dark motives of Plutarch's Lucullus would have been grist to Sallust's mill.[22] His Lucullus assists Pompeius for other motives (*Hist.* 2. 98. 10).[23]

Neither *inimicitiae* nor strained relations may be detected between Pompeius and Lucullus in the years 78 to 74. Rather, the evidence shows them on correct terms in this period; nor did this change before 66.[24] To be sure, calling them *amici* would be unwarranted. Pompeius and Lucullus, however, were certainly not yet the *inimici* that they have for too long been considered.

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22. Sallust's theme was the failure and weakness of the Sullan oligarchy and the unfitness of Pompeius for power. See B. Maurenbrecher, *C. Sallusti Crispi Historiarum Reliquiae* (Stuttgart, 1893; repr. 1966), p. 1; Syme, *Sallust,* p. 201.

23. See Gruen, "Pompey," pp. 7–9 contra Badian, *Foreign Clientelae,* p. 279 with n. 6.

24. Plut. *Luc.* 37. 6 attests Lucullus' financial support of Pompeius in his campaign against the Pirates in 66. It is the last evidence of cooperation and correct relations.

INDIA'S IVORY PALISADE

Against the theory that atoms of each shape are infinite in number it could be objected that certain things in nature are extremely rare. Forestalling this argument, Lucretius appeals to the Epicurean doctrine of *isonomia,* according to which the uncommonness of a species in one place is balanced by its abundance in another. For example, elephants are rare in Italy but plentiful in India (Lucr. 2. 536–40):

> sicut quadripedum cum primis esse videmus
> in genere anguimanus elephantos, India quorum
> milibus e multis vallo munitur eburno,
> ut penitus nequeat penetrari: tanta ferarum
> vis est, quarum nos perpauca exempla videmus.

The "ivory palisade" defending India has been interpreted in three ways: (1) as a legend of some kind (Munro, Bailey),[1] referring either to an actual wall of ivory or a living barrier of elephants (Reid);[2] (2) as an exaggerative reference to the practice of using elephant tusks as palings or incorporating them into buildings (Ernout, Borthwick);[3] (3) as a metaphorical allusion to the use of elephants in warfare (Creech,

1. H. A. J. Munro, *T. Lucreti Cari "De Rerum Natura" Libri Sex,*[4] vol. 2 (Cambridge, 1893), p. 148 ("I know no other mention of this fable"), C. Bailey, *Titi Lucreti Cari "De Rerum Natura" Libri Sex,* vol. 2 (Oxford, 1947), p. 891; cf. O. Gigon, "Lukrez und Ennius," in *Lucrèce,* Fondation Hardt pour l'étude de l'antiquité classique, Entretiens 24 (Vandoeuvres-Genève, 1977), p. 185.

2. J. S. Reid, "Lucretiana," *HSCP* 22 (1911): 38. The elder Pliny reports that elephants will spontaneously form a battle-line against hunters (*HN* 8. 9).

3. A. Ernout, "Lucrèce et les éléphants," *RPh* 44 (1970): 203–5; E. K. Borthwick, "Lucretius' Elephant Wall," *CQ* n. s. 23 (1973): 291–92. To judge from Creech's note (see n. 4 below), this was also the interpretation of Lambinus.

Wakefield, Giussani, and others).[4] Through a combination of internal and external considerations, I hope to place the third interpretation beyond reasonable doubt and to illustrate the use of similar imagery in other ancient descriptions of war elephants.

As for the first interpretation, no evidence exists for belief in a legendary wall of ivory. That a story like this might have gained credence is not implausible in view of the countless other spurious tales about India in ancient literature, but one would expect such an odd idea to have turned up in more than a single passage. In support of the legend of a *living* barricade of elephants Reid adduces Curtius Rufus 9. 2. 15 "modo quis beluas offerentes moenium speciem, quis Hydaspem amnem, quis cetera auditu maiora quam vero sustineri posse credebat? olim, hercules, fugissemus ex Asia, si nos fabulae debellare potuissent," where, however, *moenium speciem* alludes to the actual appearance of the elephants in the battle with Porus (cf. 8. 14. 13 "beluae dispositae inter armatos speciem turrium procul fecerant"), not to a fable. The evidence for the second interpretation, which claims a reference to the practical use of tusks in buildings or defenses, is no more convincing. Discounting Ernout's prehistoric archaeological evidence, which seems too far afield, it amounts to a couple of unrelated snippets, one of them referring to Africa not India (Pliny *HN* 8. 31 "in extremis Africae, qua confinis Aethiopae est, postium vicem in domiciliis praebere, saepesque in his et pecorum stabulis pro palis elephantorum dentibus fieri Polybius tradidit auctore Gulusa regulo," Dio Chrys. *Or.* 79. 4 εἰ δὲ ἐλέφας θαυμαστὸν κτῆμα καὶ περιμάχητον, Ἰνδοὶ πολὺ πάντων ὀλβιώτατοι καὶ ἄριστοι, παρ' οἷς ἔρριπται τὰ τῶν ἐλεφάντων ὀστᾶ καὶ οὐδεὶς πρόσεισιν, ὥσπερ ἐνθάδε τὰ τῶν βοῶν τε καὶ ὄνων· καὶ πολλαχοῦ φασιν ἐν τοῖς τοίχοις ἐνοικοδομεῖσθαι τὰ κρανία τῶν ἐλεφάντων αὐτοῖς ὁδοῦσιν).

Apart from their lack of supporting evidence, the first two interpretations suit the argument less well than the third. In the first place, Lucretius ought to be referring to something well known and verifiable in order to meet the requirements of Epicurean epistemology—not to a bizarre traveler's tale or an obscure local practice. In the second, the proof requires that at any one time the lack of a species in one place is compensated for by its abundance elsewhere, and this point is made most cogently by reference to living animals, not a palisade—or a building—built from dead ones. With the latter interpretation, there is a slight non sequitur between *vallo munitur eburno* and *tanta ferarum vis est,* for it could be objected, after all, that the elephant population had dwindled since the building of the palisade, that the palisade took many generations to build, or even that the ivory was imported from elsewhere. The argument is watertight only if it has to do with living elephants and invokes a matter of common knowledge.

Both these criteria are satisfied by the third interpretation, which in addition to being founded upon a well-known Indian practice is thoroughly in keeping with the boldly metaphorical style of Lucretius. The truth of the matter was discerned by Giussani, who saw a hyperbolical reference to the great number of elephants

4. T. Creech, *T. Lucreti Cari "De Rerum Natura" Libri Sex* (Oxford, 1695), p. 93 ("maximam Indiae vim in elephantis sitam esse quis nescit? illorum ope se suamque patriam Indi defendebant. haec cogita et mentem Lucretii attinges"); G. Wakefield, *T. Lucretii Cari "De Rerum Natura" Libri Sex,* vol. 1 (Glasgow, 1813), p. 291 ("ergo, *vallo eburno munitur,* quasi fronte exercitus, ubi stationem, pro *munimine,* habebant elephantes"); C. Giussani, *Lucrezio: "De Rerum Natura,"* vol. 1 (repr. Turin, 1968), p. 217; W. E. Leonard and S. B. Smith, *T. Lucreti Cari "De Rerum Natura" Libri Sex* (Madison, 1942), p. 362; E. L. B. Meurig-Davies, "Elephant Tactics," *CQ* 45 (1951): 154–55; P. H. Schrijvers, *Horror ac divina voluptas: Études sur la poétique et la poésie de Lucrèce* (Amsterdam, 1970), pp. 294–95.

used by the Indians to resist the invasion of Alexander.[5] Along similar lines, Meurig-Davies suggests that "the Ivory Vallum . . . for the elephants ranged in battle-line may have been proverbial in Roman military lore since the wars against Pyrrhus and Carthage." Schrijvers accepts the idea that the *vallum eburnum* was proverbial but, returning to Giussani's theory, suggests that Lucretius borrowed it from some account of Alexander's exploits. In support of his conclusions he cites passages of Diodorus Siculus (17. 87. 5 ἡ μὲν οὖν ὅλη σύνταξις αὐτῶν ὑπῆρχε πόλει παραπλήσιος τὴν πρόσοψιν· ἡ μὲν γὰρ τῶν ἐλεφάντων στάσις τοῖς πύργοις, οἱ δὲ ἀνὰ μέσον τούτων στρατιῶται τοῖς μεσοπυργίοις ὡμοίωντο), Appian (*Syr.* 32 ἡ δ' ὄψις ἦν τῆς μὲν φάλαγγος οἷα τείχους, τῶν δ' ἐλεφάντων οἷον πύργων), and Curtius Rufus (8. 14. 13 [quoted above]), in which the sight of war elephants ranged among soldiers is compared to that of towers along a wall.[6] There happens to be another example in Curtius Rufus,[7] echoing Livy,[8] and others too in Polyaenus[9] and Julian,[10] which suggest that the idea derives from the Alexander-historians—probably the so-called vulgate tradition associated with the name of Cleitarchus.[11] In a related simile an analogy is drawn between war elephants and a defensive wall, to which soldiers run for protection[12] or from which they cast weapons.[13] Of a similar sort are comparisons of elephants to ships, citadels, and hills.[14] A number of factors contributed to the choice and expressiveness of the images of tower and wall: the massive size of elephants, of course, which invites descriptive terms appropriate to an edifice, especially when measured on a human scale; more particularly, the tactic of stationing elephants in the front line and of placing protective towers (*turres*) on their backs from which one or several men could rain down missiles.[15]

A connection with Alexander is further supported by the adverb *penitus,* which acknowledges that he—and, according to tradition, Dionysus and Heracles before

5. *Lucrezio,* p. 217: "Piuttosto che il ricordo di una precisa leggenda, credo che si tratti d'un ricordo poeticamente iperbolico del gran numero d'elefanti degli eserciti indiani che resistettero all' invasione di Alessandro."

6. *Horror,* p. 295.

7. 8. 12. 7 "elephanti quoque per modica intervalla militum agmini immixti procul castellorum fecerant speciem"; cf. 9. 2. 15 (quoted above).

8. 28. 14. 4 "pro cornibus ante Punicam aciem elephanti castellorum procul speciem praebebant."

9. *Strat.* 4. 3. 22 ὥστε ἦν τὸ σχῆμα τείχει μεγάλῳ παραπλήσιον, οἱ μὲν ἐλέφαντες ἐοικότες πύργοις, οἱ δὲ πεζοὶ μεσοπυργίοις (cf. Diod. 17. 87. 5).

10. *Or.* 2. 65 C καὶ ἐῴκει τείχει τῶν Παρθυαίων ἡ φάλαγξ· τὰ μὲν θηρία τοὺς πύργους φέροντα, τῶν ὁπλιτῶν δὲ ἀναπληρούντων τὰ ἐν μέσῳ (cf. App. *Syr.* 32).

11. P. Goukowsky, "Le roi Poros, son éléphant et quelques autres," *BCH* 96 (1972): 477.

12. Arr. *Anab.* 5. 17. 2 κατηράχθησαν ὥσπερ εἰς τεῖχός τι φίλιον τοὺς ἐλέφαντας.

13. Philostr. *VA* 2. 12 [πύργους] ἀφ' ὧν τοξεύουσί τε καὶ ἀκοντίζουσιν οἱ Ἰνδοί, καθάπερ ἐκ πυλῶν βάλλοντες; Isid. *Etym.* 12. 2. 15 "in eis enim Persae et Indi ligneis turribus conlocatis, tamquam de muro iaculis dimicant"; Procop. *Goth.* 8. 13. 4 [ἐλέφαντες] ἐφ' ὧν δὴ ἔμελλον ἱστάμενοι Πέρσαι τοὺς πολεμίους ὥσπερ ἐκ πύργων κατὰ κορυφῆς ἐνθένδε βάλλειν; below, I discuss other examples in Silius Italicus (*Pun.* 9. 237–41, 578–83, 622–24). Cf. also Philostr. *VA* 2. 15 ἔδει δέ που τὸν ἐναντίον τρόπον αὐτοὺς πορεύεσθαι καὶ τοὺς μεγίστους τείχη καὶ προβλήματα ἑαυτῶν ποιεῖσθαι (of elephants crossing a river).

14. Arr. *Anab.* 5. 17. 7 ὥσπερ αἱ πρύμναν κρουόμεναι νῆες ἐπὶ πόδα ὑπεχώρουν (of retreating elephants); Ael. *NA* 13. 9 (an elephant rider compared to a ship's helmsman); Philostr. *VA* 2. 11 τὸ γὰρ ὥσπερ ἀκρόπολιν κατειληφότα δεσπόζειν θηρίου μεγίστου ὧν ἡ γῆ βόσκει, ἐλευθέρας ἔμοιγε δοκεῖ φύσεως καὶ λαμπρᾶς εἶναι (of a boy riding an elephant; for the image, cf. Sil. *Pun.* 9. 622–24); Amm. Marc. 24. 6. 8 "post hos elephanti gradientium collium specie motuque immanium corporum propinquantibus exitium intentabant."

15. Front line: cf., e.g., Arr. *Anab.* 5. 15. 5 (Porus at the Hydaspes); Livy 27. 48. 5, 31. 36. 4; H. H. Scullard, *The Elephant in the Greek and Roman World* (Ithaca, 1974), p. 246. Towers: e.g., Lucr. 5. 1302 *turrito corpore; BAfr* 30. 2; Livy 37. 40. 4; Juv. 12. 109–10; Goukowsky, "Poros," pp. 473–502; Scullard, *Elephant,* pp. 240–45; the evidence indicates that the practice began in the third century.

him—had encroached upon India but failed to penetrate its innermost depths. In fact, Alexander reached only as far as the river Hyphasis (Beas) in northwestern India, and according to Diodorus it was the fear of the reportedly huge elephant forces beyond the river which chiefly discouraged him or his army from proceeding farther; for the same reason, states Diodorus, no foreign king had ever conquered the country.[16] If a specific description influenced Lucretius, it was probably one of Alexander's battle with Porus—his first and most celebrated contest with elephants (and one to which several of the passages cited above refer)—coupled with the tradition of the vast number of elephants that lay ahead beyond the Hyphasis and Ganges. It is also possible that the notion had become semi-proverbial in connection with the military strategy of the Indians and other military users of elephants (such as Pyrrhus and the Carthaginians), in which case there is no need to posit a special literary stimulus. In any event, it is important to note that Lucretius' *vallum eburnum* is a much more vivid and precise idea than the simile of a wall or tower, which seems to have become somewhat of a cliché. *Vallum,* from *vallus,* a pointed stake, properly denotes the palisade of sharpened stakes on the outer side of an earthwork (*agger*) defending a camp or investing a town; it can also mean—and increasingly did so in the imperial period—the earthwork and the palisade combined, but Caesar maintains a distinction.[17] As a technical military term, it is, to begin with, a more specific image than that of a "wall" or "tower." Poetically, too, the idea is extremely vivid, not only for its paradoxical quality (*vallum eburnum* as opposed to the usual *vallum ligneum*), but, as D. West has appreciated,[18] because the *vallum eburnum* evokes a fanciful comparison between the separate stakes of a defensive stockade and the tusks of elephants lined up against the enemy in close battle-formation. There are three points of correspondence: first, the visual likeness between a palisade's sharpened stakes and the row of pointed tusks formed by an orderly line of adjacent elephants;[19] second, the implicit similarity between the earthwork and the elephant bodies bearing these stakes and tusks; third, the related military functions of the two things compared. The conception is lucid and ingenious. Homer's ἕρκος ὀδόντων comes to mind,[20] and there are parallels for the figurative use of *vallum,*[21] but the image is particularly convincing in Lucretius owing to its appropriateness and visual accuracy.

16. 2. 37. 3 διὸ καὶ τῆς χώρας ταύτης οὐδεὶς πώποτε βασιλεὺς ἔπηλυς ἐκράτησε, πάντων τῶν ἀλλοεθνῶν φοβουμένων τό τε πλῆθος καὶ τὴν ἀλκὴν τῶν θηρίων. καὶ γὰρ Ἀλέξανδρος ὁ Μακεδὼν ἁπάσης τῆς Ἀσίας κρατήσας μόνους τοὺς Γανδαρίδας οὐκ ἐπολέμησε· . . . ὡς ἐπύθετο τοὺς Γανδαρίδας ἔχειν τετρακισχιλίους ἐλέφαντας πολεμικῶς κεκοσμημένους, ἀπέγνω τὴν ἐπ' αὐτοὺς στρατείαν, in reference to the tribe of the Gandaridae beyond the Ganges, who are said to have possessed the most and the biggest elephants; cf. 17. 93. 2; Curt. 9. 2. 4 "ad hoc quadrigarum II milia trahere et, praecipuum terrorem, elephantos, quos III milium numerum explere dicebat"; Plut. *Alex.* 62. 2–4 (6,000 elephants); Arr. *Anab.* 5. 25. 1; ps.-Callisth. *Hist. Alex.* 3. 26. 7; D. Kienast, "Alexander und der Ganges," *Historia* 14 (1965): 184; Scullard, *Elephant,* pp. 72–73; the numbers of elephants cited in these passages illustrate Lucretius' phrase *milibus e multis.* Diodorus elsewhere remarks upon India's "incredible multitude" of elephants (2. 16. 4) and their terrifying appearance in battle (2. 17. 7–8).

17. Cf., e.g., *BGall.* 7. 72. 4, 86. 6; *RE* 8A.288–91.

18. *The Imagery and Poetry of Lucretius* (Edinburgh, 1969), p. 21.

19. A rampart was sometimes defended with projecting spikes called *cervi* (from their similarity to antlers); see, e.g., Caes. *BGall.* 7. 72. 4. Perhaps Lucretius envisages something like this (bearing in mind the angle of an elephant's tusks), but there is no need to limit the image so narrowly.

20. *Il.* 4. 350, etc. (cited by Wakefield), translated by Aulus Gellius as *vallum . . . dentium* (*NA* 1. 15. 3); for other descriptions of the teeth as a fence, cf. Opp. *Hal.* 1. 506, Herm. ap. Stob. 1. 49. 69, Sen. *Her. O.* 1935 *vallantque feri tempora dentes,* Sil. *Pun.* 4. 559 *et galea annosi vallatur dentibus apri.*

21. Lucretius himself uses the metaphor again in 5. 27 *hydra venenatis posset vallata colubris;* cf. Cic. *Sen.* 51, *Nat. D.* 2. 143 (cf. Arist. *Part. an.* 658b14–18), Pliny *HN* 12. 22; A. S. Pease, *M. Tulli Ciceronis "De Natura Deorum,"* vol. 2 (Cambridge, 1958), p. 922; *OLD,* s. vv. *vallo, vallum;* LSJ, s. v. χαρακόω.

In conclusion, we may safely abandon the idea that Lucretius is referring to a real ivory wall. His phrase is, rather, an apt and original variation on the simile of wall or tower commonly found in ancient descriptions of war elephants, particularly in the writings on Alexander.[22] In Lucretius' hands, simile is condensed to metaphor and a broad notion refined to one that is highly particular, the result being a taut and memorable piece of poetry. The influence of the Lucretian image can be detected in Silius Italicus' description of the battle of Cannae (*Pun.* 9. 237–41):

> sed qua se fluvius retro labentibus undis
> eripit et nullo cuneos munimine vallat,
> turritas moles ac propugnacula dorso
> belua nigranti gestans, ceu mobilis agger,
> nutat et erectos attollit ad aethera muros.

Where the river provides no *vallum,* protection is afforded by the moving *agger* of elephants. (The emphasis here is on the imposing barricade of elephants carrying towers on their backs.) Then, as the battle unfolds (9. 578–83):

> procul aspera grando
> saxorum super arma ruit, passimque volanti
> celsus telorum fundit Libys aggere nimbum.
> stat niveis longum stipata per agmina vallum
> dentibus, atque ebori praefixa comminus hasta
> fulget ab incurvo derecta cacumine cuspis.

Again we note the image of *agger* and *vallum,* the latter now corresponding precisely with Lucretius' ivory palisade. What Lucretius merely suggests is expanded, however, into a complete picture by Silius. The elephants are a "flying rampart" (*volanti . . . aggere;* cf. 240 *mobilis agger*), whose "palisade" (*vallum*) is formed by their "snowy tusks" (*niveis dentibus*)—tusks, moreover, which apparently have spears attached to them to enhance their offensive capability.[23] Silius' phrase *niveis . . . dentibus* makes explicit the allusive *eburno* of Lucretius, and he bolsters the unusual image of the palisade (*vallum*) with the more conventional one of the rampart (*agger*). Indeed, the general analogy between war elephants and defensive structures pervades Silius' whole account of the elephants' role at Cannae, beginning with his description of their tower-carrying bulk (559–60 *feraeque / turrigerae molem,* 570–71 *appellitur atra / mole fera;* cf. 619) and continuing, after the passage discussed above, with a reference to the "collapse" of an animal (598 *sternuntur subita, miserandum, mixta ruina*) and a simile comparing the Roman attack on the elephants to the besieging and storming of fortresses (9. 622–24):

> nunc iaculis, nunc et saxis, nunc alite plumbo
> eminus incessunt, ut qui castella per altos
> oppugnat munita locos atque assidet arces.

22. It is interesting to speculate whether the literature on India and Alexander contributed to any other parts of the *De rerum natura:* for example, the description of elephants running amok in battle (5. 1339–40; cf., e.g., Arr. *Anab.* 5. 17. 5–6) or the claim that early kings were chosen on the basis of handsome looks as well as strength and ability (5. 1110–12; cf. Strab. 15. 1. 30)—but such ideas may have been commonplace.

23. Meurig-Davies, "Elephant Tactics," p. 154; cf. Goukowsky, "Poros," p. 489, n. 59.

Another echo of Lucretius occurs in Isidore *Etymologiae* 12. 2. 14 "rostrum autem proboscida dicitur, quoniam illo pabulum ori admovet; et est angui similis, vallo munitus eburno," where *angui similis* recalls Lucretius' *anguimanus* and *vallo munitus eburno* whimsically transforms the Lucretian image of a palisade formed by a line of elephants into the idea of an individual elephant's tusks protecting its own trunk.[24] As employed by Florus (*Epit.* 1. 24. 16 "elephantis ad hoc inmensae magnitudinis, auro purpura argento et suo ebore fulgentibus, aciem utrimque vallaverat"), the idea seems less pointed—one of defense in general, without Lucretian reminiscence or the visual image of an array of tusks.

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24. I see no need to amplify and emend the text along the lines proposed by Maas (see Bailey, *Titi Lucreti Cari*, vol. 3, p. 1753).

DODONA RENEGES: A NEGLECTED OXYMORON IN *GEORGICS* 1. 149

In *Georgics* 1. 147–49, relating how man first learned agriculture, Vergil finds the immediate cause in a famine of acorns and arbutes:

> prima Ceres ferro mortalis vertere terram
> instituit, cum iam glandes atque arbuta sacrae
> deficerent silvae et victum Dodona negaret.

In the last of these lines, although commentators have given to the syntax of *silvae* the attention that it deserves, they have in general withheld comment on the oddity of *victum Dodona negaret*. Why should an acorn famine at Dodona have driven mankind worldwide to take up agriculture? Alternatively, if the famine was universal, why should Dodona in particular be singled out for special mention? In the preceding clause, no comparable specificity is applied either to acorns and arbutes or to the woods in which they failed to grow. And why should an oracle be blamed in any case for a famine for which oaks were responsible?

Ancient commentators on *Georgics* 1. 149 fully appreciated the problem inherent in *Dodona*. Some of them tried, characteristically, to rationalize this problem out of existence by claiming that the prophetic oak at Dodona had the same name as the shrine (so the Scholia Bernensia and Pseudo-Probus). The correct solution, however, required a poet to perceive it. Lucan, "one of Virgil's most careful readers and adapters,"[1] recognized a type of metonymy that might be labeled "locus ferens

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1. R. F. Thomas, "Tree Violation and Ambivalence in Virgil," *TAPA* 118 (1988): 268. Thomas does not mention Lucan's imitation of Vergil's metonymy.