attention was given to such climatic and topographical observations as might tend to the better understanding of the Roman writers. No snow fell in the city during the winter, though the air was often chill enough to stimulate the enjoyment of highpiled logs, and of beverages even more thrilling than the sour wine of Sabinum. Again and again the slopes of Monte Cavo were white with snow, while the more distant summits of the Sabine hills kept on their frozen nightcaps for weeks at a time. But not once did I see Soracte snow-crowned, though I looked for such a phenomenon under apparently favourable circumstances many a time. The question finally came to me whether Horace did not mean that when not merely Sabine and Alban hills, but even Soracte, stood deep in snow, the wintry weather was severe indeed.

With regard to I. 2. 14, I am not quite sure what Mr. Sargeaunt means by his remark that 'the course of a flood high enough to have threatened the temple of Vesta must have traversed [italics mine] higher ground than the Trastevere; 'but at just about the time when his article was published (on the first of December) the Forum was standing six feet deep in the Tiber-water. I have myself seen the Tiber more than once back up the ancient sewersystem to within a very few feet of the Temple of Vesta. And this is all in spite of the modern engineering operations that by deepening and widening the bed of the Tiber, and by the construction of the magnificent new embankments, have done much

to make Father Tiber content to rest in his proper quarters. The ordinary Forum floods of classical days may well have been quite as striking as the extraordinary ones of the year just closing; and the poet may be pardoned even if he did not give a technically correct discussion of the cause of the phenomena, and did ascribe to the jealous river-god an impiousness of deadly purpose against the safety of the deity who symbolized the very existence of the Roman community such as could not be allowed to stand as part of the arraignment before a modern court of law.

Mr. Page was of course much confused about his topography, but he may well be justified in believing litus Etrusoum to be the right river-bank, and for more and other reasons than I have specified here. But it is to be hoped that the American School in Rome, and the newly-founded British School, may do something to quicken the study of elementary Roman topography among English-speaking students of the classics, so that we shall not encounter such statements as Mr. Sargeaunt has properly noticed, nor such as that made on p. 412 of the same number of the Classical Review, where an American student quotes the well-known lex Iulia municipalis, but spoils the interpretation based upon it by attributing to the Porta Flaminia an existence a century and a half before the construction of the wall through which it opened.

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Dec. 15, 1900.

PHARSALIA NOSTRA.1

Hinc ingulis, hinc ferro bella geruntur.—vii 533.

On Lucan i 463 'bellis arcere Caycos oppositi' I gave my reasons for accepting Bentley's Belgis. 'But it should be added' says Mr Heitland 'that he proposed to rewrite lines 460-72 in an astounding manner.' Why should it be added! Because Mr Heitland cannot afford to rely upon the merits of his case, and must import this foreign matter to create prejudice. The rightness or wrongness of Belgis has no dependence on anything else that Bentley ever did; but because he

1 See pp. 78-80 and vol. xiv p. 468.
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annoys us very much by his bad conjectures, therefore we will refuse his good conjectures, for revenge is sweet. I avoided this irrelevancy; so it is said that I 'do not always manage to state the case fairly.' Then Mr Heitland, who shrinks from the conjectural emendation of Lucan, proceeds to the conjectural emendation of me; though I have not been dead nearly so long, nor do nine centuries of transcription intervene between my autograph and last December's Classical Review. To show that the Romans had no wish to restrain the Chauci from war, but only from war on Roman subjects, I adduced Tac. Germ. 33, where the Romans are seen exulting in the

wars of Germans upon other Germans and praying to heaven for their continuance. Mr Heitland alters my '33' to '35,' because the word Chauci occurs in that chapter: consequently at this point his argument runs off the rails and ceases to pertain to me. He then suggests that bellis may mean 'campaigns carried on, when necessary, beyond the Rhine,' and asks if Caesar did not twice cross the Rhine to impress the Germans. Yes, he did, in imposing strength; but that is not what frontier garrisons are for. Last, he enquires 'Are not the Chauci a rather ill-chosen pars pro toto?' I think that they are very well chosen, and that they are not a pars pro toto; but to whom, and with what design, is this question addressed? it is Mr Heitland's own business to answer it. Caycos is his reading and the MS reading, not a conjecture of Bentley's or mine.

iii 275 sq. 'mediae dirimens confinia terrae nunc huc, nunc illuc, qua flectitur, ampliat orbem.' I saw that Haskins understood orbem as Mr Heitland does, 'enlarges a continent'; but I thought the rendering unworthy of notice, and I hoped that no one would seriously deny the necessity of my version 'enlarges the globe.' That orbem should be used for alterutrum e duobus orbibus, that a man should say 'nunc huc nunc illuc ampliat alterutrum e duobus orbibus' when he might say 'nunc hunc nunc illum orbem ampliat,' that the naked word orbem in 276 should mean a continent when terrae means the earth in 275, I thought incredible. That continent is one meaning of orbis I know, and I myself translated it so in paraphrasing the true reading 'nunc hunc nunc illum.' Mr Heitland says 'a good deal here and elsewhere depends on the value to be assigned to the codex Vossianus primus (V),' and he wishes me to settle this question finally. I have plenty else to do, but perhaps I can enable him to settle it. Nothing here, and not much elsewhere, depends on the value to be assigned to V. That V has some value is admitted: the way to find the amount of that value is to collect the passages, including this iii 276, where its reading is intrinsically more probable than that of the 'Pauline' MSS, to confront these passages with those where its reading is intrinsically less probable, and to see which class is the larger and more important, and by how much. Having thus ascertained the value of V, dismiss it from your mind: never think of it again except in places where the intrinsic probability of V's readings and the 'Pauline' readings is exactly equal. In these places your knowledge of the relative value of V and the 'Paulines' will serve to guide your choice a little better than the method of drawing lots or spinning a coin: not much better, but a little. Such are the precepts of common sense and the practice of my masters Bentley and Madvig. But in Germany they have now adopted another plan, which is very different and much easier. You assume (and if you have luck you may be right in assuming) that one MS is better than another; and you then proceed to settle, in accordance with this assumption, the intrinsic probability of their readings, endeavouring above all to persuade yourself that the other MS is as nearly valueless as possible. This is scientific criticism; though liberal shepherds give it the grosser name of putting the cart before the horse.

i 531 'uarias ignis tenso (al. denso) dedit aere formas': I said that air was incapable of tension. Here Mr Heitland is reinforced by Prof. J. S. Reid, who quotes three passages to show that air may be said to be 'put on the stretch.' When I was reading Lucan and making up my mind about i 531, I noted down in a cynical spirit two passages which would or might be quoted in defence of tenso by some of my fellow mortals who take less pains than I do to correct the native inaccuracy and precipitancy of the human intellect. One of them has been quoted by Prof. Reid. Seneca in n. q. ii 6-9 uses intentio thirteen times and intendo six; and by intentio aeris he designates, not a 'putting on the stretch,' but almost the reverse, the urgence or pressure of the air in a definite direction: this he assigns as the cause of many phenomena, which range from the impact of sound on the ear, and the resistence of inflated bladders, to the propulsion of heavy weights, the uprooting of trees, and the whirling away of houses. take decisive instances: 'intentionem aeris ostendent . . . pondera per magnum spatium ablata uento. ostendunt uoces, quae remissae claraeque sunt, prout aer se concitauit. quid enim est uox nisi intentio aeris, ut audiatur, linguae formata percussu? quid cursus et motus omnis, nonne intenti spiritus opera sunt?... hic cum uehementer concitatus ipse se torsit, arbusta siluasque conuulsit et aedificia tota corripiens in alto So Lucan ix 472 spiritus in tentus: Lucretius too at v 513 has 'aera ... fluere atque intendere eodem | que uoluenda micant . . . sidera.' One might as well adduce intendere litem to recommend lis tensa in the sense of a protracted law

suit; and law-suits are not incapable of protraction.

Since intentio aeris means pressure in Seneca it is not likely to mean the opposite in Gellius v 16 2, even if the stretching of air were a possible thing. What it does mean in Gellius will be learnt from the words of Epictetus which Prof. Reid has cited, diss. ii 23 4 εἰκῆ δὲ καὶ τὸν μεταξὺ ἀέρα ούτως ένεργον έποίησε καὶ έντονον ώστε δι' αύτοῦ τεινομένου πως διικνεῖσθαι τὴν ὄρασιν; The Greek ἔντονος, like the Latin intentus, can mean either tensus or concitatus: that it here means the latter is shown both by its conjunction with ἐνεργός and by the sense, which is this: 1 'Frustrane interiectum quoque aerem tam agilem et intentum fecit ut per eum, certa quadam ratione citatum, uisus penetret?' Vision, say the Stoics, consists not in rays of light which shoot from the object to the eye, but in rays of sight which shoot from the eye to the object: if the intervening air were άργὸς καὶ ἄτονος, iners et languidus, it would obstruct the passage of these rays; but it is providentially endowed with a sympathetic nimbleness and briskness, and under stimulation it transmits them to their goal. How the stretching of the air would help matters I do not see: its rarefaction might, but the Latin for rarefy is extenuo, not tendo.2 Gellius then rightly renders τεινομένου by 'radiorum ex oculis in ea quae

¹ I have slightly altered Duebner's translation, which runs 'tam efficacem et intentum' and 'certa quadam ratione commotum.'

² Mr Hosius actually defends tenso aere by quoting extenuatis nubibus.

uideri queunt emissionem aerisque simul intentionem,' not tensionem; for citare is a sense which τείνω and intendo have but tendo has not. In like manner the Latin for τείνειν δρόμον (Iliad xxiii 375 etc.) is not tendere cursum, which means something quite different, but citare cursum. Reid's three quotations, all of which he has misapprehended, neither show that air may be said to be 'put on the stretch' nor that Lucan could use tenso as Epictetus used τεινομένου. But suppose he could: will you tell me that Lucan, in a rehearsal of terrific portents, interposed the mention of a circumstance which he believed to accompany every visual perception of which the eye is capable, and which itself was merely matter of theory?

For scholars to argue against me as Mr Heitland argues is just the way to foster in me that arrogant temper to which I owe my deplorable reputation. At i 481 I proposed 'inter Rhenum populos Albimque iacentes' instead of Alpem. Mr Heitland replies (p. 78b) that with Albim the reference is clearly to Germans, and it is not certain that Lucan is thinking of Germans; and this he denominates an objection. If my infallibility, that is to say the care with which I think and write, had suffered me to make this same 'objection' to Alpen,—to say that with Alpem the reference is clearly to Helvetians, and it is not certain that Lucan is thinking of Helvetians,—he would perhaps have seen that there was something not quite right with the logic.

A. E. HOUSMAN.

ARCHAEOLOGY

MARATHON.

'I'll throw a stone on your cairn' is an expression of gratitude and regard. It refers to ancient funeral rites when each friend showed his respect for the departed by helping to raise his sepulchral mound. Therefore we do not expect to find a cairn built of stones from a quarry as might be the case if the erection of the monument had been left to menials employed for the purpose. The stones were gathered over the surrounding ground wherever they could be most easily procured by the funeral party. So also, where a mound of earth was

raised over the ashes of the dead, the earth does not appear to have been systematically dug from a bank or pit but to have been scraped together from the loose surface around. When Limblow Hill, I near Royston, was opened it was found to consist of layers of humus and the rubbly top of the chalk all thrown together in such a manner as to show clearly that it was scraped from the loose and more easily gathered surface soil over a wide area around.

The Bartlow Hills are four high mounds

1 See Proc. Camb. Ant. Soc., vol. vi. p. 395.