

CHAPTER 2

Clearing the Ground in *Georgics* 1

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New beginnings

How to begin is a problem shared by farmer and writer. Vergil himself seeks a new beginning mid way through the *Georgics* when (as he presents it) he realises that uncultivated trees provide as much benefit to mankind as the vine — and wine is destructive too (2.454-6). He therefore seeks a new course. First of all he wishes to write natural philosophy in the Lucretian mode (2.475-82), but he does not have the capacity for this, whereas he does gain pleasure from the innocent life of the idyllic countryside far from the city, the world familiar from the *Eclogues* (2.483-9: n.b. *siluas*, 486; *umbra*, 489). Both are commendable; the urban and the rustic are compared at length (2.495-540), but no clear choice is determined before the book ends.¹ Book 3 begins announcing pastoral as its subject (*Te quoque, magna Pales, ... canemus*, ‘You too we shall sing, mighty Pales’, 3.1), and rejecting mythological narrative; but then the poet seeks a way to raise himself from the earth (3.8-9), and promises to build a temple for Caesar (3.13-39). Even when he returns to *siluae*, and the animal husbandry that will form the topic of the third book, he describes the work as *haud mollia iussa*, and emphasizes the way he has delayed embarking on this material, and is continuing to defer the epic to come² (3.40-3, 46-8):

interea Dryadum siluas saltusque sequamur
intactos, tua, Maecenas, haud mollia iussa:
te sine nil altum mens incohat. en age segnis
rumpe moras.

...

mox tamen ardentis accingar dicere pugnas
Caesaris et nomen fama tot ferre per annos,
Tithoni prima quot abest ab origine Caesar.

In the meantime let us head for the woods and virgin glades of the Dryads — your ungentle commands, Maecenas: without you my mind begins nothing lofty. Come then, away with idle delay. ... In time to come, however, I shall gird myself to speak of the blazing battles of Caesar, and to maintain his name in glory through as many years as Caesar is distant from the first beginning of Tithonus.

¹ Cf. Nelis 2004 (an essay much concerned with beginnings, as well as middles and ends), especially 75-80.

² Nelis 2004: 86 stresses the run of future verbs in this passage.

Delay in starting his epic will continue through book 4, but by treating the bees, his tiny topic, as epic warriors in miniature (4.3-6, 67-87), and by constructing the story of Aristaeus as a combination of *Iliad* and *Odyssey*,³ he ensures that when he begins the *Aeneid* he has already prepared himself.

Farmers similarly need to clear the ground before they begin; the difficulty and the destructive effects of this are another intermittent but major theme of the *Georgics*. Both aspects are present in the narrative that dominates the closing of the poem, for example, where Aristaeus undergoes frightening adventures in his quest to discover how to acquire a new stock of bees, and then sacrifices four bulls, four heifers, a calf and a sheep in order to gain what he seeks (4.360-553).⁴ Destruction is the striking accompaniment of instructions on how to get the richest farmland at 2.203-11:

nigra fere et presso pinguis sub uomere terra
et cui putre solum (namque hoc imitatur arando),
optima frumentis: non ullo ex aequore cernes
plura domum tardis decedere plaustra iuuencis;
aut unde iratus⁵ siluam deuexit arator
et nemora euertit multos ignaua per annos,
antiquasque domos auium cum stirpibus imis
eruit; illae altum nidis petiere relictis,
at rudis enituit impulso uomere campus.

Earth that is nearly black and rich beneath the pressure of the plough and that has crumbling soil (for this is what we imitate when ploughing) is best for corn — from no plain will you see more wagons head off home behind slow oxen; or land from where the angry ploughman has carted off the wood and overturned the groves that have been idle through many years, and uprooted the ancient homes of birds, root and trunk; they have abandoned their nests and sought the sky, while the fresh field has begun to gleam where the plough has been driven over it.

My essay is an attempt to apply Vergil's teaching to the interpretation of the opening paragraphs of the didactic.

***Georgics* 1.104-10**

Georgics 1.104-10 famously imitate Homer's simile comparing Achilles' fight with the Scamander to a man irrigating a garden (*Iliad* 21.257-62), and thus turn epic embellishment into didactic reality:⁶

³ Cf. Farrell 1991, 104-13.

⁴ See e.g. Morgan 1999, 105-8.

⁵ This is what is transmitted, but *iratus* is a participle that Vergil uses nowhere else, and I suspect it has displaced another epithet, such as *ingratus*: see Heyworth 2015: 230-1.

quid dicam, iacto qui semine comminus arua
 insequitur cumulosque ruit male pinguis harenae, 105
 deinde satis fluuium inducit riuosque sequentis,
 et, cum exustus ager morientibus aestuat herbis,
ecce supercilio cliuosi tramitis undam
elicit? illa cadens raucum per leuia murmur
 saxa ciet, scatebrisque arentia temperat arua. 110

What am I to say of the man who when he has scattered the seed gets to grips with the fields and rakes out piles of barren sand, then guides a river and streams to follow him to the crops, and then, when the field is burned out by the heat and the blades of grass are dying, **look, he decoys the wave from the brow of the channelled slope?**⁷ Descending over the smooth rocks it produces a loud purling and softens the dry fields with its bubbling water.

My first topic is nothing so grand, but simply the grammar of verse 108. Modern commentators take *supercilio* to be a separative ablative: hence Wilkins' translation (in bold, above), or Shipham's 'lo! from the brow of its hillside bed, lures forth the stream'. But Servius shows some uncertainty about the meaning:

ECCE SVPERCILIO id est ex improviso. 'supercilio' autem altitudine, summitate terrarum. alii 'supercilia' loca in obliquum delimitata quae superne habeant alia fastigia ex accidenti dicunt. tramites autem sunt conualles, quae de lateribus utrimque peruiae limitant montes, quae solent etiam saltus nuncupari. sed hic tramitem nunc pro ualle ac saltu accipere debemus et pro supercilio simpliciter edito loco, ut Ἰλιος ὀφρυόεσσα; nam ideo ait 'cliuosi'.

ECCE SVPERCILIO i.e. unexpectedly. However, *supercilio* is 'from a height, the top of an area of land'. Others say on the basis of similarity that *supercilia* are places cut off at an angle that have further tops above. *tramites* are enclosed valleys which are passable from either side and which bound mountains; these are also called *saltus* ['ravines' or perhaps 'saddles']. But here we ought now to take *trames* as standing for 'valley' or 'ravine' and for *supercilio* simply 'from a raised area', as in 'high-browed Troy' [*Iliad* 22.411]; that is why he says *cliuosi* ['hilly' or 'on a slope'].

This is an accumulation of comments rather than a single thought-out view. It is hard to see what the commentator who writes on *trames* and *supercilio* supposes the sense to be: 'he elicits water from the raised area of a hilly valley' — what sort of water collects in the raised

⁶ As well as exploring how Vergil transforms the simile, Thomas (*ad loc.*) notes the military language in *comminus ... insequitur ... ruit*; Ross 1987: 48, Cramer 1998: 16-18, and Gale 2000: 253 see such diction as starting with *iacto* in 104 (seeds/spears are cast before hand-to-hand combat begins); we might add *sequentis* in 106 (the streams are presented as troops following the commander).

⁷ The words in bold are the translation of Wilkins.

area of a valley? One commentator who explicitly follows Servius is Sargeaunt, who says:⁸ ‘Servius is here right in taking the word to mean a small valley, chine or ravine. At the top of it is a pond or stream held up by a gate. When the gate is lifted, the water flows down the *trames* and is conducted by ditches through the fields below.’ This gives a text that ignores the prior efforts of the farmer, however, as Vergil says nothing about the ditches; nor does Sargeaunt explain *supercilio*, which does not mean ‘gate’. Most other modern commentators seem to follow Servius’ interpretation, at least of *supercilio*, though they do little to clarify what he might mean. Thus Richter too finds a Homeric model for the use of *supercilium*, namely ὄφρυς for the top of a hill at *Iliad* 20.151, and for the use in Latin he compares Livy 27.18.10 *ipse expeditos ... ad leuem armaturam infimo stantem supercilio ducit* (‘he himself led the unencumbered troops ... to meet the lightly armed force standing on the lowest brow of the hill [*or* the bottom of the brow]’); clearer is 34.29.11 *supercilio haud procul distantis tumuli* (‘on the brow of a hill not far distant’). Thomas merely paraphrases: ‘look, over the slope comes a channel of water’. Neither explains how the word works in context, but the fact that they both claim *cliوسي tramitis* renders Homer’s χώρῳ ἐνι προαλαί⁹ suggests ‘from the brow of a sloping area’, so that the *trames* is the slope down which the water will run. There is a passage where we might without damaging the sense give *trames* the meaning ‘slope’: Ovid, *Fasti* 3.13 *uentum erat ad molli decliuem tramite ripam*.¹⁰ However, among the many instances of *trames* with its regular meaning ‘path’ are a group where the context shows that a sloping path is visualized, for example *Aeneid* 5.610 *cito decurrit tramite* (Iris ‘descends by a swift path’ i.e. the rainbow), Ovid, *Met.* 10.53 *carpitur accliuus per muta silentia trames* (‘a sloping path is taken through the quiet silence’), Seneca, *Ep.* 84.13 *per difficiles ... et arduos tramites adeuntur* (‘they are approached by steep and difficult paths’), and Silius 6.120 *cliioso tramite uitae* (‘on the steep path of life’, cited by Mynors); and this gives an appropriate sense at *Fasti* 3.13: Silvia ‘had come to the bank that descended with a gently sloping path’ (*uentum erat ad molli decliuem tramite ripam*). I can find no other warrant for the sense ‘slope’, and in combination with *cliusus* the reader looks for a more specific force in *trames* than simply ‘area’.

Helpful, though very muddled, is the account in Mynors. He first suggests that *supercilio* is to be taken as ‘brim’ rather than ‘brow’, a point to which we shall return; next he says

⁸ Similarly Papillon: ‘from the brow of a sloping ravine’.

⁹ ‘In a sloping area’, *Il.* 21.262.

¹⁰ Word order, with *ad* separated from the accusative noun and epithet, strongly implies that the ablative *molli tramite* modifies *decliuem*.

cliuosi (first found here) means ‘downhill’, unlike at 2.212 where *ieiuna ... cliuosi glarearuris* is the ‘barren gravel of steep [or hilly] country’, before glossing *tramitis* as ‘cross-path’ (which seems to conflict with ‘downhill’). Finally, he concludes that we should ‘think of the water as flowing in its irrigation channel across the upper edge of the field’ — which conflicts with both the previous glosses. It is true as we have seen, that *trames* means ‘path’; but paths are irrelevant to this account of managed irrigation, and Mynors’ final thought is better: *tramitis* must rather mean ‘channel’ here, as it does in Columella’s passage about horticultural irrigation, at 10.1.48 *ueniant decliui tramite riui* (‘let streams flow from [or in] a downhill channel’); at Apuleius, *Met.* 6.14.3; and in Porphyrio’s commentary on Horace’s poem to his bailiff, *Epist.* 1.14.29-30:

addit opus pigro riuus, si decedit imber,
multa mole docendus aprico parcere prato.

If rain has fallen, the brook adds labour for you in an idle moment: it needs educating with considerable effort¹¹ to spare the meadow that has caught the sun.

Porphyrio comments (on *multa mole docendus*) ‘Hoc est praefossis tramitibus. sic alibi ipse de fluuiio: *doctus iter melius*’ (‘i.e. with pre-dug channels. So elsewhere Horace himself says of a river, “taught a better route”’).¹²

Similar is Erren’s view in his commentary.¹³ However, he explains that the whole phrase is a ‘dreiteiliger Ringtausch von *e tramite cliuoso supercilii*, “aus dem abschüssigen Kanal am First”’.¹⁴ No parallels are given for this improbable series of transferences; and in any case what does *supercilio* contribute?¹⁵ Rather we should, with Wagner (and Sheridan), put *cliuosi tramitis* with *undam* (‘he elicits the water of a channel on a slope’): this enables the reader to envisage the plausible picture in which Mynors’ note culminates. How then should we take *supercilio*? If Mynors were right to render it ‘brim’, we could read the form as an

¹¹ *OLD moles* 8, but playing on sense 3, ‘earthwork’.

¹² Similar are the instances where *trames* is used for other channels, e.g. the wind-pipe at Pliny, *Nat. Hist.* 11.176.

¹³ On the other hand the translation, in vol. 1, reads ‘sieh da, da entlockt er dem First der Gefällstrecke eine Flutwelle!’ (‘Look, there he elicits a flood of water from the ridge at the top of the incline’).

¹⁴ ‘A triple transference from *e tramite cliuoso supercilii*, out of the sloping channel on the ridge.’

¹⁵ According to Erren, ‘Die “Braue” ... bezeichnet eigentlich einen Weg am oberen Rand eines steilen Abhangs’ (‘*Brow* indicates simply a path on the upper edge of a steep slope’).

ablative of the route, ‘over the brim’.¹⁶ Instances in Apuleius confirm that *supercilium* was used for ‘the top of a bank’: *Met.* 5.25.3 *tunc forte Pan deus rusticus iuxta supercilium¹⁷ amnis sedebat complexus Echo* (‘by chance the rustic god Pan was sitting embracing Echo near the brow overlooking the stream’) and 7.18.2. But the top of a bank is not the same thing as a ‘brim’, and I have found no evidence for such a usage. Possible is that it simply means ‘from the top’,¹⁸ as when Pliny describes the construction of reservoirs to produce sudden waterfalls designed to clear hillsides undermined by goldmines: *Nat. Hist.* 33.75 *ad capita deiectus in superciliis montium piscinae cauantur* (‘at the head of the waterfall pools are dug out at the tops of mountain slopes’). But elsewhere this geographical metaphor is expressed, as in the Pliny and the Apuleius passages, with greater clarity,¹⁹ or else *supercilium* means a ‘hillock’ or a ridge of earth used as a boundary marker, as repeatedly in the *Agrimensores*.²⁰ Here, as we have seen, to take *supercilio* with the following genitive leads only to confusion.

Instead we should try the sense ‘eyebrow’, the meaning *supercilium* has in Vergil’s only other usage, at *Ecl.* 8.33–4 (where the persona adopted by Damon for his song is playing the part of a Polyphemus):

dumque tibi est odio mea fistula dumque capellae
hirsutumque supercilium promissaque barba

And while you loathe my pipe and my goats, my shaggy eyebrow and my uncut beard ...

Throughout Augustan poetry, the noun only ever has the basic sense ‘eyebrow’ or ‘brow’. ‘With an eyebrow’ means ‘with an easy command’. This sense perhaps lies behind Servius’ *ex improviso* at the start of his note; but that may simply render *ecce*.²¹ Erren, after his

¹⁶ Cf. *limine* at Prop. 1.18.12 *limine formosos intulit ulla pedes* (‘any woman has brought her beautiful feet in via the doorway’), and Heyworth 2007 *ad loc.*

¹⁷ Apuleius perhaps wrote *iuxta supercilio*, ‘nearby on the top of the bank’.

¹⁸ So de la Cerda, in his *explicatio*, though he has no plausible account of *cliوسي tramitis*: ‘agricola elicit undam ex supercilio (cacumine) in quo est trames cliosus (id est, molliter et leuiter fastigiatus, per quem unda deducatur)’.

¹⁹ Cf. the Livy passages already cited: 34.29.11 *supercilio ... tumuli*; at 27.18.10 the previous sentence contains the word *tumuli*. Prudentius, *Peristephanon* 12.31 *supercilio saxi liquor ortus* (‘water rising from the top of a rock’) is conceivably indebted to Vergil’s phrasing here; but given that Servius is confused, it is hardly surprising that his contemporary was too.

²⁰ ‘Hillock’ at Hyginus Gromaticus, *De Generibus Controuersiarum* page 91, line 19; ‘ridge’ at Frontinus, *Contr.* 5; Siculus Flaccus, *De Conditionibus Agrorum* page 102, line 17; Siculus Flaccus, *De Conditionibus Agrorum* page 115, line 23, e.g.

²¹ Thus he glosses *ecce* at *Aen.* 2.203. *ecce* gives lively expression to a sudden action or revelation also at 3.515, *Ecl.* 3.50, *Aen.* 3.687, 6.337, 8.81, 11.448, 12.319. For such quasi-apostrophes in the *Georgics*, see p. ?? (Cowan).

fantasy about *supercilio cliuosi tramitis*, ends his main note with a rather different reading, seeing the metaphorical *supercilium* as allowing a shift to the eyebrow of the farmer, whose facial gesture instigates the irrigation.²² He cites one key parallel, Horace, *Odes*. 3.1.8 *Iouis cuncta supercilio mouentis* ('Jupiter moving everything with his brow'), which helpfully shows the availability of the instrumental ablative in Vergil's day. The analogy is a significant one too: the master of the universe controls things with a flicker of his eyebrow; so does the farmer who has prepared his irrigation channels in advance — for once in the *Georgics* we get a hint of the slaves who will do the work at their master's command.²³ One should acknowledge that Horace might have invented the expression on the basis of *Iliad* 1.528 κυανέησιβ ἐπ' ὀφρύσι νεῦσε Κρονίων ('Zeus the son of Cronus nodded with his dark brows'), also imitated by Apuleius at *Met.* 6.7.2 *nec rennuit Iouis caeruleum supercilium* ('nor did the dark brow of Jupiter refuse to nod'). But eyebrows regularly play a speaking role in Roman culture: see especially Pliny, *Nat. Hist.* 11.138 on their wide use to convey emotion and will.²⁴

frons et aliis, sed homini tantum tristitiae, hilaritatis, clementiae, seueritatis index. in assensu eius supercilia homini et pariter et alterna mobilia. et in his pars animi: <his> negamus, annuimus. haec maxime indicant fastum. superbia aliubi conceptaculum, sed hic sedem habet: in corde nascitur, huc subit, hic pendet.

Other creatures have a brow too, but only in man does it signify sadness and happiness, clemency and sternness. In conformity with it human eyebrows are mobile, either together or one at a time. An element of the mind lies in them: <with them> we refuse and we assent. In particular they indicate contempt. Arrogance is conceived elsewhere, but has its home here: it is born in the heart, but comes to the brow and lingers there.

Eyebrows frown and imply arrogance, sternness or disapproval; but they are also used by lovers to communicate, as repeatedly in Ovid, e.g. at *Amores* 1.4.19 *uerba superciliis sine uoce loquentia dicam* ('with my eyebrows I shall say words that communicate without voice')²⁵; and they are used by masters to address their slaves with simple authority: note

²² '... der den entscheidenden Wink gibt ..., das Wasser wie einen Trupp Menschen herbeieilen zu lassen' ('who gives a decisive wink to let the water rush over, as if to a contingent of men').

²³ Or perhaps, as Erren implies, like soldiers accepting orders from their general: cf. the military diction earlier in the sentence.

²⁴ Similar is Quintilian, *Inst. Orat.* 11.3.78-79 on the orator's use of the eyebrows.

²⁵ Note the use of the adverbial ablative *superciliis*, like the singular at *Ars* 1.500 *multa supercilio ... loquare* ('you may say much with an eyebrow'). Cf. also *Am.* 2.5.15, *Her.* 17.82; *Prop.* 3.8.25; *Martial* 9.37.5-6.

how *supercilium* is the mark of the *dominus* in Petronius, *Sat.* 113.10 *nec domini supercilium induebat, sed amici quaerebat obsequium* ('he did not put on the frown of the master, but sought the subservience of a friend'); and Martial 1.4.1-2 *Contigeris nostros, Caesar, si forte libellos,/ terrarum dominum pone supercilium* ('Caesar, if you happen to touch my little books, drop the brow that rules the world').²⁶ Thus the use of *supercilium* to connote something that gives commands is not an isolated one, nor is the use of the adverbial ablative.

What confirms the interpretation is the imitation in Columella, *De Re Rustica* 10.47-9 (of *tellus*):

at si cruda manet caelo durata sereno,
tum iussi ueniant decliui tramite riui;
terra bibat fontis et hiantia compleat ora.

But if it remains untouched and hardened by clear weather, then give the command and let streams come from the sloping channel; let the earth drink the springs and fill its gaping mouths.

In time of drought the gardener is told to order streams of water to come 'from the sloping channel': 'by a sloping channel' would have less point — the streams are drawn from the channel to irrigate the soil. As *riui* corresponds to *undam*, and *decliui tramite* to *cliuosi tramitis*, so *iussi ueniant* interprets *supercilio elicit*. Because it is the eyebrow that elicits the water, we may more easily now give weight to the sound play between *supercilio* and *elicit*.²⁷ it is as if the *supercilium* is designed for eliciting. The soundplay draws attention to the verb, and thus evokes the ceremony known as *aquaelicism*, referred to with that name by Festus (p. 2.24-6 Lindsay) *aquaelicism dicitur cum aqua pluuialis remediis quibusdam elicitur, ut quondam, si creditur, manali lapide in urbem ducto* ('it is called Aquaelicism when rainwater is conjured up by certain remedies, as in the past, if you believe it, through the bringing of the *lapis manalis* into the city'), through a brief description of the rite by Varro (*de Vita Populi Romani* fr. 52.7-9 Riposati), and another Festus entry (p. 115.8-12 Lindsay).²⁸

Manalem lapidem uocabant etiam petram quandam, quae erat extra portam Capenam iuxta aedem Martis, quam cum propter nimiam siccitatem in urbem pertraherent, insequeretur pluuia statim.

They also called a certain rock the *lapis manalis* ['the flowing stone']: this was outside the *porta Capena* near the temple of Mars, and when they dragged it into the city because of a drought, rainfall immediately followed.

²⁶ Cf. also Cicero, *Sest.* 19; *Priapea* 1.2 (and Bianchini *ad loc.*); SHA, *Aurel.* 27.5.

²⁷ As Damien Nelis suggested to me at the conference.

²⁸ DServ. on *Aen.* 3.175 says the dragging was done by the *pontifices*.

Vergil's hard-working farmer has no need of such a ritual nor such effort. This is the key point: already the farmer has sown (cf. *seres*, 73), and worked the ground, following the advice previously given (45-9, 63-70, 84-99); already he has stored water and prepared channels for irrigation. So, when there is a period of hot drought and his plants are in danger of dying, he simply raises an eyebrow, and they are quickly irrigated — thanks to the preparation he has done in advance.

So ends my first act of ground clearing, a demonstration of the weeds that still clog interpretation of Vergil's poem, and of the need always already to have begun.

***Georgics* 1.43-83**

Vere nouo, gelidus canis cum montibus umor
liquitur et Zephyro putris se glaeba resoluit,
depresso incipiat iam tum mihi taurus aratro 45
ingemere et sulco attritus splendescere uomer.

At the start of spring, when the chill moisture melts on the white mountains and the loosened soil has relaxed beneath the west wind, already then I'd want the ox to begin to groan over the plough as it is forced down and the blade to shine as it is rubbed smooth in the furrow.

Vere nouo: after the 42-line proem the didactic starts with a decisive and obvious first phrase.²⁹ The remainder of 43-4 glosses early spring as the time when snow melts and the soil relaxes under the warming breath of Zephyr: this is the time for beginning (*incipiat*, 45). 'Already then' (*iam tum*) Vergil wants to see oxen groaning with the effort of pulling the plough, and the blade to start gleaming again as it is polished by the soil. Already then the work should have begun. But verses 47-9 are less clear:

illa seges demum uotis respondet auari
agricolae, bis quae solem, bis frigora sensit;
illius immensae ruperunt horrea messes.

That crop (?) at last matches the prayers of the greedy farmer, which has twice felt the sun, twice the cold; the immeasurable harvest from that source has burst the barns.

seges, which makes good sense as 'crop' in 47, shifts to the less common meaning 'field' or 'ground' as it gets redefined by the relative clause in 48 and when *illius* is attached to *messes*

²⁹ It echoes the use of the phrase at *Ecl.* 10.74 where Vergil is carefully preparing the ground for the *Georgics*. Lucretius' *de Rerum Natura* also begins in spring (explicitly so at 1.10): see Gale 2002: 59; Hesiod's calendar begins in September (*Works & Days* 414).

in 49.³⁰ The shift is significant: the reader may think we are concerned already with the crops that are going to be harvested, but that is merely our greedy hopes talking, and the focus is first on the bare earth.

But the controversial issue here is the meaning of the relative clause. Servius comments *ad loc*:

BIS QVAE SOLEM BIS FRIGORA SENSIT: quae bis et dierum calorem et noctium senserit frigora: per quod duplicem ostendit arationem, uernalem et autumnalem. nec enim ad tempora aestatis uel hiemis referre possumus, quod ait 'bis solem, bis frigora', quia non sunt in Italia in uno anno duae aestates et duae hiemes, sicut geometrae dicunt esse in quadam parte Indiae, in insula Taprobane. aut sicut quidam dicunt ideo 'bis', ut semel cum fructibus, semel uacua solem et frigus perpessa accipiamus.

BIS QVAE SOLEM BIS FRIGORA SENSIT: which has twice experienced the warmth of days and the chill of nights: by this he points to the double ploughing, in spring and autumn. We cannot refer to the periods of summer or winter the fact that he says *bis solem, bis frigora*, because there are not two summers and two winters in a single year in Italy, as the geographers say there are in part of India, on the island of Sri Lanka. Or else, as some say, 'twice' on the following basis, that we take it as enduring sun and cold once with crops, once empty.

Though some modern commentators follow Servius, this looks like nonsense. On the one hand, it is pointless to say that the ploughland must twice be exposed to the diurnal cycle: what could it possibly mean? Two days are to pass before what? And how does the text point to spring and autumn? The objection is feeble too: of course Italy only has one summer and one winter each year, but the reference can simply be to two years. Mynors begins his commentary on 43-9 (and 63-70) with a clear account of the basic practices of cultivation that Vergil assumes (1990: 10):

The normal ancient practice, here taken for granted by V., as by Hesiod (see West on *op.* 462-3), was to take a crop off the ground in alternate years; every other year the field lay fallow to recover its fertility, and save up its scanty moisture. After harvest in early summer, the land is let alone, except perhaps for burning the stubble (84f.) ... Next spring this fallow ... is broken up by the first ploughing (*proscindere*) and again left; a second and a third ploughing follow in that same summer (*iterare* and *tertiare*); and the ground is then ready

³⁰ For *seges* in this sense see *OLD* 2, and, as Servius notes, e.g. 4.128-9 *nec fertilis illa iuuencis/ nec pecori opportuna seges nec commoda Baccho* ('that ground is not fertile for oxen to plough nor suited to pasture nor fit for Bacchus [*i.e.* planting with vines]'); likewise Cicero, *Hortensius* frag. 24 *segetes agricolae subigunt aratris multo ante quam serant* ('farmers work fields with ploughs long before they sow'), Tibullus 1.3.61 *fert casiam non culta seges* ('the untilled ground bears cinnamon').

for the sowing, which is normally accompanied by another ploughing to cover the seed ...

Though not corresponding in every detail, this gives a structure against which to understand 47-9. The reader has just been told to plough in early spring. The heat of the summer sun will follow spring, and the cold of winter will follow that: for a huge crop the farmer is to expose the field through two summers and two winters before hoping for a harvest. Though the context concerns ploughing, the more important message is about leaving the land fallow. Of course in normal practice a crop would be taken off in the summer before the land is left fallow. But for the farmer, Vergil's reader, who is just starting out, there can be no hope of a big harvest until two years of work have prepared the way.

Sargeaunt comments on *sensit* in 48, 'Unless loosened by the plough the land would be little aware of either sun or frost.' That may be right, but it is possible that Vergil thinks of the soil as first exposed by the harvest (and the burning of stubble); it will then need repeated ploughing so that the effects of winter frost and summer sun can be felt. The notion that the fourth ploughing should precede the sowing is drawn out as Vergil's lesson by the Elder Pliny, at *Nat. Hist.* 18.181:

quarto seri sulco Vergilius existimatur uoluisse, cum dixit optimam esse segetem, quae bis soles, bis frigora sensisset. spissius solum, sicut plerumque in Italia, quinto sulco seri melius est, in Tuscis uero nono. at fabam et uiciam non proscisso serere sine damno compendium operae est.

When Vergil said that the best ground was what had twice felt the sun, twice the cold, he is thought to have wanted the sowing to happen in the fourth furrow [*i.e.* the one made by the fourth ploughing]. It is better that denser soil, such is common in Italy, be sown in the fifth furrow, but in Tuscany actually in the ninth. However, it is possible without any loss to save labour by sowing beans and vetch in soil that has not been ploughed in advance.

As scholars have observed, *existimatur* here implies that the interpretation of the Vergilian passage was already controversial by Pliny's time. But his references to five ploughings, and in the richer soil of Tuscany nine, show that it is repetition that matters. However, what Vergil stresses with his numbers is the desirability of leaving land fallow. Hence my outline of the sequence Vergil here implies:

Year 1:	<i>Vere nouo</i> (43):	plough [and so repeatedly]
	summer:	heat 1 (<i>solem</i> , 48)
	winter:	cold 1 (<i>frigora</i> 48)
Year 2:	summer:	heat 2 (<i>solem</i> , 48)
	winter:	cold 2 (<i>frigora</i> 48)
[?Year 3:	spring:	[sow, 208-30] plough and sow]

The process takes time; and yet, he goes on, even before that the farmer has to learn about his land, currently ‘unknown’ (*ignotum*, 50), and about the local climate and practices: he needs to find out what will grow there, and whether it is fertile or dry — for that will (it transpires) affect how he treats the land and how often he ploughs (*G.* 1.50-4).

at³¹ prius ignotum ferro quam scindimus aequor,
uentos et uarium caeli praediscere morem
cura sit ac patrios cultusque habitusque locorum,
et quid quaeque ferat regio et quid quaeque recuset.
hic segetes, illic ueniunt felicius uuae, ...

But first, before we plough the unfamiliar plain, it should be a concern to learn in advance about the winds, the varying character of the climate, and the customary cultivation and conditions of the place, what each area bears and each refuses. Here corn, there grapes are produced more successfully, ...

The practice of leaving land fallow is clearly present in the diction of two Greek passages regularly cited on *Georgics* 1.47-9: de la Cerda already mentions Theophrastus, *de Causis Plantarum* 3.20.7 ἡ κατεργασία δὲ ἐν τῷι νεᾶν κατ’ ἀμφοτέρως τὰς ὥρας, καὶ θέρους καὶ χειμῶνος, ὅπως χειμασθῇ καὶ ἡλιωθῇ ἡ γῆ (‘Working the land through ploughing up of fallow happens in both seasons, summer and winter, so that the earth may feel the effects of cold and heat’)³², which is obviously close to Vergil’s phrasing in pairing winter and summer, bad weather and sun; and it helps underpin the interpretation by explaining the reasons for working fallow land repeatedly. The form from which νεᾶν stems appears also in an Idyll included in the Theocritean collection, at 25.25-6 τριπόλοις σπόρον ἐν νειοῖσιν/ ἔσθ’ ὅτε βάλλοντες καὶ τετραπόλοισιν ὁμοίως (‘casting the seed on fallow three times ploughed, and sometimes actually four times ploughed’); this again shows that it is the repetition of ploughing that matters, not the precise number. This interpretation was that preferred already by de la Cerda and some of his predecessors, and it is found too, most recently, in Erren. But many commentators have failed to see the relevance of the implied fallow period, and so 47-9 have remained controversial. Wagner found them so disruptive of the argument that he wished to delete them (despite the specific reference already in Pliny), and others such as Forbiger have sympathised with this. In his note on 47-8 Mynors, working from Pliny and Theophrastus, sees some of the truth (‘four cultivations, starting early in the

³¹ So the 9th-century MS γ, where the antique MSS have *ac*: in support of *at* see Cramer 1998: 9, n.31.

³² Columella has a version of this at 11.3.11 *ut aut hiemis frigoribus aut aestiuus solibus et glaebe soluatut et radices herbarum necentur* (‘so that the soil may be broken up either by the cold of winter or the heat of summer and the roots of weeds may be killed off’).

winter after harvest, and giving a four-times ploughed fallow ... as in Theocr. 25.25f.’), but he fails to link this with his earlier account of the cultivation Vergil assumes, and he gets waylaid by false objections. Firstly, ‘V. has told us emphatically in 43 to start in the spring, when we shall get no *frigora*’, but this is of no weight if *frigora* means ‘winter’, as at *Ecl.* 2.22 *lac mihi non aestate nouum, non frigore defit* (‘I do not lack fresh milk in summer, nor in winter’), and 5.70 *ante focum, si frigus erit; si messis, in umbra* (‘before the hearth, if it is winter; if harvest time, in the shade’).³³ Moreover, as Mynors himself saw, the sequence manifestly complicates the simple notion of beginning in spring: ‘We return after an enthusiastic start to a topic which logically should come first’, he comments on 50-3. Despite the clarity of the opening, the on-going instructions do not simply detail what is to be done at the start of the plant year. Secondly, he claims, ‘Repeated *bis* in *G.* 2.410, *A.* 6.32 and 134 indicates the repetition of one process divided into two stages or seen from two aspects’: this is true, but utterly irrelevant, for in those instances *bis* is accompanied by different verbs (*bis conatus erat* ..., *bis patriae cecidere manus*, 6.32), whereas here the verb remains the same and the emphasis is on the opposed objects, *solem* and *frigora*. If (alternatively) we combine the two into a single cycle, the reference is clearly to two years.

Again Erren gets it right, but in a rather unsatisfactory way, for he hardly acknowledges the controversy.³⁴ Whereas at 108 he allows thorns to keep growing amid his crops, here he acts as if there were no need to clear the ground at all. However, he like others usefully cites Cato, *Agr.* 61 *Quid est agrum bene colere? bene arare; quid secundum? arare; tertio? stercorare* (‘What is it to be a good farmer? To plough well. What comes second? Ploughing. Third? Spreading dung’). One might think that sowing is the key aspect of a farmer’s activities; but before the farmer sows for the first time, he needs already to have ploughed (45-6) and waited, just as he needs to have learnt in advance about his land (50-6), and in Vergil’s account, about the world (57-63). Verses 63ff. then reprise the pattern:

³³ See *ThLL frigus* 1335.30-47 for further examples, beginning from *Rhet. ad Her.* 4.61 *ita ut hirundines aestivo tempore praesto sunt, frigore pulsae recedunt* (‘just as swallows are present in the summer season, but disappear driven away by the cold’), and including an example of the plural from *Georgics* 1.300.

³⁴ Erren *ad loc.* (2.48): ‘Der frühe Termin bedeutet aber nicht, daß im gleichen Frühjahr noch gesät und in Sommer geerntet werden könnte. Vielmehr liegt jedes Feld jedes zweite Jahr brach und wird fleißig immer wieder gepflügt (Cato *agr.* 61.131, ...). Das Halbjahr, in dem gepflügt wird, sollte für den Acker seit der letzten Ernte das vierte sein. Dann darf man eine reiche Ernte erwarten’ (‘The early date does not mean, however, that in the same spring one can sow and then harvest in the summer. Rather each field lies fallow every other year and is diligently ploughed time after time ... The sixth-month period in which it is ploughed will be the fourth for the field since the harvest. Then one may hope for a generous crop.’).

ergo age, terrae
pingue solum primis extemplo a mensibus anni
fortes inuertant tauri, glaebasque iacentis 65
puluerulenta coquat maturis solibus aestas;
at si non fuerit tellus fecunda, sub ipsum
Arcturum tenui sat erit suspendere sulco:
illic, officiant laetis ne frugibus herbae,
hic, sterilem exiguus ne deserat umor harenam. 70
alternis idem tonsas cessare noualis
et segnem patiere situ durescere campum;

Come then, immediately from the first months of the year, where the soil of the earth is rich, the powerful oxen should overturn it, and dusty heat roast the exposed clods when the sun is at its prime; but if the ground has not proved to be fertile, it will be enough to lift it up with a shallow furrow, just before the rising of Arcturus [mid September]: in the former case so that weeds do not interfere with the successful growth of the crops, in the latter so that the little moisture does not abandon the sandy soil and leave it unfertile. In alternate years you will also allow the field that has been cut to lie fallow and the idle ground to harden with disuse.

Once more we begin at the start of the season of plant growth (*primis extemplo a mensibus anni*), but we are to plough then only if the land is heavy (*pingue*, 64).³⁵ If the soil is not *fecunda* (67), we delay to the autumn. Thus 63-70 repeats 43-6, with more complexity and qualification to take account of the farmer's newly gained knowledge of his land. Verses 71-2 then revisit the substance of 47-9, this time more explicitly (*alternis ... tonsas cessare noualis*). In 73-8 comes the added qualification that one may rotate crops instead:

aut ibi flaua seres mutato sidere farra,
unde prius laetum siliqua quassante legumen
aut tenuis fetus uiciae tristisque lupini 75
sustuleris fragilis calamos siluamque sonantem.
urit enim lini campum seges, urit auenae,
urunt Lethaeo perfusa papauera somno;
sed tamen alternis facilis labor, arida tantum
ne saturare fimo pingui pudeat sola neue 80
effetos cinerem immundum iactare per agros.
sic quoque mutatis requiescunt fetibus arua,
nec nulla interea est inaratae gratia terrae.

Or in the new season you will plant yellow spelt where you have previously harvested a successful crop of beans, with their quivering pods, or the produce of slender vetch and the fragile stems and rustling foliage of bitter lupin. A crop of flax dries out the field, so does a crop of oats, so do poppies drenched in forgetful sleep. But the labour is easy if you alternate — as long as you are not

³⁵ Klingner 1967: 194 sees that the text here offers resumption combined with qualification; cf. also Cramer 1998: 14, n.55.

ashamed to cover the dry soil with rich dung or to toss dirty ash over the exhausted field. So too fields rest when crops are changed and in the meantime there is gratitude in unploughed land.

After the double instruction to plough (43-6, 63-6), those who remember Cato's *sententia* will not be surprised by the introduction of dung in line 80. But the text then provides a Vergilian surprise by pointing out that there can be benefit to not ploughing too (83).³⁶ The sequence allows us to construct a modified time-line; my version is designed to bring out some of the disorderliness of what Vergil has constructed here (63-8 before 43). Others are possible, but all I think would acknowledge the play with time.

Geo. 1.43-83:

Year -2:	mid summer:		harvest (+ fertilise 79ff)
	late summer:	heat 1 (<i>solem</i> , 48)	
	winter:	cold 1 (<i>frigora</i> 48)	
Year -1:	spring (63-6):		plough heavy soil
	mid summer:	fallow/rotate (71ff)	no harvest/different crop
	late summer:	heat 2 (<i>solem</i> , 48)	
	autumn (67-8):		plough dry soil
	winter:	cold 2 (<i>frigora</i> 48)	[sow, 208-30]
Year 1:	<i>Vere nouo</i> (43):		plough [+ sow]

The tenses of 47-9 already suggest the need to have begun in the past:³⁷ the present *seges* ... *respondet* depends on the perfect *sensit*; a good harvest now is due to a fallow past. And the point is compounded when 49 returns to the successful *seges* with *ruperunt horrea messes*; though we may analyse this as a gnomic usage of the perfect, the change of tense from *respondet* has the effect of taking us into the past: the farmer needs this experience in advance, hence *prius* ... *praediscere* ... *cura sit* ('It should be a concern to learn in advance', 50-2).

uotis in 47, on the other hand, looks ahead to the importance of prayer, especially prominent in the passage at 338-50 that begins *in primis uenerare deos atque annua magnae | sacra refer Cereri* ('in first place honour the gods and bring the due annual offerings to mighty Ceres'). Mention of Ceres takes us back to verses 95-6 (on the man who works hard at following Vergil's instructions) *neque illum | flaua Ceres alto nequiquam spectat Olympo* ('and golden-haired Ceres does not look down on him to no good effect from lofty

³⁶ On the organisational complexity of this passage, see Miles 1980: 74-5. However, Kraggerud 2017: 100-9 makes a strong case for taking *inaratae* as 'ploughed in'; this would reprise 79-81, as 82 summarizes 73-9.

³⁷ A didactic parallel for the importance of having started already comes at Vitruvius 2.3.2 *maxime autem utiliores erunt, si ante biennium fuerint ducti* (on bricks; similarly 2.7.5, on stone).

Olympus'). But more significantly for my case the opening phrase *in primis* (338) seems designed to bring out the need already to have begun with something else.

These observations should have an effect on the text. All the editions I have consulted put a paragraph break at 71 before *alternis*. If there is to be a break at all, it should come before *ergo age* in 63: this would mark the resumption of the opening sequence, whereas one at 71 only obscures the way that Vergil is continuing to repeat himself and revise his material. To understand that we need to understand the true point of 47-9; and then we can see that the poet, like the farmer, needs already to have started before he can properly begin.

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