot be pinpointed, because R appears to align with δ (*ortus* RAV), then possibly align with P again (*demetrirus* P, *democritus* R); but one or other of these agreements might be a deceptive coincidence, or else there may have been a little contamination as a copyist moved from one exemplar to another.

The boundary is equally unclear near the start of III.1. The relevant readings are:

III.pr.12 *uolueris tibi*] inu. ord. R δ ; pr.16 *ac*] *et per* PR; pr.18 *est autem*] inu. ord. RAB; 1.2 *uarius*] *uarus* PR; *usus*] *uersus* PR.

Up to here R agrees with δ , henceforth with P. R appears to align with P at *et per* (discussed above, p. 303, but with *autem est* it again seems to align with δ . As before, one or other agreement could be coincidence, or there could be a little contamination at the boundary.

The boundaries between R α and R ξ can be fixed approximately by inspection of the readings (RZ first agree at I.14.1 *effossa*, and for the last time at II.53.2 *naturam suam* (*suam* om. *rell.*)); but they can also be pinpointed precisely, thanks to a copyist's error. In R's text after II.53.2 *adflata* there is a *signe de renvoi* indicating the insertion of a passage written at the foot of the column (fo. 55^v, col. 1) by the original scribe. This passage is I.13.2 'Debent autem hae — nec imaginem efficit', and it will be referred to as the 'footnote text' of the passage, to distinguish it from the 'first text' which occurs at the proper place in Book I. There are nine differences between the first text and the footnote text,³² some of them significant, and coming within such a very short compass they show that the two texts must come from different sources. When it is observed that the footnote text occurs in the neighbourhood of one of the boundaries of R α and R ξ (as approximately defined above), and that its proper place (I.13.2) is in the neighbourhood of the other boundary, then it is natural to guess that the different sources are those of R α and R ξ . Since the footnote text twice agrees with δ (*remittit*, *efficit*), and has a similar interpolation (*eiusmodi*] *quae eiusmodi* Rf: *quae huiusmodi sunt* δ), it must cohere with R α , and the first text therefore probably coheres with R ξ . Clearly the scribe (whether of R or of an ancestor of R) who employed a ξ -MS. to complete the lacuna in his exemplar from I.13.2 *Quia apud nos* to II.53.2 *adflata*, when he returned to his original exemplar at the end of the lacuna, was in some confusion about where he should begin copying again. He started off correctly at II.53.2 *Praeterea quocumque*, but then went back and copied out the preceding footnote text, forgetting that he had already copied this from the ξ -MS.

II

Having described the text of R, I now come on to manuscripts which are related to it. First, Paris lat. 6385 (fourteenth century) has the traditional book order, unlike R, but it at once betrays its affinity to R by the interpolation within the text after II.53.2 *adflata* of I.13.2 'Debent — efficit' the 'footnote text' which was discussed above. The manuscript is heavily contaminated with δ readings, but still retains numerous other conjunctive errors shared with R, for example:

³² The differences are as follows (R = first text, Rf = footnote text): *densae*] *depressae* Rf; *eiusmodi*] *quae eiusmodi* Rf; *quia*] *qua* R; *percussu*] *percursu* R; *percussa*

Rf; *resplendent*] *-et* Rf; *fuert*] *fiunt* R; *propior*] *prior* R; *remittet*] *-it* Rf; *efficiet*] *-it* Rf.

II.1.1 *quemadmodum*] *quam quemadmodum*; 1.2 *et* (ante *humanas*) om.; 1.4 *animal*] *animata*; *cetera*] *-re*; 2.1 *praesumendum*] *est* add.

The manuscript is very close to R, but the contamination makes it very difficult to establish whether it is independent of R or not. I have collated the portion which corresponds to R_ξ, but have found no evidence of independence from R, so for practical purposes the manuscript is valueless.

Schägl 154 (fifteenth century) contains only Book I and the first 41 chapters of Book II, and like Paris lat. 6385 it shares many conjunctive errors with R, e.g. those in the list just above. Again there is contamination from δ, but the manuscript is clearly a close relative, or even a descendant, of R. It too is for practical purposes valueless, because of the contamination.

Next we come to three manuscripts which are more distantly related to R:³³

S Montpellier H 445 (twelfth century). *Grandinem* book order. The text breaks off after VI.9.1 *ignis ex*, the remainder of the manuscript being lost.

T Paris lat. 6386 (thirteenth century). *Grandinem* book order. There are two lacunae: the first (in T's book order) is from IVb.12 *imbremque* to V.15.1 *auctor est de-* inclusive, and results from the loss of several folios of T; the second, from II.34.3 *si dicas* to 53.2 *sed adflata*, results from a similar loss in an ancestor of T, whose text is continuous across the lacuna.

X Exeter Cathedral 3549(B) (thirteenth century). *Grandinem* book order.

STX derive from a common ancestor, for they share numerous conjunctive errors; for example, to take a few cases from the start of Book IVb:

(i) OMISSIONS. IVb.4.3 *sunt*; 5.3 *quoque* (post *illud*); 5.4 *iam* (post *tepentem*).

(ii) TRANSPOSITIONS. IVb.3.4 *huic quoque simile esse*; 4.1 *quidem mihi*; 4.3 *minuta et rara*.

(iii) OTHER ERRORS. IVb.4.1 *qui*] *quod*; 4.2 *uehementior*] *-mens*; 5.3 *experiariis*] *-eris*.

For our purposes it is not necessary to reconstruct the ancestor of STX with precision, for they differ amongst themselves comparatively little; so I shall use T, which I have collated completely, supplemented where it has lacunae by X (in II.34.3–53.2) and S (in IVb.12–V.15.1).³⁴ 't' will be used as shorthand for 'T or S or X, as the case may be'.

By examination of t's readings it can be established that t falls into five sections which coincide in extent with the five sections of R. (See the diagram on p. 311) It should be noted that T's second lacuna, due to loss of folios from an ancestor, ends at exactly the same point as R_ξ, after II.53.2 *adflata*; this can hardly be coincidence.³⁵ In the two outermost sections of t (IVb.3–VII.15.2 and III.pr. 18–IVa.2.30, τ_p), one finds the following:

³³ On ST, see Gercke, *Studia Annaeana*, pp. 20–7, and his edition, pp. xxvii, xxxv. On X, see M. T. Claxton, 'The place of Exeter Cathedral Manuscript 3549(B) in the textual tradition of Seneca's *Naturales Quaestiones*' (University of Exeter M.A. Thesis, 1960, unpublished).

³⁴ Claxton, op. cit., pp. 35 ff., tackles the problem of the precise relations of STX to each other and their common ancestor; but she is hampered by the incompleteness

of Gercke's and Oltramare's reports of ST, on which she relies.

³⁵ One may ask why T has this lacuna and X does not. There are two main possibilities. Either T represents the state of the common ancestor of TX, and X has undergone subsequent contamination which restored the missing portion; or X represents the common ancestor, and T's lacuna is perhaps to be explained on the hypothesis of a fluid exemplar, T (or an intermediary)

- (i) PRt frequently share conjunctive errors, e.g.:
IVb.3.2 *illo*] *eo*; 4.2 *est mutatio aeris*] *mutatio aeris est*; 9 *minora foramina*] inu. ord.; 10 *hoc* (post *recessit*) om.; 11.2 *inter*] *intra*; 13.1 *fiant*] -unt; 13.2 *emunt*] -ant; 13.4 *etiam*] *esse*; 13.6 *usque* om.
- (ii) Rt frequently share conjunctive errors against P, e.g.:
IVb.5.4 *si*] *et si*; 9 *bis* (post *Accedit*) om.; *deinde*] *argumentum*; 12 *rigore*] *frigore*; 13.1 *est* (post *futura*) om.; 13.4 *profudit*] *per-*; *potest placere*] inu. ord.; 13.9 *deseruientia*] *seru-*.
- (iii) PR frequently share conjunctive errors against t, e.g.:
IVb.3.3 *omne*] *esse*; *quod*] *quoque*; 5.4 *frangente*] *fung-*; 6.3 *afferebat*] *inff-* P: *imf-* R; 11.3 *sibi*] *ibi* add.; 13.2 *illis*] *illud*; 13.7 *muniant*] *minuatur*; 13.9 *niuis*] *minus*.
- (iv) Pt rarely share errors against R. I have noted only the following:
III.9.2 *aut* (post *fonti*)] *ac*; 12.3 (12.4 Gercke) *fluens* (post *flumen est*)] *effluens*; IVa.pr.10 *Solebam tibi*] *Solebant ibi*; VI.5.3 *res* om. PtV; 15 *diuerberat*] *de-* PtfG;³⁶ VII.7.3 *illos* (post *aquilonis*)] *illo*.

These errors are not only very few in comparison with the errors of Rt and PR, but also not very weighty: the errors at VI.5.3 and 15 occur by chance in other manuscripts, as stated, and it is not implausible that the coincidence of Pt is in every case just chance.

From (i) it follows that PRt derive from a common ancestor, which is either ρ or an ancestor of ρ . There are many significant errors of PR and of Rt, but few if any of Pt. In such a situation there must be contamination from another source either in P or in t,³⁷ and one of the following stemmata must represent the situation:



For the moment let us postpone consideration of which of these is the true picture, and move on to the two adjacent sections of t, VII.15.2–I.13.1 and II.53.2–III.pr.18, t_a , where we find the following:

- (i) δ Rt frequently share conjunctive errors, e.g.:
VII.16.1 *bi*] *alii*; 16.3 *duas* (ante *dirimi*)] *partes* add.; 17.1 *multis*] *diuersis*; *effici*] *fieri*; 17.2 *diei* om.; 17.3 *liquidumque*] *et liquidum*; 20.1 *relinquunt*] *remittunt* (-ant Rt); *ne*] *non*.

having been copied after some folios were lost. (This would have been very easy if some folios containing the missing portion had been stuck in to the common ancestor.) In the text above I assume that X represents the common ancestor, but even if this is not so, there is sufficient evidence in T itself to prove that the central portion of t comes from η .

³⁶ f = Escorial N III 16 (13th cent.), a

twin of G; see Geist, op. cit., pp. 9–10; my thesis, pp. 118–19.

³⁷ In general, where one has three manuscripts, ABC, of which AB and BC share significant errors, while AC do not, then there must, on the simplest possible account, be contamination in either A or C. Cf. J. Willis, *Latin Textual Criticism, Illinois Studies in Language and Literature*, 61 (Illinois, 1972), 17 ff.

- (ii) Rt frequently share conjunctive errors against δ , e.g.:

VII.16.3 *obseruare*] *seru-*; 17.1 *extentus*] *executus*; *illi forma est*] *est illi forma*; 17.2 *emersit*] *mersit*; 17.3 *uisuntur*] *nascuntur*; 18.2 *ac*] *et*; 20.3 *alieno*] *alio*.

- (iii) δ R frequently share conjunctive errors against t, e.g.:

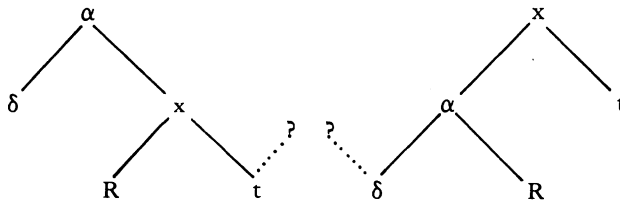
VII.17.2 *est* (post *Ceterum non*) om.; *post* om.; 17.3 *sincera*] *sine causa*; *sed*] *et*; *omen*] *crimen*; 19.1 *illorum*] *terrae* add.; 20.1 *simul* om.; 20.2 *ad* om.; *emicuit*] *igneum*.

- (iv) δ t rarely agree in error against R. I have noted only the following cases:

I.pr.6 *neget*] *-at*; 1.8 *possint*] *-unt*; 1.9 *stultissimum*] *est* add.; 4.1 *cuiquam*] *quicquam*; 6.3 *Nullum autem*] *aliud* add.; 7.1 *mutationem*] *imitationem*;³⁸ II.57.4 *illa*] *ita* R; om. δ t; 59.5 *conantur*] *-atur*; 59.6 *totum* (post *populum*) om.; VII.23.2 *dicuntur*] *duc-*.

These cases are not only few in comparison with the errors of Rt and δ R, but they are mostly insignificant, being either minor errors or else corrections which might well occur to δ and t independently.

From (i) it follows that δ Rt derive from a common ancestor, which is either α or an ancestor of α . There are frequent conjunctive errors of Rt and of δ R, but few if any of δ t. The situation is parallel to that we met in the case of t_ρ ; so here there must be contamination either in t or in δ , according to one of the following diagrams:



Again let us postpone consideration of these two possibilities, and move on to examine the final, central section of t. This in no way resembles the central section of R, for there are no ζ readings, but there are a number of θ 's errors, namely:³⁹

- (i) OMISSIONS. II.3.2 *numero*; 4.1 *tamen*; 39.4 *utriusque*; 41.2 *et inuolutos*; 45.3 *fulmina*; 48.1 *aeque . . . minus finitum est* (post *finitum est*).

- (ii) OTHER ERRORS. II.48.2 *inmensum*] *-sa*.⁴⁰

These are in fact all the errors of θ which occur within the limits of this section of t, which is therefore derived from θ . Furthermore, the θ source used was closely related to DE, for t shares numerous errors and interpolations with DE, e.g.:

I.15.2 *expressit*] *press-*; 17.5 *beneficia*] *-ium*; *inuenta*] *-tum*; II.1.4 *uidebitur*] *uidetur*; 11.3 *-que* om.; 12.1 *et* om.; 13.3 *illos*] *eos*; 13.4 *expurgatus*] *purg-*; *est* (post *locus*) om.; 21.1 *uirium habuisset*] *habuisset* (*hausisset* E) *uirium*; 32.1 *si* om.; 32.2 *est* (post *consequens*) om.

³⁸ All editions have *imitationem*, but the sense requires *mutationem*.

³⁹ θ here denotes the consensus of DEFGH.

⁴⁰ *In inmensum* [-sam H¹P: -sa θ] *procedam*. *In inmensum* is the normal expression (see *ThLL* 7.1.453.56-65), so

one would expect it here; but for the sake of the clausula Seneca might have used *in immensa*. Cf. how at V.17.3 he uses *in transuersa*, which is otherwise poetic (see Lewis and Short s. *transuerto* II A 2). Even if *inmensa* is correct, it is another case of t siding with θ .

So the central section of *t* essentially derives from η .⁴¹ It should be pointed out that there are also several agreements with δ here, namely (the list aims to be complete):

I.15.2 *ad*] *in*; 17.2 *quorsus*] *-sum*; *eum* om.; 17.6 *subit*] *-iit*; II.2.3 *quidem* om.; 13.1 *Falsam*] *autem* add.; 18 *per crassum*] *percussum* δ : *per percussum* *t*; *non ualuit in flammam*] *in flammam non ualuit*; 21.4 *plus quiddam*] *inu. ord.*; 35.1 *esse aliud*] *inu. ord. (esse om. V)*; 38.2 *et* om.;⁴² 41.2 *quia*] *quae*.

Several of these errors are negligible, and probably all could reasonably be regarded as chance coincidence; but for present purposes it does not matter if there was some influence of δ on *t*, for that would not affect the fact that *t* is here basically derived from η .

When one of *t*'s ancestors had the missing central portion of the work supplied from an η MS., there was an opportunity for contamination of the other portions of the text from that η MS.; and there is evidence that such contamination did take place. First, in *t_p* and *t_a* there are numerous places where *t* and η share the same error or conjecture (cf. Gercke, *Studia Annaeana*, pp. 27–35), e.g.:

I.pr.5 *in (ante ualetudinario)* om.; pr.8 *despiciens*] *et* add.; pr.9 *ridiculi*] *ridiculosi*; 1.14 *tantum* om.; 3.8 *et (ante peruinci)* om.; 3.12 *nube in*] *in nube*; 4.1 *plano*] *platone*; 8.6 *habet uirium*] *uirum (uirum T) habet*; 11.2 *magnitudinem*] *imaginem*; 13.2 *solis*] *solidae*; 14.3 *sed*] *si*.

Furthermore, *t* occasionally shares errors of θ , outside *t_η*, namely:

III.20.5 *harum* om.; 24.2 *tenui* om.; V.10.1 *aura*] *natura*.

So it seems clear enough that *t_p* and *t_a* are contaminated from the η source of *t_η*.⁴³

We are now well placed to return to the two problems which were earlier postponed (pp. 308 f.: whether it is *P* or *t* which has undergone contamination in the region of *t_p*; and whether it is δ or *t* which has undergone contamination in the region of *t_a*). The problems now resolve themselves simultaneously, for it has been shown that these sections of *t* are contaminated from η , so that *t* must be the culprit. In any case, *P* and δ show no other signs of being contaminated.

In conclusion, STX are composite and contaminated, and so of no stemmatic value. Gercke's ρ , the consensus of PST, is an impostor where ST derive from *a* or η ; and it is noticeable how rarely ρ stands alone in Gercke's apparatus here. Where STX do derive from ρ they are unreliable witnesses, because many of ρ 's errors have been eliminated from them by contamination from η .

Two Brussels manuscripts, 4785–93 and 20030–2, contain excerpts from the *Natural Questions* with a text like *t*'s. 20030–2 has two distinct sets of excerpts. The first, on fo. 133^v, is very brief,⁴⁴ and has several agreements with *t*, e.g.:

⁴¹ By η I denote the common ancestor of DE, which was probably an ancestor of Gercke's ' η '; see my thesis, pp. 51 ff.

⁴² The correct text is *ut et nauiget*; see B. Axelson, *Senecastudien, Kritische Bemerkungen zu Senecas Naturales Quaestiones*, *Lunds Universitets Årsskrift*, N. F. 29. 1. 3 (Lund, 1933), 80 n. 10.

⁴³ The question of contamination of *t* from η is complicated by the fact that there is a possibility of contamination in the other direction as well (cf. n. 28 above), which

makes it hard to tell in which direction the contamination has gone in a particular instance. But the presence of characteristic θ errors in *t*, and the origin of *t_η*, makes it plain enough that there has been contamination from η in *t_p* and *t_a*.

⁴⁴ The excerpts, in *Grandinem* book order, begin with: V.15.4 *Nulli [Ulli ergo uulg.] mortuo . . . infodit*; VI.29.1–2 *Quid mirum est animos . . . non desipere [consipere uulg.]*; I.pr.5 *Quid est cur suscipiamus [suspici- uulg.] . . . ualitudinario*.

III.pr.2 *totus animus sibi*; VI.29.1 *aberasse*] *ob-*; 29.2 *consipere*] *non desipere*. The second set of excerpts in 20030-2 (fos. 177^v-178^v) is also found in 4785-93 (fos. 142-3).⁴⁵ The two manuscripts rarely differ from each other, and they share a number of errors with t, e.g.:

V.15.3 *intimae om.*; *possidendum quam quaerendum*; VI.2.6 *extrinsecus*] *nos add.*; *in ipso sinu pericula*; 32.5 *deorum nec hominum*.

III

Finally we may summarize R's contribution to the recension of the text of the *Natural Questions*. This contribution is threefold: with R_ρ , the true nature of STX can be discovered, and the reconstruction of ρ can be placed on a firmer footing; R_α is a most valuable check on the excesses of error and conjecture which δ displays; and R_ζ is a much-needed twin of Z. One must hope that complete manuscripts of the same type as each of these parts of R may yet come to light.

Book	IVb	V	VI	VII	I	II	III	IVa
				VII.15.2	I.13.2	II.53.2	III.pr.18	
R	R_ρ			R_α	R_ζ	R_α		R_ρ
t	t_ρ			t_α	t_η	t_α		t_ρ

Diagram to illustrate the structure of R and t

University of Edinburgh

H. M. HINE

⁴⁵ The excerpts, in *Grandinem* book order, begin with: V.18.6 *Quae nos dementia . . . sepulturae*; 18.9 *Miseri quid . . . malum*;

15.3 *Quae tanta . . . possidendum quam quaerendum* [*quaerquam poss- uulg.*].