

LUCRETIUS

DE RERUM NATURA

WITH AN ENGLISH TRANSLATION BY

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LUCRETIUS

LCL 181

240

245

251

255

260

Nunc age, res quoniam docui non posse creari 265
de nilo neque item genitas ad nil revocari,

240 nexus *OQGFL* (cf. 220, 244): nexu *Q* corr., *ABM*
257 pingui *Philargyrius* on *Virgil, G. 3.124*: pinguis *OQ*,
G corr. (*G* omits), *Martin*

²⁶⁵ Now then, since I have taught that things can- The atoms
not be created from nothing and, when brought are in-
visible, but

ne qua forte tamen coeptes diffidere dictis,
quod nequeunt oculis rerum primordia cerni,
accipe praeterea quae corpora tute necesses
confiteare esse in rebus nec posse videri. 270

Principio venti vis verberat incita pontum
ingentisque ruit navis et nubila differt ;
interdum rapido percurrens turbine campos
arboribus magnis sternit montisque supremos 275
silvifragis vexat flabris : ita perfurit acri
cum fremitu saevitque minaci murmure ventus.

sunt igitur venti nimirum corpora caeca
quae mare, quae terras, quae denique nubila caeli
verrunt ac subito vexantia turbine raptant ;
nec ratione fluunt alia stragemque propagant 280
et cum mollis aquae fertur natura repente
flumine abundantanti, quam largis imbris augeat
montibus ex altis magnus decursus aquai,
fragmina coniciens silvarum arbustaque tota,
nec validi possunt pontes venientis aquai 285
vim subitam tolerare : ita magno turbidus imbri
molibus incurrit validis cum viribus amnis.

dat sonitu magno stragem volvitque sub undis
grandia saxa, ruit qua quidquid fluctibus obstat. 290
sic igitur debent venti quoque flamina ferri,
quae veluti validum cum flumen procubuere
quamlibet in partem, trudent res ante ruuntque

271 pontum *Marullus*: cortus OQG: tortus O corr.:
corpus Q corr.: portus P. 276 ventus *J. Markland* in
a marginal note (see *A. Stachelscheid, Hermathena* 4 [1883]
156), also conjectured by a friend of Wakefield: pontus
OQGP: cortus (=coortus) *Faber* (from 271) 282 quam
Lachmann: quem OQG: quod L: quom *J. Woltjer, Jahrb.*
f. cl. Phil. 119 (1879) 772 augeat O: uuegt QG:
urget O corr. 289 ruit qua QGP, O corr.: ruit O

* For the correspondences between this simile and the

forth, cannot be brought back to nothing, that you may not by any chance begin nevertheless to distrust my words, because the first-beginnings of things cannot be distinguished by the eye, learn in addition of bodies which you must yourself of necessity confess to be numbered amongst things and yet impossible to be seen.

271 First the mighty wind when stirred up beats wind, upon the ocean and overwhelms huge ships and scatters the clouds, and at times sweeping over the plains with rapid hurricane strews them with great trees and flogs the topmost mountains with tree-crashing blasts: so furious and fierce its howling, so savage and threatening the wind's roar. Therefore undoubtedly there are unseen bodies of wind that sweep the sea, that sweep the earth, sweep the clouds of the sky also, beating them suddenly and catching them up in a hurricane; and they flow and deal devastation in the same way as water,^a which, soft as it is, suddenly rolls in overwelling stream when a great deluge of water from the high mountains swells the flood with torrents of rain, dashing together wreckage of forests and whole trees, nor can strong bridges withstand the sudden force of the coming water, with so mighty a force does the river, boiling with rain-torrents, rush against the piers; it works devastation with loud uproar and rolls huge rocks under its waves, and sweeps away whatever stands in its path. Thus therefore the blasts of the wind also must be borne along, which, like a strong river, when they have borne down in any direction, thrust all before them and sweep all away with frequent account of wind, see especially *D. West, Philol.* 114 (1970) 272-274.

impetibus crebris, interdum vertice torto
 corripiunt rapidoque rotantia turbine portant.
 quare etiam atque etiam sunt venti corpora caeca, 295
 quandoquidem factis et moribus aemula magnis
 amnibus inveniuntur, aperto corpore qui sunt.

Tum porro varios rerum sentimus odores
 nec tamen ad naris venientis cernimus umquam,
 nec calidos aestus tuimur nec frigora quimus 300
 usurpare oculis nec voces cernere suemus ;
 quae tamen omnia corporea constare necessest
 natura, quoniam sensus impellere possunt ;
 tangere enim et tangi, nisi corpus, nulla potest res.

Denique fluctifrago suspensae in litore vestes 305
 uvescunt, caedem dispansae in sole serescunt ;
 at neque quo pacto persederit umor aquai
 visumst nec rursus quo pacto fugerit aestu.
 in parvas igitur partis dispargitur umor,
 quas oculi nulla possunt ratione videre. 310

Quin etiam multis solis redeuntibus annis
 anulus in digito subter tenuatur habendo,
 stilicidi casus lapidem cavat, uncus aratri
 ferreus occulto decrescit vomer in arvis,
 strataque iam volgi pedibus detrita viarum 315
 saxea conspicimus ; tum portas propter aena
 signa manus dextras ostendunt adtenuari
 saepe salutantum tactu praeterque meantum.

294 rapidoque "ex codicibus fidelioribus" (Pius): rapidi-
 que O, Q corr., GP: rapidisque Q: rapideque Lachmann rotantia
 Lambinus (1563-64): rotanti OQCP 306 dispansae in
 OQGP: candenti Nonius p. 257 Lindsay 309 dispargitur
 ed. Veronensis and, acc. to Wakefield, three manuscripts, P.
 Friedländer, AJPhil. 62 (1941) 31 314 occulto Q, Servius
 on Virgil, G. 1.46, Isidorus, Orig. 20.14.1: occulte O, Q corr.,
 GP. occulto is quoted from Afranius by Charisius p. 270 Barwick

quent attacks, and at times catch things up in a
 swirling eddy and whirling them round carry them off in a
 swift tornado. Therefore I say again and again, there are
 unseen bodies of wind, since in deeds and ways they are
 found to rival great rivers, which possess a body which can
 be seen.

²⁹⁸ Then further, we smell the various odours of scent,
 things and yet we never see them approaching our
 nostrils, nor do we behold scorching heat, nor can we heat,
 set eyes on cold, nor are we accustomed to see cold,
 sounds ; yet all these must of necessity consist of sound,
 bodily structure, since they can act upon our senses.
 For nothing can touch or be touched, except body.

³⁰⁵ Again, garments hung up on a surf-beaten
 shore grow damp, the same spread in the sun grow
 dry ; yet none has seen either how the damp of the vapour of
 water pervaded them, or again how it departed in
 the heat. Therefore the water is dispersed into small
 particles, which the eye cannot in any way see.

³¹¹ Moreover, with many revolutions of the sun's particles of
 year, a ring on the finger is thinned underneath by worn metal
 wear, the fall of drippings hollows a stone, the curved
 ploughshare of iron imperceptibly dwindles away in
 the fields, and the stony pavement of the roads we
 see already to be rubbed away by men's feet ; again,
 bronze statues set by gateways display the right
 hands thinned away by the frequent touch of greeting
 from those who pass by.^a These therefore we observe

^a Cicero, *Verr.* 4.94, mentions a bronze statue in the temple
 of Hercules at Agrigentum, whose lips and chin had been
 worn away by the kisses of worshippers. However, Lucr. is
 referring to the right hands of statues by city gates, and the
 custom may have been to touch or grasp these (*cf. tactu*, 318,
 though this could refer to the touch of the lips) rather than,
 as is usually supposed, to kiss them. The foot of St. Peter's
 statue in St. Peter's, Rome, is a familiar modern parallel.

haec igitur minui, cum sint detrita, videmus ;
sed quae corpora decedant in tempore quoque, 320
invida praecludit specimen natura videndi.

Postremo quaecumque dies naturaque rebus
paulatim tribuit, moderatim crescere cogens,
nulla potest oculorum acies contenta tueri ;
nec porro quaecumque aevo macieque senescunt, 325
nec, mare quae inpendent, vesco sale saxa peresa
quid quoque amittant in tempore cernere possis.
corporibus caecis igitur natura gerit res.

Nec tamen undique corporea stipata tenentur
omnia natura ; namque est in rebus inane. 330
quod tibi cognosse in multis erit utile rebus
nec sinet errantem dubitare et quaerere semper
de summa rerum et nostris diffidere dictis.
quapropter locus est intactus inane vacansque.
quod si non esset, nulla ratione moveri 335
res possent ; namque officium quod corporis exstat,
officere atque obstare, id in omni tempore adesset
omnibus ; haud igitur quicquam procedere posset,
principium quoniam cedendi nulla daret res.
at nunc per maria ac terras sublimaque caeli 340
multa modis multis varia ratione moveri
cernimus ante oculos, quae, si non esset inane,
non tam sollicito motu privata carerent
quam genita omnino nulla ratione fuissent,
undique materies quoniam stipata quiesset. 345

321 specimen *F. Nencini, Riv. Fil.* 24 (1896) 304, *C. L. Howard, GPhil.* 56 (1961) 145-146 (cf. 4.209, and for the corruption cf. 5.186 where most editors accept Pius' emendation); speciem *OQGP*

to be growing less because they are rubbed away ; but what particles are separated on each occasion, our rigidly faculty of sight has debarred us from proving.

³²² Lastly, whatever time and nature little by little adds to things, compelling them to grow in due measure, no keenness of sight, however strained, can perceive ; nor further when things grow old by age and wasting, nor when rocks hanging over the sea are eaten away by the gnawing salt, could you discern what they lose upon each occasion. Therefore nature works by means of bodies unseen.

particles of living bodies that grow and decay.

³²⁹ Yet everything is not held close and packed everywhere in one solid mass, for there is void in things : which knowledge will be useful to you in many matters, and will not allow you to wander in doubt and always to be at a loss as regards the universe and to distrust my words. Therefore there is intangible space, void, emptiness.^a But if there were none, things could not in any way move ; for that which is the province of body, to prevent^b and to obstruct, would at all times be present to all things ; therefore nothing would be able to move forward, since nothing could begin to give place. But as it is, we discern before our eyes, throughout seas and lands and the heights of heaven, many things moving in many ways and various manners, which, if there were no void, would not so much lack altogether their restless motion, as never would have been in any way produced at all, since matter would have been everywhere quiescent packed in one solid mass.

There is also Void

or (1) things could not move,

^a Cf. Epicurus, *Ep. ad Hdt.* 40.

^b "Province . . . prevent" (M. F. Smith) is an attempt to reproduce the verbal play *officium . . . officere*.

Praeterea quamvis solidae res esse putentur,
 hinc tamen esse licet raro cum corpore cernas :
 in saxis ac speluncis permanat aquarum
 liquidus umor et uberibus flent omnia guttis ;
 dissipat in corpus sese cibus omne animantum ; 350
 crescunt arbusta et fetus in tempore fundunt,
 quod cibus in totas usque ab radicibus imis
 per truncos ac per ramos diffunditur omnis ;
 inter saepta meant voces et clausa domorum
 transvolitant ; rigidum permanat frigus ad ossa. 355
 quod, nisi inania sint qua possent corpora quaeque
 transire, haud ulla fieri ratione videres.

Denique cur alias aliis praestare videmus
 pondere res rebus nilo maiore figura ?
 nam si tantundemst in lanae glomere quantum 360
 corporis in plumbo est, tantundem pendere par est,
 corporis officiumst quoniam premere omnia deorsum,
 contra autem natura manet sine pondere inanis.
 ergo quod magnumst aequae leviusque videtur
 nimirum plus esse sibi declarat inanis ; 365
 at contra gravius plus in se corporis esse
 dedicat et multo vacui minus intus habere.
 est igitur nimirum id quod ratione sagaci
 quaerimus admixtum rebus, quod inane vocamus.

Illud in his rebus ne te deducere vero 370
 possit, quod quidam fingunt, praecurrere cogor.

357 fieri *O* corr. by Dungal (9th cent.), *P*: valeret *OQG*, and Bernays (not Brieger, as shown by Martin and Bailey) proposed corpora quaeque valeret in 356 367 vacui Pontanus:
 30

346 Besides, however solid things may be thought to be, here is proof that you may discern them to be of less than solid consistency. In rocks and caves the liquid moisture of waters oozes through, and the whole place weeps with plenteous drops. Food is dispersed through all the body in living creatures. Trees grow and at their time put forth their fruits, because their food is distributed all over them^a from the lowest roots through trunks and through branches. Sounds pass through walls and fly through closed houses, stiffening cold permeates to the bones. But, if there were no void there which bodies might pass through in each case, you could not see this happen in any way.

358 Lastly, why do we see some things surpass others in weight when they are no larger? For if there is as much body in a ball of wool as in lead, it is fitting that they should both weigh the same, since it is the property of body to depress everything downwards, but contrariwise the nature of void remains without weight. Therefore that which is equally great and is seen to be lighter without doubt shows itself to have more void; but contrariwise the heavier makes clear that it has more body in it, and much less of void. There is therefore without doubt, intermingled with things, that which we seek with keen-scented reasoning, that which we call void.

370 And here in this matter I am driven to forestall what some imagine, lest it should lead you away

^a Lucr. writes *totas*, as though not *arbusta* (351), but *arborea*, had preceded. Cf. 190, 6.215.

vacuum *OQ*: vacuum *O* (*O* corr. by Dungal, according to Büchner) *P*

cedere squamigeris latices nitentibus aiunt
 et liquidas aperire vias, quia post loca pisces
 linquant, quo possint cedentes confluere undae ;
 sic alias quoque res inter se posse moveri 375
 et mutare locum, quamvis sint omnia plena.
 scilicet id falsa totum ratione receptumst.
 nam quo squamigeri poterunt procedere tandem,
 ni spatium dederint latices ? concedere porro
 quo poterunt undae, cum pisces ire nequibunt ? 380
 aut igitur motu privandumst corpora quaeque,
 aut esse admixtum dicendumst rebus inane,
 unde initum primum capiat res quaeque movendi.
 Postremo duo de concursu corpora late
 si cita dissiliant, nempe aer omne necessesst, 385
 inter corpora quod fiat, possidat inane.
 is porro quamvis circum celerantibus auris
 confluat, haud poterit tamen uno tempore totum
 compleri spatium ; nam primum quemque necessesst
 occupet ille locum, deinde omnia possideantur. 390
 quod si forte aliquis, cum corpora dissilueret,
 tum putat id fieri quia se condenseat aer,
 errat ; nam vacuum tum fit quod non fuit ante
 et repletur item vacuum quod constitit ante ;
 nec tali ratione potest denserier aer, 395
 nec, si iam posset, sine inani posset, opinor,
 ipse in se trahere et partis conducere in unum.

Quapropter, quamvis causando multa moreris,
 esse in rebus inane tamen fateare necessesst.

384 late *Cod. Vat. Ottob. lat.* 1954, variant in *Cod. Vat. lat.*
 3275: lata OQGP

* The theory to which *Lucr.* refers is mentioned first in
 Plato, *Ti.* 79 B, but is attributed by a later source to *Empedocles*
 and *Anaxagoras*. It was adopted by *Aristotle* (*Ph.*

from the truth. They say^a that water yields to the pressure of scaly creatures and opens liquid ways, because fish leave room behind them for the yielding waves to run together ; that so other things also are able to move in and out and to change place, although all is full. You must know that this has been accepted on reasons wholly false. For whither, I ask, will the scaly fish be able to move forward, unless the water shall give place ? Into what place, again, will the water be able to move back, when the fish will be unable to go ? Either then all bodies must be deprived of movement, or we must say that void is intermingled in things, as a result of which each thing may begin to move.

³⁸⁴ Lastly, if two bodies set in motion leap far apart after contact, of course it is necessary that air take possession of all the void which is made between the bodies. Further, however swiftly this air may run together with currents hurrying all around, yet the space will not be able to be filled all at one time ; for the air must occupy each point of space in succession before the whole is occupied. But if by chance anyone thinks that this happens at the moment when the bodies have leapt asunder because the air becomes compressed, he goes astray ; for in that case a void is made which was not there before, and a void also is filled which was there before ; nor can air be compressed in such a way, nor, granting that it could, could it, I think, without void withdraw into itself and condense its parts together.

³⁹⁸ Therefore, however you may demur by making many objections, confess you must, nevertheless, that there is void in things. Many another proof be-

Follow up the other proofs for yourself.
 213 B—216 B) and *Epicurus*' contemporary *Strato of Lampsacus*, and is mentioned by *Cicero*, *Acad.* 2.40.125.

multaque praeterea tibi possum commemorando 400
 argumenta fidem dictis conradere nostris.
 verum animo satis haec vestigia parva sagaci
 sunt, per quae possis cognoscere cetera tute.
 namque canes ut montivagae persaepe ferai
 naribus inveniunt intectas fronde quietes, 405
 cum semel institerunt vestigia certa viai,
 sic alid ex alio per te tute ipse videre
 talibus in rebus poteris caecaeque latebras
 insinuare omnis et verum protrahere inde.
 quod si pigraris paulumve recesseris ab re, 410
 hoc tibi de plano possum promittere, Memmi:
 usque adeo largos haustus e fontibu' magnis
 lingua meo suavis diti de pectore fundet,
 ut verear ne tarda prius per membra senectus
 serpat et in nobis vitae claustra resolvat, 415
 quam tibi de quavis una re versibus omnis
 argumentorum sit copia missa per auris.

Sed nunc ut repetam coeptum pertexere dictis,
 omnis ut est igitur per se natura duabus
 constitit in rebus; nam corpora sunt et inane, 420

404 ferai Q corr., P: ferare OGG: ferarum O corr.
 412 magnis P: magnes O: amnes QG: amnis O corr.:
 perhaps altis (it is just possible that in 5.446 altum is a
 corruption of magnum, which is recorded by Macrobius)

^a On the correspondences between simile and context, see especially D. West, *The Imagery and Poetry of Lucretius* 74-75. Socrates, in the Platonic dialogues, frequently uses hunting metaphors when referring to arguments: e.g. *Phd.* 63 A, 66 B-C, 79 E, 88 D.

^b Cf. Lord Vaux, *The Aged Lover Renounceth Love*: "For Age, with stealing steps, Hath clawed me with his clutch."

^c Notice again (cf. 140-145) Lucr.'s readiness *quemvis*

sides I can mention to scrape together credit for my doctrines. But for a keen-scented mind, these little tracks are enough to enable you to recognize the others for yourself. For as hounds very often find by their scent the leaf-hidden resting-place of the mountain-ranging quarry, when once they have hit upon certain traces of its path, so will you be able for yourself to see one thing after another in such matters as these, and to penetrate all unseen hiding-places, and draw forth the truth from them.^a But should you be sluggish or draw back a little from the task, this I can promise you, Memmius, without more ado: so bounteous draughts out of plenteous springs will my melodious speech pour forth from my richly stored mind, that I fear lest laggard age may creep over our limbs^b and break down the barriers of life within us, before the whole store of demonstrations on any one matter has been poured in my verses through your ears.^c

418 But now to resume my task begun of weaving the web of this discourse: the nature of the universe,^d therefore, as it is in itself, is made up of two things; for there are bodies, and there is void, in which these

Sensation
 proves that
 Body
 exists,

efferre laborem in his attempt to convert Memmius to Epicureanism. Notice too that he is prepared to make fun of his own missionary fervour and enthusiasm for philosophy: cf. 4.969-970, where he confesses that, just as lawyers dream of legal cases, generals of battles, and sailors of the sea, so he himself dreams of studying Epicureanism and expounding it in Latin.

^a *omnis* (419) is best taken as genitive of *omne* = τὸ πᾶν. Cf. Plutarch, *adv. Col.* 1112 F (of Epicurus): τὸ πᾶν παντὸς φύσιν (cf. *omnis* . . . *natura*) ὀνομάζειν εἶπεθε. Cf. *natura* . . . *inanis* (363), corresponding to Epicurus' ἡ . . . τοῦ κενοῦ φύσιν (*Ep. ad Hdt.* 44; cf. Plutarch, *loc. cit.*).

haec in quo sita sunt et qua diversa moventur.
 corpus enim per se communis dedicat esse
 sensus ; cui nisi prima fides fundata valebit,
 haud erit occultis de rebus quo referentes
 confirmare animi quicquam ratione queamus. 425
 tum porro locus ac spatium, quod inane vocamus,
 si nullum foret, haud usquam sita corpora possent
 esse neque omnino quoquam diversa meare ;
 id quod iam supera tibi paulo ostendimus ante.

Praeterea nil est quod possis dicere ab omni 430
 corpore seiunctum secretumque esse ab inani,
 quod quasi tertia sit numero natura reperta.
 nam quodcumque erit, esse aliquid debet id ipsum :
 435 cui si tactus erit quamvis levis exiguusque,
 434 augmine vel grandi vel parvo denique, dum sit, 435
 corporis augebit numerum summamque sequetur ;
 sin intactile erit, nulla de parte quod ullam
 rem prohibere queat per se transire meantem,
 scilicet hoc id erit, vacuum quod inane vocamus.
 praeterea per se quodcumque erit, aut faciet quid 440
 aut aliis fungi debebit agentibus ipsum
 aut erit ut possint in eo res esse gerique.
 at facere et fungi sine corpore nulla potest res,
 nec praebere locum porro nisi inane vacansque.

435-434 transposed, as suggested in *Codex Laurentianus* 35.32. Order of lines in the manuscripts is retained, perhaps rightly, by Martin and Büchner

^a In 422, *per se* may be taken either with *corpus* . . . *esse*, or with *sensus* "sensation of itself" : the former interpretation is supported by 419, 445, 479, the latter by Epicurus, *Ep. ad Hdt.* 39 : ἀτῆ ἢ αἰσθησις ἐπὶ πάντων μαρτυρεῖ.

^b According to Epicurus, sensation is the primary standard of truth, and there is no other criterion by which it can be refuted : cf. e.g. *Ep. ad Hdt.* 38-39, *Sent.* 23, Diogenes Laertius 10.31-32, Lucr. 1.699-700, 4.478-521, Cicero, *Fin.* 1.7.22, 1.19.64.

bodies are and through which they move this way and that. For sensation common to men declares that body has its separate existence^a ; and unless our belief in sensation is first firmly established, there will be no principle of appeal in hidden matters, according to which we may establish anything by the reason.^b Then further, if there were no place and space which we call void, bodies could not be situated anywhere nor could they move anywhere at all in different directions, as I have already shown you above a little while ago.^c

430 Besides, there is nothing which you can call wholly distinct from body and separate from void, to be discovered as a kind of third nature.^d For whatever is to be, that must be something in itself ; and if it shall be sensible to touch however light and small, it will increase the quantity of body by some increment either great or small if you will, provided it do exist, and will go to make up the sum. But if it shall be intangible, being unable to forbid anything to pass through it in motion at any point, undoubtedly this will be that which we call empty void. Besides, whatever shall exist of itself will either act upon something, or will necessarily be passive itself while other things act upon it, or it will be possible that things be and be done in it. But nothing can act or be acted upon without body, nothing can afford space but the void and the empty.^e

and without Void nothing could move or be.

There is no third nature ; for if it can be touched, it is Body, if not, it is Void :

if it acts or is acted upon, it is Body ; if things can be done in it, Void.

^c 335-345, 370-383.

^d 419-432 and 445-448 are closely related to Epicurus, *Ep. ad Hdt.* 39-40, but the argument of 433-444 is not found in *Ep. ad Hdt.*, and the whole passage may be based on Epicurus' lost Μεγάλη Ἐπιτομή or even on his Περὶ Φύσεως (see Bailey 666).

^e Cf. Epicurus, *Ep. ad Hdt.* 67.

ergo, praeter inane et corpora, tertia per se 445
 nulla potest rerum in numero natura relinqui,
 nec quae sub sensus cadat ullo tempore nostros
 nec ratione animi quam quisquam possit apisci.

Nam quaecumque cluent, aut his coniuncta duabus 450
 rebus ea invenies aut horum eventa videbis.
 coniunctum est id quod nusquam sine permissali
 discidio potis est seiungi seque gregari,
 pondus uti saxis, calor igni, liquor aquai,
 tactus corporibus cunctis, intactus inani.
 servitium contra paupertas divitiaeque, 455
 libertas bellum concordia, cetera quorum
 adventu manet incolumis natura abituque,
 haec soliti sumus, ut par est, eventa vocare.
 tempus item per se non est, sed rebus ab ipsis
 consequitur sensus, transactum quid sit in aevo, 460
 tum quae res instet, quid porro deinde sequatur ;
 nec per se quemquam tempus sentire fatendumst
 semotum ab rerum motu placidaque quiete.

Denique Tyndaridem raptam belloque subactas
 Troiigenas gentis cum dicunt esse, videndumst 465
 ne forte haec per se cogant nos esse fateri,
 quando ea saecula hominum, quorum haec eventa
 fuerunt,

inrevocabilis abstulerit iam praeterita aetas ;
 namque aliud terris, aliud regionibus ipsis

453 saxis *OQGP*: saxist Wakefield igni *J. P. Post-
 gate, Journ. Phil. 24 (1896) 131 (but reading aquae stat for
 aquai)*: ignis *OQG*: ignist Bockemüller aquai *QG*,
O corr.: aquae *O*

^a For properties (*coniuncta* = *συμβεβηκότα*) and accidents
 (*eventa* = *συμπράγματα*), cf. Epicurus, *Ep. ad Hdt.* 40, 68-73.

^b On the tmesis *se ... gregari* in 452, see note on 3.860 and S.
 Hinds, *CQ N.S.* 37 (1987) 450-453.

^c It has been generally supposed that in 459-482 Lucr. is
 refuting the Stoics, but see D. J. Furley in *BICS* 13 (1966)

Therefore besides void and bodies no third nature
 can be left self-existing in the sum of things—neither
 one that can ever at any time come within our
 senses, nor one that any man can grasp by the
 reasoning of the mind.

⁴⁴⁹ For whatsoever things have a name, either you
 will find to be properties of these two or you will
 see them to be accidents of the same.^a A property is
 that which without destructive dissolution can never
 be separated and disjoined,^b as weight is to stone,
 heat to fire, liquidity to water, touch to all bodies,
 intangibility to void. Slavery, on the other hand,
 poverty and riches, freedom, war, concord, all else
 which may come and go while the nature of things
 remains intact, these, as is right, we are accustomed
 to call accidents. Time also exists not of itself,^c but
 from things themselves is derived the sense of what
 has been done in the past, then what thing is present
 with us, further what is to follow after. Nor may
 we admit that anyone has a sense of time by itself
 separated from the movement of things and their
 quiet calm.

All other
 things are
 properties
 or accidents
 of these.

Time has
 no inde-
 pendent
 existence.

⁴⁶⁴ Moreover, when they say that the rape of
 Tyndareus' daughter^d and the conquest by war of
 the Trojan tribes *are* facts,^e we must see to it that
 they do not compel us to admit that these things
are of themselves, on the ground that those genera-
 tions of men, of whom these were accidents, the ir-
 revocable ages past have already carried away ;
 for whatever has been done may be called an accident

nor have
 historical
 events.

13-14.

^d Helen of Troy.

^e *esse*, the auxiliary of the pf. inf. pass., is capable of being
 understood as an assertion of existence. This ambiguity is
 not found in English, hence the paraphrase "*are* facts."

eventum dici poterit quodcumque erit actum. 470
 denique materies si rerum nulla fuisset
 nec locus ac spatium, res in quo quaeque geruntur,
 numquam Tyndaridis forma confatus amore
 ignis, Alexandri Phrygio sub pectore gliscens,
 clara accendisset saevi certamina belli, 475
 nec clam durateus Troianis Pergama partu
 inflammasset equos nocturno Graiiugenarum ;
 perspicere ut possis res gestas funditus omnis
 non ita uti corpus per se constare neque esse,
 nec ratione cluere eadem qua constet inane, 480
 sed magis ut merito possis eventa vocare
 corporis atque loci, res in quo quaeque gerantur.

Corpora sunt porro partim primordia rerum,
 partim concilio quae constant principiorum.
 sed quae sunt rerum primordia, nulla potest vis 485
 stinguere ; nam solido vincunt ea corpore demum.
 etsi difficile esse videtur credere quicquam
 in rebus solido reperiri corpore posse.
 transit enim fulmen caeli per saepta domorum,
 clamor ut ac voces ; ferrum candescit in igni 490
 dissiliuntque fero ferventi saxa vapore ;
 cum labefactatus rigor auri solvitur aestu,

473 forma OQG: formae O corr., P, perhaps rightly
 amore OQGP: amoris Wakefield tentatively in notes
 477 equos OQG: equus O corr., P: equo Q corr.
 491 fero OQG: fere B (according to Büchler), first printed
 by Pius, not (as the editors say) Wakefield 492 cum
 OQG: tum F (according to Martin), ed. Brixiensis

^a For this interpretation of 469-470, see R. L. Dunbabin,
 CQ 11 (1917) 135-136, K. Wellesley, CR N.S. 13 (1963) 16-17.

^b Paris. The epithet *Phrygio* is probably intended to sug-

either of the whole earth or of the actual regions in which it occurred.^a Again, if there had been no material for things, and no place and space in which each thing is done, no fire fanned to flame by love through the beauty of Tyndareus' daughter, and glowing beneath the breast of Phrygian Alexander,^b would ever have set alight blazing battles of savage war ; no wooden horse,^c unmarked by the sons of Troy, would ever have set Pergama in flames by its night-born brood of Grecians^d ; so that you may perceive that things done never at all consist or exist in themselves as body does, nor are said to exist in the same way as void ; but rather you may properly call them accidents of body, and of the place in which the things are severally done.

⁴⁸³ Furthermore, bodies are partly the first-beginnings of things, partly those which are formed by union of the first-beginnings. But those which are the first-beginnings of things no power can quench : they conquer after all^e by their solid body.^f And yet it seems difficult to believe that anything with solid body can be found in creation. For heaven's thunderbolt passes through walled houses, as sound does and voices^g ; iron grows white-hot in fire, and stones split with fierce fervent heat ; the hardness of gold is softened and dissolved by heat, and the ice

The first-beginnings are solid and indestructible.

gest the *frigus* in Paris' heart before he was " fired " with love for Helen. Cf. 2.611, 613 *Phrygias* . . . *fruges*.

^c *equos* (477) = *equus*.

^d For the " pregnant " Trojan Horse, cf. Aeschylus, *Ag.* 825, Euripides, *Tro.* 11, Ennius, *Sc.* 76-77, Virgil, *Aen.* 2.20, 237-238, 6.516.

^e Cf. Epicurus, *Ep. ad Hdt.* 40-41.

^f Cf. 6.228-229.

tum glacies aeris flamma devicta liquescit ;
 permanat calor argentum penetraleque frigus,
 quando utrumque manu retinentes pocula rite 495
 sensimus, infuso lympharum rore superne.
 usque adeo in rebus solidi nil esse videtur.
 sed quia vera tamen ratio naturaque rerum
 cogit, ades, paucis dum versibus expediemus
 esse ea quae solido atque aeterno corpore constant,
 semina quae rerum primordiaque esse docemus, 501
 unde omnis rerum nunc constet summa creata.

Principio quoniam duplex natura duarum
 dissimilis rerum longe constare repertast,
 corporis atque loci, res in quo quaeque geruntur, 505
 esse utramque sibi per se puramque necessesit.
 nam quacumque vacat spatium, quod inane vocamus,
 corpus ea non est ; qua porro cumque tenet se
 corpus, ea vacuum nequaquam constat inane.
 sunt igitur solida ac sine inani corpora prima. 510

Praeterea quoniam genitis in rebus inanest,
 materiem circum solidam constare necessesit,
 nec res ulla potest vera ratione probari
 corpore inane suo celare atque intus habere,
 si non, quod cohibet, solidum constare relinquant. 515
 id porro nil esse potest nisi materiai
 concilium, quod inane queat rerum cohibere.
 materies igitur, solido quae corpore constat,
 esse aeterna potest, cum cetera dissoluantur.

^a For the possibility that this striking metaphor was inspired or influenced by Empedocles, see J. Longrigg, *CR* N.S. 20 (1970) 8-9. The metaphor, though bold, is extremely apt, because bronze, like ice, is solidified, smooth, shiny,

of bronze ^a is overcome by fire and liquefies ; warmth oozes through silver and so does penetrating cold, seeing that we have felt both, as we duly grasp the goblet, when dewy ^b water is poured in from above. So true is it that there seems to be nothing solid in the world. But because nevertheless true reason and the nature of things compels, be with me, until in a few verses I make it clear that there are such things as consist of body solid and everlasting, which we teach to be seeds of things and their first-beginnings, out of which now all the sum of things has been built up.

⁵⁰³ First, since there has been found to exist a twofold and widely dissimilar nature of two things—^{For (1) Body and Void are mutually exclusive;} of body, that is, and space in which all things are done—it is necessary that each exist by itself and for itself unmixed. For wherever is empty space, which we call void, there no body is ; further, where body maintains itself, there by no means exists empty space. The first bodies therefore are solid and without void.

⁵¹¹ Besides, since there is void in created things, there must be solid matter round about it, nor can anything by true reasoning be proved to conceal void in its body and to hold it within, unless you grant that which holds to be solid. Further, that can be nothing but a union of matter, which can hold the emptiness of things within it. Matter therefore, which consists of solid body, may be everlasting, though all else ^{(2) compound objects contain Void, and this Void must be enclosed by Body that contains no Void (i.e. atoms) ;} be dissolved.

cold (cf. Homer, *Il.* 5.75, *ψυχρόν . . . χαλκόν*, quoted by Wakefield), and melts (cf. *liquescit*).

^b *rore* suggests the purity, and especially the sparkle, of the water : cf. 771, 777, 4.438.

^c That is, all compound bodies.

Tum porro si nil esset quod inane vacaret, 520
 omne foret solidum ; nisi contra corpora certa
 essent quae loca complerent quaecumque tenerent,
 omne quod est, spatium vacuum constaret inane.
 alternis igitur nimirum corpus inani
 distinctum, quoniam nec plenum naviter extat 525
 nec porro vacuum. sunt ergo corpora certa
 quae spatium pleno possint distinguere inane.
 haec neque dissolui plagis extrinsecus icta
 possunt nec porro penitus penetrata retexi
 nec ratione queunt alia temptata labare ; 530
 id quod iam supra tibi paulo ostendimus ante.
 nam neque conlidi sine inani posse videtur
 quicquam nec frangi nec findi in bina secundo
 nec capere umorem neque item manabile frigus
 nec penetralem ignem, quibus omnia conficiuntur.
 et quo quaeque magis cohibet res intus inane, 536
 tam magis his rebus penitus temptata labascit.
 ergo si solida ac sine inani corpora prima
 sunt ita uti docui, sint haec aeterna necessent.
 Praeterea nisi materies aeterna fuisset, 540
 antehac ad nilum penitus res quaeque redissent,
 de niloque renata forent quaecumque videmus.
 at quoniam supra docui nil posse creari
 de nilo neque quod genitum est ad nil revocari,
 esse immortali primordia corpore debent, 545
 dissolui quo quaeque supremo tempore possint,
 materies ut suppeditet rebus reparandis.
 sunt igitur solida primordia simplicitate,

520 vacaret *O* corr., *P* ; vocaret *QG* : vacaret *O*. It is possible that *Lucr.* wrote vocaret=vacaret (see *Munro*), but the form occurs nowhere else in the poem, and a scribe easily could have written quod inane vocaret in error, influenced by the common quod inane vocamus (369, 426, 439, 507) ; in any case, it seems unwise to risk confusing the modern reader

520 Then further, if there were nothing void and (3) the universe consists of both Body and Void, and so there must be definite bodies, empty, the universe would be solid ; unless on the other hand there were definite bodies to fill up the places they held, then the existing universe would be vacant and empty space. Therefore without doubt body is marked off from void alternately, since the universe is not completely full nor yet empty. There are therefore definite bodies to mark off empty space from full. These can neither be dissolved by blows when struck from without, nor again be pierced inwardly and decomposed, nor can they be assailed and shaken in any other way, as I have shown you above a little while ago.^a For it is seen that without void nothing can be crushed, or broken, or split in two by cutting, nothing can admit liquid or again percolating cold or penetrating fire, by which all things are destroyed. And the more each thing holds void within it, so much the more thoroughly it is shaken when these things attack it. Therefore, if the first bodies are solid and without void, as I have taught, these must be everlasting.

540 Besides, unless matter had been everlasting, (4) if not, all things would have returned utterly to nothing, and whatever we see would have been born again from nothing. But since I have shown above^b that nothing can be produced from nothing and what has been made cannot be brought back to nothing, there must be first-beginnings of immortal body, into which each thing can be resolved at its last moment, that matter may be forthcoming for the renewal of things. The first-beginnings are therefore of solid singleness, nor can they in any other way be pre-

^a 215-264, 485-502.

^b 149-264.

nec ratione queunt alia servata per aevom
ex infinito iam tempore res reparare. 550

Denique si nullam finem natura parasset
frangendis rebus, iam corpora materiai
usque redacta forent aevo frangente priore,
ut nil ex illis a certo tempore posset
conceptum summum aetatis pervadere finem. 555

nam quidvis citius dissolvi posse videmus
quam rursus refici; quapropter longa diei
infinita aetas anteacti temporis omnis
quod fregisset adhuc disturbans dissoluensque,
numquam relicuo reparari tempore posset. 560

at nunc nimirum frangendi reddita finis
certa manet, quoniam refici rem quamque videmus
et finita simul generatim tempora rebus
stare, quibus possint aevi contingere florem.

Huc accedit uti, solidissima materiai 565
corpora cum constant, possint tamen omnia reddi
mollia quae fiunt—aer aqua terra vapores—
quo pacto fiant et qua vi quaeque gerantur,
admixtum quoniam semel est in rebus inane.

at contra si mollia sint primordia rerum, 570
unde queant validi silices ferrumque creari
non poterit ratio reddi; nam funditus omnis
principio fundamenti natura carebit.

sunt igitur solida pollutentia simplicitate,
quorum condenseo magis omnia conciliatu 575
artari possunt validasque ostendere viris.

Porro si nullast frangendis reddita finis
corporibus, tamen ex aeterno tempore quaeque

555 finem *Q* corr., *BL* (for the masculine gender, cf. 2.1116): fine *QG*: finis *OAF*: florem *Marullus*

^a The four elements of Empedocles, with whose theory Lucr. deals in 716-829.

served through the ages from infinite time past and
make things anew.

⁵⁵¹ Moreover, if nature had provided no limit to (5) if there
the breaking-up of things, by this time the bodies of were no
matter would have been so reduced by the breakings limit to
of ages past, that from them nothing could within breaking
any fixed time be conceived and attain the full up, de-
maturity of its life. For we see that anything can struction
more quickly be dissolved than it can be remade would be
again; therefore what all the long ages of infinite quicker
time past, disturbing and dissolving, had broken up than
before now, could never be made new in the time renewal;
remaining. But as it is, in fact there remains ap-
pointed a fixed limit for the breaking, since we see
each thing being remade, and at the same time
definite periods fixed for things after their kind, in
which they may attain the flower of life.

⁵⁶⁵ Add, moreover, that while the elements of (6) solid
matter are perfectly solid, yet it is possible to give bodies can
an explanation how all those things which are soft— make soft
air, water, earth, fire^a—are formed, and by what things, but
force each is directed, when once void is intermingled not soft
in things. But contrariwise, if the first-beginnings bodies hard
of things were soft, no explanation will be possible things;
to say out of what hard flints and iron could be pro-
duced; for all nature will utterly lack a foundation to
begin upon. Therefore they are mighty by their solid
singleness, and, by a denser combination of these,
all things can be more closely packed and show hard
strength.

⁵⁷⁷ Further, if no limit has been set to the breaking- (7) if there
up of bodies,^b you must nevertheless admit that even is no limit
to breaking

^b Lucr. is arguing here primarily against Anaxagoras (cf. 847-858), who held that matter is infinitely divisible.

nunc etiam superare necessest corpora rebus,
 quae nondum clueant ullo temptata periclo. 580
 at quoniam fragili natura praedita constant,
 discrepat aeternum tempus potuisse manere
 innumerabilibus plagis vexata per aevom.

Denique iam quoniam generatim reddita finis
 crescendi rebus constat vitamque tenendi, 585
 et quid quaeque queant per foedera naturai,
 quid porro nequeant, sancitum quandoquidem extat,
 nec commutatur quicquam, quin omnia constant
 usque adeo variae volucres ut in ordine cunctae
 ostendant maculas generalis corpore inesse, 590
 inmutabili' materiae quoque corpus habere
 debent nimirum; nam si primordia rerum
 commutari aliqua possent ratione revicta,
 incertum quoque iam constet quid possit oriri,
 quid nequeat, finita potestas denique cuique 595
 quanam sit ratione atque alte terminus haerens,
 nec totiens possent generatim saecula referre
 naturam mores victum motusque parentum.

Tum porro quoniam est extremum quodque ca-
 cumen
 corporis illius quod nostri cernere sensus 600
 iam nequeunt, id nimirum sine partibus extat
 et minima constat natura, nec fuit umquam

599-600 Munro assumes a lacuna between these two lines and supplies e.g.: corporibus, quod iam nobis minimum esse videtur, | debet item ratione pari minimum esse cacumen—thus introducing an analogy from perceptible objects, such as is found in 749-752 and Epicurus, Ep. ad Hdt. 58-59. This solution, rejected by recent editors, is strongly supported by D. J. Furley, *Two Studies in the Greek Atomists* 31-33, and may well be correct. However, as Furley admits later in 48

now after infinite time there are left bodies of every kind of thing, bodies never yet attacked by any danger. But, since they are endowed with a dissoluble nature, it is inconsistent to say that they could have remained through time everlasting, exposed to innumerable assaults throughout the ages.

⁵⁸⁴ Again, since a limit has been fixed for the growth of things after their kind and for their tenure of life, and since it stands decreed what each can do by the ordinances of nature, and also what each cannot do, and since nothing changes,^a but all things are constant to such a degree that all the different birds show in succession marks upon their bodies to distinguish their kind, they must also have beyond a doubt a body of immutable matter. For if the first-beginnings of things could be changed, being in any way overmastered, it would also now remain uncertain what could arise and what could not, in a word in what way each thing has its power limited and its deep-set boundary mark,^b nor could the generations so often repeat after their kind the nature, manners, living, and movements of their parents.

⁵⁹⁹ Then further, since there is always an extreme point on that body which our senses are no longer able to perceive, that point undoubtedly is without parts, and is the smallest possible existence, and it

^a The types persist.

^b 595-596 = 76-77, 5.89-90, 6.65-66.

his detailed discussion of 599-634, "Lucretius' argument is not very clear" and "the whole section is messily put together," and the cause of the difficulty in the opening lines may be lack of revision rather than a textual loss. Therefore the text of the manuscripts is retained, though with much hesitation

per se secretum neque posthac esse valebit,
 alterius quoniamst ipsum pars primaque et una,
 inde aliae atque aliae similes ex ordine partes 605
 agmine condense naturam corporis explent,
 quae, quoniam per se nequeunt constare, necessest
 haerere unde queant nulla ratione revelli.
 sunt igitur solida primordia simplicitate,
 quae minimis stipata cohaerent partibus arte, 610
 non ex illorum conventu conciliata,
 sed magis aeterna pollentia simplicitate,
 unde neque avelli quicquam neque deminui iam
 concedit natura reservans semina rebus.

Praeterea nisi erit minimum, parvissima quaeque
 corpora constabunt ex partibus infinitis, 616
 quippe ubi dimidiae partis pars semper habebit
 dimidiam partem nec res praefinet ulla.
 ergo rerum inter summam minimamque quid escit ?
 nil erit ut distet ; nam quamvis funditus omnis 620
 summa sit infinita, tamen, parvissima quae sunt,
 ex infinitis constabunt partibus aequae.
 quod quoniam ratio reclamat vera negatque
 credere posse animum, victus fateare necessest
 esse ea quae nullis iam praedita partibus extent 625

611 illorum (*i.e.* cacuminum or minimorum = minima-
 partium; *cf.* 450) *OQGP*: illarum *Preiger* (*see Haver-*
camp)

^a For the subtle and difficult doctrine of minimal parts (*minimae partes*, *minima* = ἐλάχιστα), *cf.* Epicurus, *Ep. ad Hdt.* 56-59. Epicurus could not accept that matter is infinitely divisible and so postulated the existence of minute, physically indivisible particles, *i.e.* atoms, but at the same time believed that each atom, since it has magnitude, must also have parts which, though they are physically inseparable from the atom, can be distinguished in thought. *Lucr.*

has never existed apart by itself nor will ever have force to do so, since it is essentially a part of something else, a first part with unity of its own, and then other and other like parts, each in its own place, in close formation fill up the nature of the atom; and since these cannot exist separately, they must necessarily so adhere to the whole that they cannot by any means be torn away.^a The first-beginnings, therefore, are of solid singleness, made of these smallest parts closely packed and cohering together, not compounded by the gathering of these parts, but strong rather by their eternal singleness, and from these nature allows nothing to be torn away or diminished any longer, but keeps them as seeds for things.

⁶¹⁵ Besides, unless there is to be a smallest some-
 thing, each littlest ^b body will consist of infinite parts, (10) if there were infinite division, the smallest thing would be equal to the sum of things;
 since of course a half of the half of anything will always have a half of its own, and there will be no limit to the division. Then what difference will there be between the sum of things and the least of things? There will be no difference; for although the whole sum of things be absolutely infinite, yet the bodies which are littlest will equally consist of infinite parts.^c But since true reasoning protests against this, and denies that the mind can believe it, you must yield and confess that there are things which no longer consist of any parts and are of the smallest possible

returns to the doctrine in 2.478-499 in connexion with atomic shapes.

^b *parvissima* is used here to avoid confusion with *minimum*.

^c The fallacious assumption that all infinities are equal is refuted by Newton in a passage quoted by Munro. *Lucr.*'s argument is probably aimed chiefly at Anaxagoras, perhaps also at the Stoics.

LUCRETII

et minima constant natura. quae quoniam sunt,
illa quoque esse tibi solida atque aeterna fatendum.

Denique si minimas in partibus cuncta resolvi
cogere consuisset rerum natura creatrix,
iam nil ex illis eadem reparare valeret 630
propterea quia, quae nullis sunt partibus aucta,
non possunt ea quae debet genitalis habere
materies, varios conexus pondera plagas
concursum motus, per quae res quaeque geruntur.

634 quae Marullus: quas QG, O corr. by Dungal: quos Codex
Musaei Britannici (Harleian 2612), according to
Wakefield: omitted by O, which also omits res quaeque
geruntur

° varios (633) is emphatic: see D. J. Furley, *Two Studies
in the Greek Atomists* 39-40 (cf. next note).

DE RERUM NATURA, 1. 626-644

nature. And since these exist, you must also confess
that the first-beginnings are solid and everlasting.

628 Lastly, if nature the maker had been accus-
tomed to compel all things to be resolved into their
smallest parts, that same nature would no longer be
able to make anything again out of them, because
things which are not augmented by any parts can-
not have what generative matter must have—the
variety ° of connexions, weights, blows, concurrences,
motions, by which all things are brought to pass.

(11) if things could be resolved into minimal parts, these would not have the varied qualities needed for creating things.