NEWS AND COMMENTS

THE performance of classical plays seems to be finding favour in America. The November *Classical Journal* mentions that the *Rudens* (shortened) has been given at San José, California, by boys and girls, under the training of Miss E. D. Whitmire: and at Emporia, Kansas, the *Agamemnon* was given in English (Goodwin's translation of the dialogue, Plumptre's of the choruses). The *Alcestis*, given in English at Beloit College, is stated to be the twenty-first of that kind given at Beloit. The classical class of the University of Idaho represented the scene of Horace and the Bore. 'They had togas, but no scenery, and the hilarity was duly tempered by a paper on the Via Sacra.'

The *Classical Journal* also contains a paper on 'A New Greek Course,' outlining a course of study for those who know no Greek, exactly after the fashion of the 'Experiment' which Prof. Sonnenschein describes in our last issue.

WE are informed that Prof. H. A. Strong, of Liverpool, is translating into English, Weise's *Charakteristik der Lateinischen Sprache.*

MANCHESTER University has just founded a Greenwood Professorship of Hellenistic Greek. The first professor is Dr. J. H. Moulton, whose *Prolegomena* to New Testament grammar has excited so much attention in this country: he will probably combine with it Indo-European philology from the Greek standpoint, Prof. Conway taking the Latin side of that subject. The new chair is an amalgamation of the Greenwood lectureship of Hellenistic Greek and the lectureship on philology held by the late Prof. Strachan.

Manchester is leading the way for Oxford and Cambridge in encouraging studies other than scientific: witness the new chair and that of Pali. Besides these subjects, Cambridge has no official provision for Zend or Modern Greek, both subjects of importance, not to mention Tibetan; Oxford has a little advantage here over Cambridge. There is no indication that a certain department, which we will call the horse-leech's daughter, has ceased to cry 'Give, give,' and perhaps other departments may now begin to use the modern substitute for argument.

CORRESPONDENCE

To the Editor of THE CLASSICAL REVIEW.

EPICURUS AND LUCRETIUS.

GIUSSANI is, I believe, the first editor of Lucretius who has attempted to disentangle the argument of Epicurus ('Letter to Herodotus' 56 ff. *Usener*) in proof of what is known as the doctrine of 'minimal partes' composing the atom, and to apply it to Lucretius, I. 599 ff. But, if Epicurus is obscure, Giussani, in spite of his admirable penetration, and partly perhaps in consequence of it, is not easy reading either—at least I have not found him so; indeed, between the tortuosities of the Greek and the subtleties of the Italian, I have been very nearly driven off my head in attempting to understand the argument in question. In the hope therefore of being corrected,

if I am wrong, or, if I am right, of saving some other student, as dull-witted as myself, from much painful effort, I venture to put forward the following brief abstract of what seems to me to be the argument of Epicurus, as a help towards understanding the reasoning of Lucretius. Lucretius himself has dealt very cavalierly with 'the intricate prose' of his master, and has been commended—I wonder why—by Monro for so doing. Giussani, however, is as thorough here as elsewhere throughout his brilliant book, and, if the following statement of the argument is right, the merit is his, while if it is wrong, the fault must lie with me.

But first it is necessary to understand clearly what exactly is meant by the terms 'visible' ($\alpha\grave{\iota}\sigma\theta\eta\tau\acute{o}\nu$) and 'invisible' ($\nu o\eta\tau\acute{o}\nu$) in Epicurean physics. Many people, I believe, if asked 'why is an atom invisible?'

would reply, 'because it is so small.' Surely this is not so; if an atom were as large as a mountain it would still be 'invisible.' εἴρηται δὲ ἄτομος, οὐχ ὅτι ἐστιν ἐλαχίστη, ἀλλ' ὅτι οὐ δύναται τμηθῆναι, ἀπαθὴς οὖσα καὶ ἀμέτοχος κενοῦ. Even this commonplace might preclude misconception. Any body, no matter how small, is 'visible' or αἰσθητόν, if it possesses quality, that is, if it is composed of matter *with* void, that is, if it can emit εἴδωλα (Lucret. 1. 687-8). Any body, no matter how large, is 'invisible' or νοητόν, if it does not possess quality, that is, if it is composed of matter *without* void, that is, if it cannot emit εἴδωλα. An atom then is invisible, not because of its smallness, but because it is without quality, being ἀμέτοχος κενοῦ and so unable to radiate εἴδωλα. Therefore, to say of a thing that it has become 'invisible,' οὐκ αἰσθητόν or νοητόν, is equivalent to saying, not that it is too small to be seen—for light can see anything that can emit εἴδωλα—but that it has ceased to exist as a 'res genita,' or a compound of matter and void.

So much being admitted, I think Epicurus' argument amounts to this :

1. Atoms, like all finite (ὡρισμένα) bodies, whether 'visible' or 'invisible,' must have parts, that is, 'extremities' (ἀκρά, 'cacumina'), e.g. a right side and a left, to determine their shape. Without this extension, a body is neither αἰσθητόν nor νοητόν. But since the finite cannot contain the infinite, there must be a point at which the separation of these parts or 'extremities' ceases.

2. Take a visible (αἰσθητόν) body. Suppose our sight strong enough to see the smallest body existing in a qualified form (*i.e.* matter *plus* void), e.g. a particle of gold. To be visible, this gold body must have gold ἀκρά determining its shape. But since this body is the smallest body existing in the sphere of the visible (τὸ αἰσθητόν), its ἀκρά, which are smaller still, cannot exist on that sphere except in ἀκρά of that body. Apart from it, they would be οὐκ αἰσθητά, that is, *without* gold *parts* determining their shape. They are, therefore, as gold, *inseparable* from the body. If isolated from it, they would cease to be gold and become 'invisible' matter or atoms.

3. Next, take an invisible (νοητόν) body. Suppose our reason (our 'mental eye,' as Epicurus calls it) strong enough to conceive the smallest body existing in an *unqualified* form (*i.e.* matter *minus* void), e.g. the atom. To be conceivable (νοητόν), this material body must have material ἀκρά determining its shape. But since this body is the smallest body existing in the sphere of the conceivable (τὸ νοητόν), its ἀκρά, which are smaller still, cannot exist in that sphere except as ἀκρά of that body. Apart from it, they would be οὐ νοητά, that is, *without* material *parts* determining their shape. They are, therefore, as material, *inseparable* from the body. If isolated from it, they would cease to be matter and become nothing.

The conclusion therefore is, that the atom must have parts (ἀκρά), but these parts themselves are without parts, that is, without extension (ἀμετάβατα), and therefore cannot be conceived as existing separate

from the atom. Unextended themselves, they merely supply the atom with its extension. ἔτι τε τὰ ἐλάχιστα καὶ ἀμιγῆ (= 'una,' Lucret. 1. 604), πέρατα δεῖ νομίζειν τῶν μηκῶν τὸ καταμέτρημα ἐξ αὐτῶν πρώτων ('prima,' Lucret. 1. 604) τοῖς μείζοσι καὶ ἐλάττοσι παρασκευάζοντα τῇ διὰ λόγου θεωρίᾳ ἐπὶ τῶν ἀοράτων. 'We must consider these irreducible and simple extremities as the fundamental basis which supplies the atoms with the measure of this size for the mental contemplations of the invisible,' *i.e.* without its extremities the atom cannot be conceived as a dimension.

These considerations point to the true meaning of Lucret. 1. 749 ff.—a crucial passage which has been seriously misunderstood :

cum videamus id extremum cuiusque cacumen
esse quod ad sensus nostros minimum esse videtur,
conicere ut possis ex hoc, quae cernere non quis
extremum quod habent, minimum consistere ⟨in
  illis⟩.

The current translation is : 'though we see that that is the bounding point of anything which seems to be least to our senses, so that from this you may infer that because the things which you do not see have a bounding point, there is a host in them'; with this explanation : 'in the visible thing, however, the *cacumen seems* to be a *minimum*, in the atom it *is* a minimum.' But this, as Giussani observes, is to reason from a fallacy to a fact. 'Se nel fattos percipiti c'è un inganno, l'induzione fatti per l'impercettibili non ha più fondamento.' It appears, then, that *esse videtur* here does not mean 'seems to be' but 'is seen to be,' that is, 'is really a *minimum* in the sphere of the visible (τὸ αἰσθητόν).' 'Epicurus intende un vero *minimum*, ma nel campo del percettibili.' I therefore translate, taking *id* as predicate : 'though we see that the extremity of anything is a thing which, judged by our senses, is seen to be a *minimum*, so that from this you can infer that, since things you cannot see (*i.e.* atoms) have an extremity, there is a *minimum* also in them' (supplying 'et illis' with Postgate), and the argument will be : since our senses tell us that the ἀκρὸν of a qualified or visible body is a *minimum* in the sphere of τὸ αἰσθητόν, our reason infers that the ἀκρὸν of an unqualified or invisible body (the atom) is a *minimum* in the sphere of τὸ νοητόν.　　　　　　W. T. L.

EURIP. *BACCH.* 659.

ἡμεῖς δέ σοι μενοῦμεν, οὐ φευξούμεθα.

ON seeing (at page 216 of the present volume of *The Classical Review*) Mr. J. U. Powell's conjecture σῷ, nominative plural of σῶς, instead of the 'awkward' σοι of the MSS., it has occurred to me that the reading here is :

ἡμεῖς δ' ἔσω μενοῦμεν, οὐ φευξούμεθα.

SAMUEL ALLEN.

Lisconnan, Dervock, Co. Antrim.