

# The Symbolic Value of Grafting in Ancient Rome\*

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SUMMARY: Some scholars have read Virgil's grafted tree (*G.* 2.78–82) as a sinister image, symptomatic of man's perversion of nature. However, when it is placed within the long tradition of Roman accounts of grafting (in both prose and verse), it seems to reinforce a consistently positive view of the technique, its results, and its possibilities. Virgil's treatment does represent a significant change from Republican to Imperial literature, whereby grafting went from mundane reality to utopian fantasy. This is reflected in responses to Virgil from Ovid, Columella, Calpurnius, Pliny the Elder, and Palladius (with Republican context from Cato, Varro, and Lucretius), and even in the postclassical transformation of Virgil's biography into a magical folktale.

## INTRODUCTION

RECENT STUDIES HAVE SHOWN THAT THE MEANING OF THE ANCIENT ROMAN garden (*hortus*, from vegetable-patch to pleasure-grounds) extended beyond economics and aesthetics into a wide range of concerns, including ethics, social memory, and politics.<sup>1</sup> The emphasis has been on how Roman authors articulate their experiences of their own estates and those of their peers and patrons, yet it has become clear that any description of agricultural or horticultural activity can illuminate important aspects of Roman thought.

\* For her past and present work on trees and gardens in Latin literature, this article is dedicated to Emily Gowers. All translations are original. I am grateful for the helpful comments of *TAPA*'s anonymous readers.

<sup>1</sup> E.g., Henderson 2004; Myers 2005; Frass 2006; Pagán 2006; Spencer 2006; Cima and Talano 2008; von Stackelberg 2009. The essays in Shipley and Salmon, eds. 1996 show the importance of agronomic (or ecological) histories of the ancient world for informing social and cultural studies.

Grafting played a key role in both the history and the imagination of Roman gardening, yet Pease's 1933 article remains the only study of the former, and the latter has received attention only in passing. The following discussion will begin from the most famous text about botanical transplant surgery, Virgil's *Georgics* 2, and move towards the beginning and the end of Roman agricultural literature, to provide an overview of Roman thought on the topic and to show how this passage relates to this wider context.

Virgil begins Book 2 of the *Georgics* by giving disproportionate attention to the practice of grafting, which dominates one sixth of the book.<sup>2</sup> The final, most extensive mention is a catalogue of improbable or impossible hybridizations, suggesting an uninhibited free-for-all, which concludes with a personified tree being amazed by its own crop:

inseritur vero et fetu nucis arbutus horrida,  
 et steriles platani malos gessere valentis,  
 castaneae fagos; ornusque incanuit albo  
 flore piri glandemque sues fregere sub ulmis.  
 nec modus inserere atque oculos imponere simplex.  
 nam qua se medio trudunt de cortice gemmae  
 et tenuis rumpunt tunicas, angustus in ipso  
 fit nodo sinus; huc aliena ex arbore germen  
 includunt udoque docent inolescere libro.  
 aut rursum enodes trunci resecantur, et alte  
 finditur in solidum cuneis via, deinde feraces  
 plantae immittuntur: nec longum tempus, et ingens  
 exiit ad caelum ramis felicibus arbos,  
 miratastque novas frondes et non sua poma. (*G.* 2.69–82)

Indeed, the bristly arbutus is engrafted with the crop of the walnut,  
 And sterile plane-trees have borne robust apples.  
 Chestnuts have borne beeches; the mountain-ash has whitened  
 With pear-blossom, and sows have crunched acorns beneath elms.  
 Nor is there a single way of inserting and setting scions,  
 For where the buds thrust forth from the middle of the bark  
 And burst their thin jackets, a narrow notch  
 Is made in the knot itself; here they enclose a shoot from another tree  
 And teach it to grow into the moist pith.  
 Or, again, knotless trunks are pruned back, and a deep

<sup>2</sup> Maggiulli 1995: 39 notes that the ordinary noun for grafting, *insitio*, appears nowhere in Virgil, but that, nonetheless, his *inserere* and *oculos imponere* are technical or everyday terms.

Path is split into the solid wood using wedges, and then fertile  
Cuttings are put inside; before long, a huge  
Tree rears up toward the sky with its plenteous branches,  
And marvels at its new foliage and borrowed fruit.

Many have read this grafted tree as an emblem of the farmer's hubristic disregard for natural limits, particularly Richard Thomas, for whom it is a "chilling characterization of man's distortion of the natural world," and David Ross, for whom "[t]he product of this art is the monstrous and unnatural."<sup>3</sup> These statements imply that grafting is a decadent and hubristic act, one step too far in the manipulation of nature. In this way, it has become a mainstay of the "pessimistic" reading of Virgil's *Georgics*.<sup>4</sup> It is undoubtedly no longer possible for any critic to see the poem as a straightforward celebration of the rustic life. However, Virgil still recognized and exploited a widespread urban interest in the practical benefits of agriculture.<sup>5</sup> In what follows I will attempt to argue that the treatment of grafting is among Virgil's less ambiguous eulogies of the miraculous gifts of nature. This is because (by contrast with some other cultures) Roman authors of all periods regarded grafting as unproblematic, and indeed as a blessing. This is most evident in the fact that poets who were influenced by Virgil seem not to associate grafting with ill omens—*prodigia* in the negative sense—but with wonders elsewhere in his poetry, especially *Eclogue* 4. Indeed, in the eyes of his literary successors, there was a consistent pattern of celebration in Virgil's grafting imagery. His contribution to the trope of the botanical wonder may, ultimately, have contributed to his mediaeval transformation into a philanthropic, miracle-working mage.

## GRAFTING IN REPUBLICAN ROME

The evidence for Roman suspicion and criticism of grafting is surprisingly scant, especially when compared with that of animal and human hybrids. Roman authors can usually be relied upon to protest at the creation of mismatched forms: Vitruvius famously condemns the "modern" trend of com-

<sup>3</sup> Thomas 1988a: 271; Ross 1987: 109. Cf Ross 1980.

<sup>4</sup> As is typical of antitheses in scholarship, not only has an ongoing polarity among critics become an unpopular cliché, but calling it a cliché is now itself a cliché. Kronenberg 2000: 341n2 provides a convenient survey of "pessimistic," "optimistic," and more nuanced standpoints in recent scholarship on the *Georgics*.

<sup>5</sup> Gale 2000: x: "It is ... misleading, I think, to describe Vergil's agricultural subject-matter as a metaphor or trope. Clearly it makes no sense to treat the poem as a practical handbook; yet the poet seems to me to be no less (and no more) serious about his theme than Hesiod or Lucretius."

binning plant, animal, and architectural shapes in frescoes (*De arch.* 7.5.3–4); Horace famously compares an ill-proportioned poem to a horse-headed, fish-tailed monstrosity (*Ars P.* 1–13). This habit of thought was probably influenced by a traditional aversion to *monstra*, which in Roman religion usually represented divine displeasure with disasters to follow. This misgiving, most acute in times of upheaval (Livy 27.37.2), furnished a principle for Rome’s aesthetic conservatives, perhaps especially in the late first century B.C.E.: to Horace and Vitruvius we may add Augustus’s own loathing of the fashion for deformed slaves (Suet. *Aug.* 83). However, this did not apply to established practices: attitudes towards the products of grafting remain consistently favorable from the earliest to the latest Roman sources, and indeed interest increased over time.

It would be natural to presume that mid-Republican Rome, a society with taboos strong enough to dictate the drowning of hermaphrodite babies and prohibit the flamen Dialis from mentioning raw meat or beans,<sup>6</sup> would see the artificial splicing of trees and plants as improper at best and impious at worst. As a comparandum from ancient Judaism, the Mishnah of the third century C.E. explicitly bans all grafting (Kilayim 1: 7), and some read this prohibition as far back as Leviticus 19: 19, which prohibits the sowing of two kinds of seed in one field. Again, in the rather different cultural context of nineteenth-century North America, the instincts of cultivators could run against grafting on the principle that it was “unnatural.”<sup>7</sup> However, these cases should not color our view of grafting in the Hellenic and Roman worlds. For example, early Christians seem not to have considered this widespread practice to have impious overtones: addressing the Romans, St. Paul seems comfortable with describing God as an olive-grower who is able to graft original branches (Jews) and oleaster branches (Gentiles) on and off the fertile rootstock of the patriarchs at will.<sup>8</sup> A similar complacency characterizes even the earliest Roman literature. Cato’s *De agri cultura* (c. 160 B.C.E.) includes grafting among the various techniques which every farmer should know and use. Chapter 41

<sup>6</sup> Livy 27.37.6; Gell. *NA* 10.15.

<sup>7</sup> Bailey 1912 [1896]: 81–82 (originally delivered as a talk in 1892): “The opinion is commonly expressed by horticultural writers that graftage is somehow vitally pernicious and that its effect on the plant must be injurious ... akin to magic and entirely opposed to the laws of nature.” This may be an exaggeration.

<sup>8</sup> Rom. 11: 16–24, esp. 24. The simile can only be partial, since oleaster branches grafted onto a fertile stock will produce bitter fruit anyway. Real olive-growers instead graft fertile branches onto oleasters, as at *G.* 2.49–52.

offers a detailed procedure for vine-grafting, with no hint of the type of ritual precautions required when risking divine displeasure by felling trees or digging up the ground (41.139–40). For Cato, the procedure is commonplace: not impious, problematic, or even novel. Virgil was apparently the first to endow it with special importance, by shifting attention from pragmatic grafts (especially between vines, olives, and fruit trees) to more experimental, and even gratuitous, fusions between *different* trees and plants (Ross 1987: 206).<sup>9</sup> Arguably the procedure of the graft itself, when similar or identical species were involved, was never more interesting for the Romans than planting or sowing; only farfetched combinations connoted anything more.

## PLINY AND PLUTARCH

We must therefore look beyond Cato, Rome's model of cultural orthodoxy, for suggestions that the intentions or products of grafting were criticized. This takes us, by way of Varro, to Pliny and Plutarch in the second century c.e. Pliny the Elder advises against some types of grafting on the grounds of religious law (*fas*):

neque omnia insita misceri fas est, sicut nec spinas inseri,<sup>10</sup> quando fulgura piari non queunt facile, quotque genera insita fuerint, tot fulgura uno ictu fieri pronuntiat. (*HN* 15.57)

Nor is it *fas* to graft everything together, for example grafting onto hawthorns, since thunderbolts are difficult to expiate, and it is declared that for every tree-type that is grafted, a thunderbolt will fall in a single strike.

On the face of it, this is a straightforward condemnation of grafting as impious. Yet the source for the comment survives: it is taken from Varro, *De re rustica* 1.40.5. Pliny's expression *pronuntiat*, "it is declared," elides an important qualification. Varro's actual preface to the statement is as follows: "many people who pay a lot of attention to soothsayers follow this rule, which is declared (*proditum*) by them."<sup>11</sup> In other words, only especially religious or supersti-

<sup>9</sup> Of course, if Virgil popularized a false belief, he did not necessarily invent it: the *bougonia*, for example, was regarded as scientific fact long before and long after Virgil's mythologized treatment in *G.* 4 (Wilkinson 1969: 268–69).

<sup>10</sup> André 1960: 96 remarks that the hawthorn is in practice an unusually receptive rootstock. One might speculate that the taboo arose historically when one or more existing grafted hawthorns were struck by lightning.

<sup>11</sup> *Hoc secuntur multi, qui haruspices audiunt multum, a quibus proditum* (*Rust.* 1.40.5). Pliny may have a second source, since the type of tree in Varro is not specified as a hawthorn.

tious people followed this taboo.<sup>12</sup> Even if Pliny had misunderstood Varro to mean that it was a universal *nefas*, he mentions it in passing and has no ideological ax to grind: the principle of grafting itself is not at issue, since no blameworthy extravagance of self-indulgence or *luxuria* is involved. Elsewhere, he approves of grafting as a collaboration, whereby man and nature work in “friendly competition” (Beagon 1992: 80); he reckons it no more inherently perverse than topiary or the designing of novelty gourds.<sup>13</sup> Botanical *prodigia* do occur—one kind is when fruits grow directly out of the tree-trunk, or appear without any accompanying leaves; another is when edible fruits appear on normally inedible fruit-trees, or vice versa—but these must be spontaneous, and may bode either well or ill.<sup>14</sup> Indeed, he calls it a very bad omen if a tree transforms from a better variety to a worse (e.g., white figs into black, or an olive into an oleaster: 17.244), which at least hints that the reverse would be a positive sign. If grafts were thought of in terms of *prodigia*, they would probably bode well; but as they are not supernatural, they are not evaluated on these terms.

Not even virtuoso grafting in the *Georgic* style provokes Pliny’s criticism. Having seen a “cornucopia-tree” of implausible diversity, he is content merely to describe it, before moving on to observations on the science behind it:

tot modis insitam arborem vidimus iuxta Tiburtes †Thulias† omni genere pomorum onustam, alio ramo nucibus, alio bacis, aliunde vite, piris, ficis, punicis malorumque generibus. sed huic brevis fuit vita. nec tamen omnia experimentis adsequi in natura possumus. quaedam enim nasci nisi sponte nullo modo queunt, eaque inmitibus tantum et desertis locis proveniunt.

capacissima insitorum omnium ducitur platanus, postea robur, verum utraque saporis corrumpit. quaedam omni genere inseruntur, ut ficus, ut punicae. (HN 17.120–21)

<sup>12</sup> Many Romans, including Cato, regarded the advice of *haruspices* as absurd (Cic. *Div. 2.24*). The other pieces of evidence for a thunderbolt grafting-taboo are Plin. *HN* 17.124 on mulberry onto elm (*morus talea tantum [seritur] quoniam in ulmo eam inseri religio fulgorum prohibet*) and Palladius (*Opus agriculturae* 3.25.30) on the same, who claims that, although viable, this combination “generates growth of great misfortune” (*parturit magnae infelicitatis augmenta*). Since Palladius was writing well over a century later and draws on Pliny, he is unlikely to be an independent witness; he may also mean *infelicitas* in the merely literal sense of “infertility” (I thank TAPA’s anonymous reader for the latter observation).

<sup>13</sup> Plin. *HN* 15.130, 16.70 (topiary); 19.70 (novelty gourds).

<sup>14</sup> Plin. *HN* 17.241–44. This is taken directly from Theophr. *Hist. pl.* 2.3, although in Theophrastus’s account, soothsayers interpret *all* changes as bad signs. (Theophrastus also says that none of these changes are actually omens, although some are hard to explain.)

I have seen a tree in the Tiburtine region (?) grafted in lots of ways, loaded with fruits of every kind, with nuts on one branch, berries on another, and in other places vines, pears, figs, pomegranates, and the different varieties of apple. It did not live long, however. And yet we cannot reproduce everything in nature through our experiments. For some trees cannot germinate in any way other than spontaneously, and they only grow in harsh and barren environments.

The plane tree is considered the most accommodating of all grafted trees, and after that the hardwood oak, although both impair the flavor. Some trees can be grafted with anything, for example the fig and the pomegranate.

For Roman agricultural authors, technical writers and poets alike, grafting was at best a blessing and at worst a curiosity. Although Pliny says that “there is no further room for ingenuity; no new fruit has been discovered for a long time now,”<sup>15</sup> he does not seem to mean that the depths of depravity have been plumbed. In fact, “This aspect of life reached its acme long ago, and humankind has tried it all; indeed, Virgil speaks of nuts grafted on arbutus, apples on the plane, and cherries on the elm.”<sup>16</sup>

A generation later, in the *Quaestiones convivales*, Plutarch follows a similar procedure: an anecdotal showcase of mostly impossible grafts prompts a theoretical discussion of grafting. A party of guests is presented with an orchard of miscellaneous hybrids, and makes fun of the owner Soklaros for creating a menagerie “stranger than the sphinxes and chimeras of poetry.”<sup>17</sup> However, they immediately fall to suggesting reasons why evergreens resist grafting. This implies that Plutarch finds tree-hybridization intriguing, although in Soklaros’s case quirky and largely pointless. This is the one classical text in which tree-hybrids are compared with monstrous animals, and may hint at wider cultural discomfort about grafting, although if such discomfort were genuinely widespread, this would detract considerably from the wit of the joke. Pliny describes an experimental cornucopia-tree, and Soklaros’s supposed hybrids attract curiosity and amusement, but it should be remembered that ancient grafting was not in reality capable of producing anything startling

<sup>15</sup> *Nec quicquam amplius excogitari potest; nullum certe pomum novum diu iam invenitur* (HN 15.57).

<sup>16</sup> *Pars haec vitae iam pridem pervenit ad columnen, expertis cuncta hominibus, quippe cum Vergilius insitam nucibus arbutum, malis platanum, cerasis ulmum dicat* (HN 15.57). Pliny’s misquotation suggests that he believed that Virgil was listing not finite, but infinite possibilities.

<sup>17</sup> Plut. *Quaest. conv.* 2.6 = *Mor.* 640b-c (πρὸς τὸν Σώκλαρον ἔπαιζον, ὥς τῶν ποιητικῶν σφιγγῶν καὶ χμαιρῶν τερατωδέστερα γένη καὶ θρέμματα βόσκοντα).

enough for inclusion in Axel N. Erlandson's *Tree Circus* (Erlandson 2001), and that unlike spontaneous changes in trees, no historical graft was ever associated with supernatural events.

Beyond Pliny and Plutarch, we find no condemnations of grafting, and indeed a near-total absence of any commentary on actual examples (except when authors explain how to do it). It was a widespread rhetorical trope for Roman authors to disparage economic activities—especially sailing, mining, and warfare—as violations of nature, whose invention was symptomatic of the end of the Golden Age. Grafting was “invented” in harmony with nature—scarcely invented at all, it seems—and is never used to symbolize the application of violence to the natural world for personal gain (although given its vocabulary of bodily violence, discussed below, it would have suited that purpose admirably). Not even plowing escapes accusations of criminality so completely.<sup>18</sup> The only mythical etiology for it is provided by Macrobius, according to whom Saturnus taught it to the Italians, along with sowing and all other forms of propagation.<sup>19</sup> Although it became a symbol of fertility only after Virgil transformed it into a promise of unlimited productiveness, grafting had been a useful part of agricultural practice at Rome ever since its (heavily fantasized) origins. Far from a decadent novelty, the grafting of scions (*insitio*) was considered by the Romans to have been one of the earliest agricultural practices. All authors treat it as a subdivision of planting (*satio*):

at specimen sationis et insitionis origo  
ipsa fuit rerum primum natura creatrix. (Lucr. 5.1361–62)

But the first model for sowing, and the origin of grafting,  
Was Nature herself, the creator of all things.

Humans learned grafting from nature (or during Saturnus's reign); far from decadent, it is, if anything, wholesomely primitivistic and authentically Roman.<sup>20</sup> Cicero, having evoked the ultra-Roman figure of Cato to eulogize

<sup>18</sup> Ovid's *Tellus* complains of her year-long wounding from ploughs and hoes (*Met.* 2.285–87). Columella, *Rust.* 10.70–76 portrays the same actions upon Mother Earth as a startling series of abuses: *lacerate comas ... scindite amictus ... perfode terga ... eradere viscera matris / ne dubita*. He claims that this is no impiety, since she is really Stepmother Earth (10.58).

<sup>19</sup> Macrobius, *Sat.* 1.7.25: *huic deo insertiones surculorum pomorumque educationes et omnium huiusmodi fertilium tribuunt disciplinas*.

<sup>20</sup> Grafting is also a *mos maiorum* in didactic contexts: *tria genera porro insitionum antiqui tradiderunt* (Columella, *Rust.* 15.11.1); *quicquid veteres scripsere coloni / sacraque priscorum verba labore sequar* (Palladius, *De insitione* 35–36). This may also reflect the importance of earlier didactic authors, especially Theophrastus and Mago.



gardening as a pursuit for old men, makes a similar point with a similar wordplay:

nec consitiones modo delectant, sed etiam insitiones, quibus nihil invenit agri cultura sollertius.<sup>21</sup> (Cic. *Sen.* 54)

I take pleasure not only in *plantings*, but also in *implantings*, agriculture's cleverest discovery of all.

In Latin, as in Greek, the very etymology of grafting places it under the umbrella of planting.<sup>22</sup> As I have already mentioned, Virgil seems to have been the first author to portray grafters exploring the limits of possibility, rather than applying inherited knowledge in tried and tested ways. Cicero's Cato makes no distinction between experimentation and the routine practices described by Cato's own *De agri cultura*. All prose authors acknowledge that transplant-graft combinations are restricted by compatibility,<sup>23</sup> but outside the obscure taboo recorded unsympathetically by Varro, there is little sense that grafting might be inadvisable for any other reason. From the *Georgics* onward, to graft is to explore, but it had always been an everyday miracle, like any other form of planting.

#### ADYNATA IN THE ECLOGUES

The surprising results of grafting in the *Georgics* share less with Virgil's alarming *prodigia* than with his fantastical *adynata*, which often consist of rustic produce appearing in unexpected places. Virgil shows a flair for describing sinister deviations from the natural order of things, as in the portents of Caesar's death at *Georgics* 1.476–86 and the eerie *bouleversements* during the plague at Noricum at 3.539–47. Yet not all Virgilian paradoxography is in the same register; as he explicitly states, the transplanting of branches is performed “harmlessly” (*impune*, *G.* 2.32). The figure of *adynaton*, inherited from Greek literature, evolves poetic tropes out of proverbial expressions (Rowe 1965), and may therefore carry a colloquial flavor. In *Eclogues* 8.52–58,

<sup>21</sup> Cicero appears to have coined the word *consitio* for the purpose of expressing the parallel verbally. Cicero and Lucretius demonstrate that grafting was regarded merely as “planting” on the branch, a slightly more challenging permutation of planting in the ground, and not, as for us, a distinct concept.

<sup>22</sup> Cf. Theophr. *Hist. pl.* 1.16.10 (τὰς φυντείας καὶ τὰς ἐμφυντείας); Cato, *Agr.* 7.3–4 (*serito aut inserito*). Varro lists cuttings for grafting (*quae inseruntur ex arboribus in arbores*, *Rust.* 1.39.3) as one of four categories of *semina* or “plantable things.”

<sup>23</sup> Varro, *Rust.* 1.40.5; Columella, *De arb.* 26.1 and *Rust.* 5.11.1; Plin. *HN* 17.103; Plut. *Quaest. conv.* 2.6 = *Mor.* 640b–c.

Damon declares that in a world that can see Nysa married to Mopsus, the wolf should flee the sheep of his own accord, the hard oaks bear golden apples, the alder bloom with narcissus, and the tamarisks sweat rich ambers from their barks. Ross notes that this is a reworking of Theocritus, *Idyll* 1.132–34, and stresses that both passages are announcements of intent to commit suicide, describing “a world gone wrong for the desperate lover” (1980; 1987: 107). Yet as the list continues, this figure starts to seem whimsical, even humorous: “let screech-owls compete with swans,” continues Damon, “and let Tityrus be an Orpheus in the woods and an Arion among the dolphins,” a joke at the expense of Tityrus’s talents. Again, it is worth considering what an unambiguously negative version would look like.<sup>24</sup> Virgil, like Theocritus (who mentions violets from hawthorns, narcissus from juniper, and pears from pine), catalogues desirable and valuable excrescences, not poisonous or barren ones.<sup>25</sup> These *adynata* share nothing in common with negative *prodigia*, whether in Virgil or elsewhere.

Nor is *Eclogue* 8 Virgil’s only pre-*Georgic* use of botanical *adynata*. In *Eclogue* 3, Damoetas says “he who loves Pollio ... may honey flow for him, and the bramble grow balsam,” to which Menalcas replies, “may the one who does not hate Bavius love Maevius’s poems, and yoke foxes and milk he-goats,” once again indicating levity.<sup>26</sup> Many motifs of spontaneous growth in Virgil’s poetry involve the auspicious color gold: honey, yellow apples, amber, the golden bough. The most extensive catalogue of botanical *adynata* in the *Eclogues* is of course *Eclogue* 4, which lists prophecies about the child who will bring a golden age. After his birth, pastured goats will walk home of their own accord, the ox will not fear the lion and Assyrian balsam will grow everywhere; when he is old enough to read, grapes will grow on hawthorns and oaks will sweat honey; when he is adult, no farming or trade will be necessary and sheep will

<sup>24</sup> TAPA’s anonymous reader notes that one candidate is *Ecl.* 5.36–39, in which Daphnis’s death replaces picturesque, pickable plants (barley, violets, narcissus) with unattractive weeds (darnel, wild oats, thistles). This is of course pathetic fallacy rather than *adynaton*.

<sup>25</sup> Saunders 2008 explores a range of biological metaphors for the *Eclogues* as a poetic innovation, for example a mixture of Lucretius and Theocritus (28) or an aberrant form of epic (76).

<sup>26</sup> Verg. *Ecl.* 3.88–89 (*qui te, Pollio, amat, veniat quo te quoque gaudet; / mella fluent illi, ferat et rubus asper amomum*); 3.90–91 (*qui Bavius non odit, amet tua carmina, Maevi, / atque idem iungat vulpes et mulgeat hircos*). Cf. Ov. *Ars am.* 1.747–48: anyone who trusts their friend not to compete for a woman can expect tamarisks to drop apples and honey to appear in the middle of a river.

grow pre-dyed fleeces (19–45). This imagery is tongue-in-cheek, but hardly pessimistic or sinister; trees and plants adorned with an implausible profusion of delights are merely one strand of a broader range of whimsical *adynata*. This seems to be what inspired Virgil to exaggerate the benefits of grafting to the point where man himself could turn these fantasies into reality.

In a diluted sense, botanical *adynata* become reality elsewhere in the *Georgics*, as is well known: the miraculous Italian countryside bears a double harvest (*biferi ... rosaria Paesti*, 4.119), and an impossible mixture of produce arises in the *senex Corycius's* garden (4.125–46). Neither of these examples involves grafting (instead, the Corycian somehow relocates entire rows of mature elms, pears, blackthorns, and planes),<sup>27</sup> although they do confound nature by disrupting the flow of time. The Corycian cultivates an impossible bouquet of flowers from different seasons of the year, as noted by Ross (1987: 200–6). His garden is therefore a poetic confection like the tree with *novas frondes et non sua poma* in Book 2,<sup>28</sup> and also resembles the cornucopia-trees of Pliny and Plutarch. Both Virgil's hybrid trees and hybrid garden have been interpreted as disquieting poetic lies, and they are certainly unrealistic, but the *Eclogues* contain precedents for such fantastical imagery that seem more playful than mendacious. As Coe 2007 rightly suggests, the golden bough of *Aeneid* 6 is a supernatural version of mistletoe, which embeds itself in the host tree's bark and was therefore considered in antiquity to be a natural graft.<sup>29</sup>

## ANTHROPOMORPHIC IMAGERY

Much of the potential for sinister implications in Virgil's treatment of grafting lies in the fact that its vocabulary often suggests bodily violence and mutilation. Coe 2007 has recently argued that Virgil uses linguistic echoes in the Polydorus episode in *Aeneid* 3 to expose impious and even criminal under-

<sup>27</sup> Verg. G. 4.144–46. The Latin is unequivocal about the maturity of the trees (*seras in versum distulit ulmos ... et spinos iam pruna ferentis*), although presumably cuttings are indicated, rather than entire trees. Grafting itself (in the common form of apple-branches onto pears) is implicitly condoned on two occasions in the *Ecl.* (1.73 and 9.50), when it represents an investment of effort that will benefit the landowner's heirs.

<sup>28</sup> Seneca criticizes the cultivation of flowers out of season (*Ep.* 122.8), but the point is that such projects are gratuitously expensive luxuries, and does not apply to the self-sufficient Corycian.

<sup>29</sup> In point of fact mistletoe is a hemi-parasite, and its identification as a natural graft is essentially correct. It is propagated when seeds in bird excrement germinate in trees, an accident which Pliny claims can make different colored berries grow on the same tree (*HN* 17.22: *bacas simul discolores*; cf. *Aen.* 6.204: *discolor ... auri per ramos aura refulsit*).

tones in the grafting procedures described in *Georgics* 2. This is a convincing reinforcement of Thomas's implication of grafting in Virgil's indisputable preoccupation with "tree-violation," particularly in the striking observation that each passage pairs myrtle with cornel, which is almost without parallel in classical Latin.<sup>30</sup> Still, we should not forget that the anthropomorphic treatment of trees was not unique to Virgil. Gowers supplements a diverse series of examples gathered by Robin Nisbet with two detailed anatomical portraits from agricultural authors: Columella suggests that trees have equivalents of *pedes*, *truncus*, *brachia*, and *palmae*, and are *vestitae* in fruit and foliage, and Pliny that trees have *cutis*, *sanguis*, *caro*, *nervi*, *venae*, *ossa*, and *medullae*.<sup>31</sup> Since the anthropomorphic view of trees was widespread in antiquity (and beyond) and the Latin vocabulary small, it would be difficult for a Roman poet to discuss trees at any length without using anatomical terms such as *truncus*, *brachia*, and *coma*. It is difficult even in English to describe, say, the emission of sap without words like "weeping" or "sweating." These suggestions of anthropomorphism must inevitably contain the potential to disturb; we must rely on our perceptions of how much Roman authors chose to exploit this potential. Often enough they personify grafted trees, but usually without anthropomorphizing. For example, Propertius's Vertumnus receives garlands of apples which the grower has grafted onto the "unwilling" pear-tree (*invito stipite*, 4.2.18); this pear-tree has been imposed upon, not mutilated.<sup>32</sup> As we shall see, the language of later poets also defines *insitio* more often as a relationship (an imposition or a social bond) than as an embodied experience (a violation or a loss of identity).

If Virgil regarded grafting as a symbol of humankind's pyrrhic victory over nature, an unsatisfactory result of *labor improbus*, then his true feelings seemingly went undetected until the twentieth century. In his 1988 commentary on the passage with which we started, Thomas states (ad G. 2.80–82):

The lines capture the essence of the book, and ultimately of the poem. Through man's forceful intervention the world of nature, after Saturn subject to degenera-

<sup>30</sup> The shafts of both cornel and myrtle were commonly used for making spears, which is why they are mentioned together at G. 2.447–48 and in their only other pairing (Grattius, *Cynegetica* 115).

<sup>31</sup> Gowers 2005: 334–37, citing Nisbet 1987: 243 (= 1995: 202); Plin. *HN* 16.181 and other passages; Columella, *Rust.* 3.10.11.

<sup>32</sup> Henderson 1999: 124 shows that another example of anthropomorphism, Martial's amphibious-looking "Caesarean" plane tree (9.61), embodies the immortal vigor of the Julian house in its "thick hair" (*platanus densis Caesariana comis*, 6; cf. *caesaries*) as much as in its sacrosanct longevity.

tion, is transformed and made “productive”; in the process it loses its original identity ... technology is triumphant. Those who associate successful technology with success will feel comfortable; others may feel ambivalent.

If Virgil meant to make grafting seem sinister, he was the first to do so. In order to convey ambivalence, in other words, angst, the negative force of *aliena*, *ingens*, and *mirata* must be strong enough to compete with the positive imagery in the same passage. There are three separate personifications in this passage: *gemmae* burst through the bark and split their “slender tunics”; the grafters teach (*docent*) the shoots to grow. After fertile (*feraces*) scions are inserted, the tree soon reaches towards the sky, wondering (*miratast*) at its fecund branches (*ramis felicibus*).<sup>33</sup> The vocabulary is encomiastic, the personifications nothing like as grim as they might be.<sup>34</sup> Even Ovid makes comparatively little use of the anthropomorphic tree-words in his numerous portraits of characters suffering tortuous transformations into personified trees.<sup>35</sup> Here, if anywhere, is a “*labor-fructus* ideal” (Boyle 1979: 66 and *passim*). As in most ancient poetic treatments of grafting, the imagery is opportunistic and varied. In the same passages in which we find the language of burdening and wounding, there are often descriptions of sweetening and mellowing, as well as non-violent personification imagery such as teaching, adoption, and *hospitium*.

Discussions of this passage do not customarily make a connection with an apparent reception in the visual arts, one which encourages us to see Virgil’s treatment of hybrid trees as influencing the *Zeitgeist*. The friezes of the Ara Pacis Augustae, created in 9 B.C.E. (ten years after Virgil’s death), contain a large quantity of vegetal detail in the form of stylized acanthus stalks bearing a diversity of fruits and flowers. Castriota 1995, esp. 13–33 has demonstrated that these “polycarpophoric” plants are directly imitated from a number of Hellenistic reliefs from Pergamum, and stresses the symbolism of the individual growths, which include oak, grapevine, poppy, rose, laurel, ivy, and probably wheat. This cornucopia-plant imagery (which would have been eye-

<sup>33</sup> Thomas (1987: 258; also 1988b: 170) takes the verb in *miratastque novas frondes et non sua poma* to imply a shocked and disturbed reaction, mainly on the basis of a parallel in the pseudo-Virgilian *Ciris*, where the transformed heroine *mirata novos expalluit artus / ipsa suos* (81–82). We might conversely ask what flavor the *Georgic* usage is imparting to the later poem (in which *expalluit* removes any ambiguity).

<sup>34</sup> An obvious comparandum is the toppling mountain-ash that represents Troy: *tremefacta comam concusso vertice nutat ... vulneribus ... congemuit* (*Aen.* 2.626–31).

<sup>35</sup> Daphne keeps her *nitor* (*Met.* 1.549–62), the Heliades their *lacrimae* (2.364–66), and Myrrha her *medulla* (10.492).

catching when painted) had wider currency; other Augustan artworks show similar designs, for example some silver cups in the British Museum (Corbett and Strong 1961), which include twelve different crops (wheat, grapevine, ivy, apple or quince, poppy, oak, pine, pomegranate, myrtle, fig, pear, and olive).<sup>36</sup> The stylized patterns on the altar are hardly meant to represent living organisms. Still, the fact that Virgil had created the fantasy of unlimited grafting twenty years before may come from the same discourse that made artists look to Pergamum, choosing to symbolize the plenteous peace of the Augustan era with an impossible mixed yield of fruits and flowers. This does not necessarily mean that Virgil's own use of this motif had a political dimension. It does suggest, however, that the first generation of readers of the *Georgics* associated artificial "polycarpophoria" with a Saturnian Golden Age, rather than the abuses of nature which followed.

## OVID

Virgil's influence on later Latin poets was unparalleled. His ascending tricolon of *Eclogues*, *Georgics*, and *Aeneid* became the definitive poetic *cursus honorum* (see Theodorakopoulos 1997), and all subsequent Roman epic can be read as a history of Virgilian receptions (see Hardie 1993). Virgil's portrayal of grafting gained wide currency in its own right, and despite the range of different genres involved, it is to some extent possible to read all subsequent agricultural literature of the Roman empire as a series of responses to Virgil.

As with most strands of the Virgilian tradition, this begins with Ovid. Grafting is rarely used in classical literature in similes, and even more rarely for other metaphorical purposes,<sup>37</sup> unlike in modern English, but nonetheless it makes several appearances in the Ovidian corpus, and is not restricted to those texts written in the didactic style. There are two images of bodies being grafted together in his most Virgilian-influenced work, the *Metamorphoses*. The first is well known, and describes Salmacis and Hermaphroditus fusing together as they grapple underwater:

<sup>36</sup> According to Pliny, Pompey's third triumph of 61 B.C.E. had also featured a "polycarpophoric" sculpture (*HN* 37.14), a golden pyramid decorated with animals and mixed fruits, surrounded by a golden vine: *montem aureum quadratum cum cervis et leonibus et pomis omnis generis circumdata vite aurea*. New trees and plants were, like new animals, the spoils of conquest. However, for botanical motifs to evoke triumphal displays directly, one would expect the inclusion of palms and laurels.

<sup>37</sup> One potential instance occurs at *Met.* 3.117: one of the sown men tells Cadmus not to sow/graft himself (*insere*) into their civil wars, a neat agricultural pun, although sowing alone may be meant.

vota suos habuere deos; nam mixta duorum  
 corpora iunguntur, faciesque inducitur illis  
 una. velut, si quis conducatur cortice ramos,  
 crescendo iungi pariterque adolescere cernit,  
 sic ubi complexu coierunt membra tenaci,  
 nec duo sunt et forma duplex, nec femina dici  
 nec puer ut possit, neutrumque et utrumque videntur. (*Met.* 4.373–79)

Her prayers found their gods: for the pair's bodies  
 Mix and join, and a single form steals over them both.  
 When someone inserts branches into bark,  
 He sees them joined by growth, maturing together;  
 This is how their limbs fused in the clinging embrace.  
 There are no longer two—it is a double form, you could not say  
 Whether it was a woman or a boy—they seem to be either and neither.

For Rimell, this scene of a “violent union” is “tinged with Salmacis’ furious energies ... destabilizing our impression of a couple blissfully in synch” (2006: 93). Despite the asymmetry and frenzy of the encounter, the grafting image itself seems designed more to convey the completeness of the fusion than to make it disturbing: there is no mention of suffering in the process itself, and the product is a whole and aesthetically pleasing form. The same applies to the transformation of Ovid’s definitive “couple blissfully in synch,” namely Philemon and Baucis. Rewarded with eternal companionship in tree form, they become a linden and an oak growing from the same stock (*de gemino vicinos corpore truncos* [8.720], literally “juxtaposed trunks from a twin body”).<sup>38</sup> One of these grafting images is a simile, the other literal, but they have a number of things in common. Both are commemorated by a memorial in the rural landscape; both are enacted as a divine reward on the petition of one of the terrestrial beings involved; and both are rapid, successful, painless, and permanent.

Literal grafting occurs four times in the Ovidian corpus, and is presented in an equally favorable light. Like Cicero’s Cato, the poet describes it as one of gardening’s more pleasurable pastimes. It is one of the rustic pursuits with which the convalescent lover may distract himself:

venerit insitio; fac ramum ramus adoptet,  
 stetque peregrinis arbor operata comis. (*Rem. am.* 195–96)

<sup>38</sup> Gowers 2005: 351 proposes this interpretation as a possibility, but it is surely correct: the singular *gemino ... corpore* is unambiguous.

Then it is grafting season; make branch adopt branch,  
And let the tree stand under cover of foreign tresses.

In *Metamorphoses* 14, Pomona's lack of a spear (*iaculo*) explains her more peaceful agricultural activities: instead, she is dexterous with a hooked sickle, which prunes stalks and the spreading *brachia* of trees, and splits bark to insert wood and "offer juices to a foreign nursling" (623–31). This is part of a picturesque scene; arguably the pruning of *brachia* implies other physical abuses—a typically Ovidian violation of a *locus amoenus*<sup>39</sup>—if it reflects the rape-attempts to which Pomona is subjected. Yet sexual violence is not achieved by others, and not ultimately needed by Vertumnus; this may be one case in which the anatomical terminology of grafted trees does not significantly imply suffering (indeed, the two quotations above both portray foster care). Ovid's positive view of grafting even becomes programmatic. He counts it among the manifold benefits of *cultus*, "cultivation/adornment":

cultus et in pomis sucos emendat acerbos,  
fissaque adoptivas accipit arbor opes.  
culti placent. (*Medic.* 5–7)

Cultivation also mends the sour juices of apples,  
And the tree is split to receive an adopted bounty.  
Cultivated things are pleasing.

Grafting fulfils a similarly positive function in the *Ars Amatoria* (2.649–52), this time as a symbol of the resilience which love develops through habituation:

dum novus in viridi coalescit cortice ramus,  
concutiat tenerum quaelibet aura, cadet:  
mox eadem ventis, spatio durata, resistet,  
firmaque adoptivas arbor habebit opes.

While the new branch is growing into the green bark,  
If any breeze shakes the delicate thing, it will fall out.  
Soon, when it is hardened by time, the same branch will resist the winds,  
And the sturdy tree will keep its adopted bounty.

Ovid's embrace of the concept of grafting can be considered typical of Roman attitudes, although his emphasis on the fusion of the old with the new may be considered particularly timely as a symbol of Augustan classicism. He

<sup>39</sup> Parry 1964; Hinds 2002.



dwells characteristically upon forms of artifice which separate the “Golden Age” of Augustus from that of Saturnus. This is the poet who embarked on a poem promoting *medicamina faciei femineae*, including wigs and hair-dye,<sup>40</sup> despite their long-standing association with misogynistic invective, especially against old women. No poet was more likely to endorse inventions that some considered unorthodox. Yet none of Ovid’s six references to grafting entertain sinister or controversial intimations; if he detected these in Virgil, he chose not to explore them.

## NERONIAN LITERATURE

Early imperial literature continues to bear out the impression that grafting appealed to the practical interest and imagination of various writers. The phrase “Neronian literature” should be used cautiously, since in fact only three authors touch on the subject. The designation does, however, make a point not often acknowledged, namely that the Neronian agricultural writer Columella belongs to the same context as his close contemporaries Calpurnius Siculus and Seneca.<sup>41</sup>

Calpurnius, as a writer of *Eclogues*, inevitably responds to Virgil. In his second poem, Idas the shepherd and Astacus the gardener compete in serenading Crocale, each trying to make his own vocation seem the more utopian. Idas claims that Pales has taught him how to breed different-colored sheep to produce a new color of wool (2.36–39), evoking the pre-dyed fleeces of Virgil’s *Eclogue* 4.42–45. Astacus counters this with the claim that his skill can make a tree “flexible” (*mobilis*) and cause it to “put on unfamiliar leaves and fruits it didn’t deliver,” resulting in pear-trees being “mellowed” by apples, and peaches “sneaking in amongst” plums (Calp. *Ecl.* 2.41–44). Despite the infrequency of grafting metaphors in Roman literature, we cannot discount the obvious metapoetic potential in the image of an original element being varied and improved by the addition of something new. Neronian literature was just as secondary and just as climactic as Augustan literature. Perhaps even for readers who see anxiety in the symbolism of grafting, it can be seen as a recurrent means for Roman writers of the “natural” to index their own novelty. Columella, although writing from practical experience in his *De re rustica*, is also in dialogue with Virgil, not least in the tenth book in which he switches into hexameters to versify gardens, in answer to the challenge issued

<sup>40</sup> Ov. *Ars am.* 3.163–66: cf. *peregrinis comis* (*Rem. am.* 196, quoted above).

<sup>41</sup> Calpurnius’s Neronian date is widely, but not unanimously, accepted. Mayer 1980 defends it convincingly.

in *Georgics* 4.<sup>42</sup> Like Calpurnius (and Propertius), he chooses to metaphorize supplementation rather than violation:

ergo age nunc cultus et tempora quaeque serendis  
seminibus, quae cura satis, quo sidere primum  
nascantur flores Paestique rosaria gemment,  
quo Bacchi genus aut aliena stirpe gravata  
mitis adoptatis curvetur frugibus arbos,  
Pierides tenui deducite carmine Musae. (Columella, *Rust.* 10.35–40)

Come then, Pierian Muses, and draw forth in slender song  
Cultivation; when seeds should be sown, each in its season;  
The stardate when flowers bloom and Paestum's roses bud,  
Or Bacchus's progeny; or when, burdened by another's stock,  
The mellow tree is bowed by adopted fruits.

If the “adopted fruits” include Columella's own verse importation of the *Georgics* into the *De re rustica* (or vice versa), signaled by the *rosaria Paesti* with which Virgil begins his *praeteritio* (*G.* 4.119),<sup>43</sup> then a neat symmetry is achieved. The contents of *Georgics* 2 (vines and trees) are mentioned briefly here, but will not be given full didactic explanation later in the poem.<sup>44</sup> Columella effectively mirrors Virgil's glimpse of a marginalized garden with his own glimpse of a marginalized *Georgics*.

Columella's prose account of grafting is also Virgilian, in its spirit of exploration. He stresses the range of possibilities for grafting by transplant, despite the restriction of compatibility:

sed omnis surculus inseri potest, si non est ei, cui inseritur, arbori cortice dissimilis. si vero etiam similem fructum et eodem tempore adfert, sine scrupulo egregie inseritur. (Columella, *Rust.* 5.11.1–2)

But every kind of cutting can be grafted, if it is not incompatible with the bark of the host tree. Indeed, if it also bears similar fruit in the same season, the grafting takes place very well with no difficulty.

<sup>42</sup> Gowers 2000 links the literally marginal location of Roman garden plots with the textual “space” given to them by Virgil and Columella.

<sup>43</sup> This passage also evokes the beginning of *G.* 1; note the echo in line 36 (*quae cura satis, quo sidere primum*) of *G.* 1.1 (*quid faciat laetas segetes, quo sidere terram*).

<sup>44</sup> Henderson notes that Columella's program for the *Rust.* as a whole is not an accurate forecast either (2002: 122: “grafting and pruning are oddly separated from trees and vines ... rosebeds will never get proper treatment”).

In this he follows Varro (*Rust.* 1.40.5), although he omits Varro's proviso that the branch grafted on should be a producer of better fruit than the host—in other words, that there should be a purely practical aim of an improved yield (*Rust.* 1.40.6). This omission is symptomatic of Columella's whole approach to grafting. For Pigeaud 1988, Columella is a willful violator of an unstated taboo on grafting, a teratogenic “anti-Aristote” who is as much an artist as a gardener. This probably overstates the degree to which Columella saw himself as controversial, but captures the essential truth that he viewed the potential of grafting with optimism. This may reflect his reliance upon Virgil, who for him is the *verissimus vates* (*Rust.* 1.4.4). Despite his extensive experience in farming, he shows enthusiasm for entirely impractical applications. As we are told by Columella himself and by Pliny,<sup>45</sup> he invented inarching (grafting by gradual fusion rather than transplant), which does in fact increase compatibility, explaining his bold statement that despite the conventional opinion, anything can be grafted on anything.<sup>46</sup> However, the example he provides (grafting olive onto fig) takes at least seven years to perform and promises no increase in yield or quality whatsoever. In *De arboribus* 9.1–2 he describes how to create a single bunch of grapes of different colors and types—he recommends at least four or five—which, again, has no value beyond that of novelty. Columella is one of several Romans, especially in the first century C.E., who engaged in agriculture as an applied science. His own uncle Marcus had bred African rams with local sheep, to create a mixed breed, as he reports with pride<sup>47</sup>: this had practical value, but animals too might be subject to gratuitous experimentation, as illustrated by Pliny's description of how to split and separate the horns of newborn cattle so that they have four instead of two (*HN* 11.128). Many gentlemen-farmers took a similar interest in grafting experiments. A number of educated Romans, including Gaius Matius—friend of Caesar and Octavian and correspondent of Cicero (*Fam.* 11.27–28)—and an unnamed member of the respectable *gens Appia*, became ancient forerunners of Granny Smith by introducing new varieties of fruit which were named after them (White 1970: 259). Pliny lists several such cultivars as evidence of the “ingenuity of grafting” and because, he puns, their

<sup>45</sup> Plin. *HN* 17.137, noted by Pease 1933: 68n16.

<sup>46</sup> *Sed cum antiqui negaverint posse omne genus surculorum in omnem arborem inseri ... existimavimus errorem et huius opinionis discutiendum tradendamque posteris rationem, qua possit omne genus surculi omni generi arboris inseri* (Columella, *Rust.* 5.11.12).

<sup>47</sup> Columella, *Rust.* 7.2.30; cf. Calp. *Ecl.* 2.36–39.

creators have “propagated” eternal fame for themselves.<sup>48</sup> Seneca the Younger himself, one of the richest men in Rome, claims personal knowledge of grafting when (uniquely in classical Latin) he applies it as an extended metaphor: “I want to give you an example from my own handicraft.”<sup>49</sup> He appears to know what he is talking about, since his description of the procedure for grafting an old and rotten vine is similar to the one described at *De arboribus* 6.5. It seems that Columella is typical of first-century Roman elite attitudes towards grafting, which since the time of Cato had progressed from the mundane to the experimental, and thereby captured the imagination. Virgil’s vision of indiscriminate grafting in the *Georgics*, although an unscientific fantasy, reflected this trend and—since (as far as we know) all subsequent agricultural writers had read it—probably contributed to it.

### PALLADIUS

Although Calpurnius and Columella both versify grafting as part of their very distinct appropriations of Virgil, it is not until late antiquity that the topic reappears in extant poetry. Well after the authors mentioned so far, and probably in the late fourth century C.E., Rutilius Taurus Aemilianus Palladius wrote a prose treatise on farming, the *Opus agriculturae*. He included a fourteenth book of 170 elegiac verses (with a self-effacing preface) on the subject of grafting, known as the *Liber de insitione*. In so doing he signaled his inheritance of the Latin tradition of agricultural poetry: just as Virgil’s call for a successor to versify gardens (*G.* 4.116–24) had inspired Columella to do so in Book 10 of his twelve-book *De re rustica*, Palladius narrows the focus once more. The garden was the confined, intimate space in the *Georgics* where the virtuoso Corycian operated (Gowers 2000: 129–33); the scientific art of grafting was the precise, delicate technique in which the virtuoso Columella excelled. Palladius’s prose draws heavily on Columella and third-century authors (“very simple, clear Latin, without any attempt at producing a work of *belles lettres*,” Browning 1983: 89), whereas the *De insitione*, the only composition from antiquity devoted entirely to grafting, draws on Virgil. Of the

<sup>48</sup> *Reliqua cur pigeat nominatim indicare, cum conditoribus suis aeternam propagaverint memoriam ...? nisi fallor, apparebit ex eo ingenium inserendi* (Plin. *HN* 15.49).

<sup>49</sup> *Volo tibi ex nostro artificio exemplum referre* (Sen. *Ep.* 112.1): a dissipated youth rejects the “graft” of *ratio*, like a withered vine. This comment probably reflects his acquisition of Remmius Palaemon’s spectacularly productive estate, whose vineyards drew crowds (*HN* 14.48–52). Palaemon himself had supposedly performed a vine-graft which yielded 360 bunches of grapes (Suet. *Gram.* 23).

thirty graft combinations it describes, twenty-three are impossible (Mudge et al. 2009: 457–58), indicating that his approach is imaginative rather than documentary. Furthermore, as Formisano 2005 has demonstrated, the poem bears the hallmarks of a self-conscious literary composition. It is, for us, the culmination of a series of responses to Virgil's grafting fantasy, which constitute a coherent tradition intersecting with, but independent of, the historical reality of grafting.<sup>50</sup>

Palladius's prose and poetry offer an instructive case study in the use of anthropomorphic imagery in grafting. In Book 3, he presents an image which anyone disturbed by Virgil's language would find horrific: grafting can produce peaches that are "born without bones," that is, pitless.<sup>51</sup> As it is, the expression occurs in the prose part of the work, where there are no signs of an ambivalent or unsettling worldview, or of a mortal existence compromised by the perverse manufacture of sinister prodigies. This is a specimen of typical Latin rather than a deliberate implication of *nefas*.<sup>52</sup> The poem itself occasionally features imagery of a violent or ominous nature: however, this is intermingled with several benign metaphors for grafting, and a string of these occurs in the opening section: grafting as marriage (13–14), hospitality (19), adoption (20), and even consecration (26). Medlar branches grafted onto a pear tree "threaten greedy hands" with their thorns (105–08), and the ash-tree, lending support to a fig-tree bearing mulberries, fears the new fruit as it becomes "spattered with gore."<sup>53</sup> The poem contains a blend of images both light and dark, as does any lengthy discussion of agriculture in Latin verse. The language in this last passage recalls Virgil's grafted tree, which on its own might suggest a pessimistic reading; but an even plainer reminiscence appears in the description of grafting almond-branches onto chestnut at 153–56:

in modicam tornat siliqua tendente figuram<sup>54</sup>  
 et frondes pulchro ditat odore feras  
 castaneamque trucem depulsis cogit echinis  
**mirari fructus levia poma sui.**

<sup>50</sup> Mistaken claims about incompatible grafts in Palladius, as in Pliny, indicate an ongoing confusion among the literate about what was actually possible.

<sup>51</sup> *Hinc persici poma sine ossibus nasci* (Palladius, *Opus agriculturae* 3.17.8).

<sup>52</sup> Cf. Suet. *Claud.* 8: *olearum aut palmularum ossibus incessebatur* ("they would toss olive or date pits at him").

<sup>53</sup> Palladius, *De insitione* 129–30: [*fraxinus*] *metuit fetus sparsa cruore novos*.

<sup>54</sup> A reminiscence of G. 1.74 (*siliqua quassante legumen*).

As the husk stretches out, [the almond] lathes [the chestnut] into a neat  
shape

And endows the wild branches with a sweet perfume;  
It compels the prickly chestnut to shed its urchins  
And marvel at the smooth fruits it yields.

The chestnut-tree, formerly *trux* (fierce, spiky), now marvels (*mirari*) at the smooth almond-fruits it has artificially received. The personification of this nut-tree is just as vivid as that of the “gore-sprinkled” ash-tree, but the tone is the exact opposite. Perhaps Palladius’s reception of Virgil has redeployed the disquieting elements of the *Georgics* in complex or hidden ways and recreated that poem’s ambivalence. A more economical interpretation, though, is that Palladius (like Ovid, Columella, Pliny, and Virgil’s other Latin agricultural successors) saw grafting in a distinctly favorable light. The exploitation of unsettling metaphors where they suggested themselves (as with the blood-red mulberries) is perfectly compatible with a larger project of celebrating his own *ingenium inserendi*, to borrow Pliny’s apt expression (*HN* 15.49).

## CONCLUSION

Suggestions that any Roman author was suspicious of grafting, whether on religious, moral, or symbolic grounds, have little basis in the literary evidence. Pre-Virgilian authors either praise it or offer no comment; Book 2 of the *Georgics* adds an extra dimension, namely the fantasy of unlimited transplantation; later texts show increased interest, manifested as a range of favorable treatments, whether practical, symbolic, or sentimental. Regardless of genre or date, attitudes toward grafting (both real and imagined) are uniformly favorable from Cato to Palladius. Recognizing this may reduce the extent of disjuncture which modern critics tend to perceive between the conservative and utopian *laudes ruris* of the Augustan period and the later celebrations of artifice—including Neronian novelty and Flavian (or at least Statian) technocracy—which are now so well documented.<sup>55</sup> Roman writers of all periods show a consistently positive attitude towards grafting; this very fact invites us to give it more attention than most of these writers claim it deserves. Virgil’s inventive (even “adynatist”) imaginations stand at the head of a long, if marginal, tradition of grafting-fantasies. This indicates that the farming activities of the *Georgics*, so insistently traditional *en bloc*, might at key moments be as novel and technocratic as the verses which express them.

<sup>55</sup> On Statius’s *Silvae*, see, e.g., Myers 2000 and 2005, with Pavlovskis 1973.

## CODA: VITAE VERGILIANAE

As an appendix to this story of a literary theme in which Virgil plays so prominent a role, I would like to suggest how the theme may in turn have affected the *Nachleben* of the author himself. Virgil's reputation was impressive in his own lifetime, and continued to increase over the coming centuries until it outstripped that of any other non-Christian poet. This was due partly to the ability of the *Aeneid* to retain its place on European school curricula, and also partly to the supposed prophecy of the birth of Christ in *Eclogue* 4. However, there are early signs that Virgil's praise of grafting in the second *Georgic* contributed to his later biographical metamorphosis into *Virgilius Magus* (Petzoldt 1995). Marian notes a surprising lack of connection between the "magic" in Virgil's own works (especially the rites of *Eclogue* 8) and the folkloric material which surfaces in the twelfth century: "his name proved to be one of those magnets around which disconnected stories gather" (1993 [1948]: 99). There may be vestiges of other literary origins amidst this material. The anecdote that he built two exits to the city, one causing good luck and the other bad, recalls the gates of True and False Dreams in *Aeneid* 6; the temple containing statues that represent Italy's kingdoms (which collapsed into dust at the birth of Christ) recalls the statue-filled ancestral hall which King Latinus visits in *Aeneid* 7.<sup>56</sup> Yet instead of attributing Virgil's folklore directly to his poetry, we might do better to see it as the product of an intermediate tradition, namely the late antique *Rezeptionsgeschichte* of the poetry and its author.

In the 60s C.E., Columella had described his desire to write a sequel to the *Georgics* as coming "from a desire to venerate the poet, as if his spirit (*numen*) were compelling me."<sup>57</sup> The term *numen* was not usually used of mortals (except of the emperor, clearly a special case); perhaps a form of "sanctification" was already taking place in the mind of a reader of the *Georgics* as early as the first century. However, the first symptom of supernatural associations, the clairvoyant practice of the *sortes Vergilianae*, cannot be securely dated before the fourth century, the earliest date of composition for the *Historia Augusta*,

<sup>56</sup>There is no evidence that the talismans with which Virgil protected his townsfolk from various ills (a magical model of the city, a brass fly, a golden leech, a preservative piece of meat) were inspired by the content of his poetry, e.g., the golden bough, although there are clearly elements which recur (cf. the "Brazen Head"). The sources are conveniently collected in Petzoldt 1995 and Williams and Pattie 1982: 90-93.

<sup>57</sup>Columella, *Rust.* 10 praef. 4: *ex voluntate vatis maxime venerandi, cuius quasi numine instigante.*

where it is first mentioned.<sup>58</sup> This is also the era when the first extant Life of Virgil, that of Donatus, was composed.<sup>59</sup> As the subsequent evolutions of the ancient *Vitae* indicate, this document contains early signs of the transformation from biography to hagiography and beyond.

It appears that some elements of Donatus's biography (and especially of its successors) were inspired by Virgil's own works,<sup>60</sup> with the exclusion of the *Aeneid*. This suggests that these non-mythical works were regarded as more personal, even biographical. Virgil's father, a *viator* who married his employer's daughter, made his fortune through buying up woodland (*silvis coemendis*) and bee-keeping (*apibus curandis*); either the father's life inspired the content of the *Georgics*, or (more likely) vice versa. Virgil himself, we are told, was such a quiet and happy baby that he presaged a prosperous horoscope (cf. *Ecl.* 4)<sup>61</sup>; and when fully grown, he was large, swarthy, and rustic in appearance,<sup>62</sup> the ideal person to give the command *nudus ara, sere nudus*. This skepticism can be taken too far, and we must accept that much accurate Suetonian material is present. For example, the concrete historical details imply that his reputation for chaste morals is based on more than his sacerdotal pose as a *vates*, and his ephebophilia on more than the melancholy over Daphnis, Alexis, Euryalus, Pallas, and other youths out of reach.<sup>63</sup> The more folkloric material,

<sup>58</sup> In this text, two emperors are said to have consulted the *sortes Vergilianae*, receiving suspiciously reliable oracles (SHA, *Alex. Sev.* 14; *Hadr.* 2). Jerome's complaint in 394 C.E. that the Bible was being given the same treatment as Homer and Virgil seems to allude to Proba's composition of a Christian Cento (*Ep.* 53.7), but may also imply *sortilegium* from Christian texts. Both practices were probably transferred from Homer and Virgil onto the Bible.

<sup>59</sup> Brugnoli and Stok 1997: vi provide a full *stemma*.

<sup>60</sup> Donatus attributes this biography to Suetonius, and it is certainly the best witness to this lost work. Rostagni 1944 regards it as purely Suetonian; Hardie 1966: xii and Brugnoli and Stok 1997: vi treat it as a close paraphrase, to be supplemented by passages in Jerome, which derive independently from Suetonius.

<sup>61</sup> Donat. *Vit. Verg.* 4: *ferunt infantem, ut sit editus, neque vagisse et adeo miti vultu fuisse, ut haud dubiam spem prosperioris geniturae iam tum daret*. Although the baby in *Ecl.* 4 is not himself called placid, his pacifying effect on animals and the implication that he will (most unnaturally) smile at his mother at birth (60–63) suggest a parallel. A more explicit response to *Ecl.* 4 occurs in the *Vita Focae*: the earth produces grass and flowers to cushion the baby, and the “happy bees” (*laeta cohors apium*) put honey into his mouth (50–54).

<sup>62</sup> Donat. *Vit. Verg.* 8: *corpore et statura fuit grandi, aquilo colore, facie rusticana*.

<sup>63</sup> The latter suggestion may have gained appeal now that similar themes in works such as Thomas Mann's *Death in Venice* and A. E. Housman's *A Shropshire Lad* have been accepted as autobiographical.



however, is likely to be of later origin, and this brings us back to the theme of grafting in *Georgics* 2. It seems more than coincidental that Virgil's birth is accompanied by two miracles of tree-branches growing. One is a poplar cutting (*virga populea*) planted after the birth "in the local custom," which soon outgrows the other poplars and attracts cult as a fertility symbol under the name "Virgil's Tree" (5). The other miracle is a dream his mother has on the night before she gives birth:

praegnans eo mater somniavit enixam se laureum ramum, quem contactu terrae coaluisse et excrevisse ilico in speciem maturae arboris refertaeque variis pomis et floribus, ac sequenti luci cum marito rus propinquum petens ex itinere devertit atque in subiecta fossa partu levata est. (Donat. *Vit. Verg.* 3)

Pregnant with him, his mother dreamt that she gave birth to a laurel branch, which was nourished by contact with the earth and grew up from that spot into the form of a mature tree, crammed with various fruits and flowers. On the next day, heading for a place in the countryside nearby with her husband, she turned aside from the route and was delivered in a nearby ditch.

A dream of a growing tree portending greatness has many precedents in ancient literature,<sup>64</sup> but the fact that it is a cornucopia-tree seems particularly apt. Virgil's Life begins from two of his most miraculous poetic creations: the baby of *Eclogue* 4 and the grafted tree of *Georgics* 2. The reason for the post-classical change of spelling from *Vergilius* to *Virgilius* is unknown; many favor *virgo*, "maiden", by analogy with the nickname *Parthenias* ("Miss Innocent," Donat. *Vit. Verg.* 36), but some have posited the influence of *virga*, "magic wand."<sup>65</sup> Since Donatus associates him with two omens involving replanted branches—a *virga populea* and a *laureus ramus* (cf. *aureus ramus*?)—it may be relevant that *virga* can also mean a stick for grafting (*Ov. Met.* 14.630). Priscian even derives "Virgilius" from *virgulta*, "tree-shoots," the term with which Virgil introduces the whole theme of arboriculture in *Georgics* 2.<sup>66</sup> Since his verses had elevated grafting from a convenience to a miracle, it was an apt compliment for Virgil's admirers to botanize the author himself.

<sup>64</sup> E.g., Hdt. 1.108 (cf. 7.19.1); Soph. *El.* 419–23.

<sup>65</sup> Although the *virga* etymology is widely known, its proponents are difficult to trace; it is acknowledged by Charnock 1882 s.v. "Virgill."

<sup>66</sup> The only ancient etymology cited by Maltby 1991 is Priscian's (2.135.14: *servilis Servilius ... virgulta Virgilius*); cf. Verg. *G.* 2.2–3: *nunc te, Bacche, canam, nec non silvestria tecum / virgulta et prolem tarde crescentis olivae.*

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