

tant;<sup>26</sup> Germanicus Cæsar, one of the sons-in-law of Augustus, also translated the poem, and this translation remains almost entire. Finally, we have a complete translation by Avienus.<sup>27</sup> The "Astronomica" of Manilius, the "Poeticon Astronomicon" of Hyginus, both belonging to the time of Augustus, are, like the work of Aratus, poems which combine mythological ornament with elementary astronomical exposition; but have no value in the history of science. We may pass nearly the same judgment upon the explanations and declamations of Cicero, Seneca, and Pliny, for they do not apprise us of any additions to astronomical knowledge; and they do not always indicate a very clear apprehension of the doctrines which the writers adopt.

Perhaps the most remarkable feature in the two last-named writers, is the declamatory expression of their admiration for the discoverers of physical knowledge; and in one of them, Seneca, the persuasion of a boundless progress in science to which man was destined. Though this belief was no more than a vague and arbitrary conjecture, it suggested other conjectures in detail, some of which, having been verified, have attracted much notice. For instance, in speaking of comets,<sup>28</sup> Seneca says, "The time will come when those things which are now hidden shall be brought to light by time and persevering diligence. Our posterity will wonder that we should be ignorant of what is so obvious." "The motions of the planets," he adds, "complex and seemingly confused, have been reduced to rule; and some one will come hereafter, who will reveal to us the paths of comets." Such convictions and conjectures are not to be admired for their wisdom; for Seneca was led rather by enthusiasm, than by any solid reasons, to entertain this opinion; nor, again, are they to be considered as merely lucky guesses, implying no merit; they are remarkable as showing how the persuasion of the universality of law, and the belief of the probability of its discovery by man, grow up in men's minds, when speculative knowledge becomes a prominent object of attention.

An important practical application of astronomical knowledge was made by Julius Cæsar, in his correction of the calendar, which we have already noticed; and this was strictly due to the Alexandrian School: Sosigenes, an astronomer belonging to that school, came from Egypt to Rome for the purpose.

<sup>26</sup> Two copies of this translation, illustrated by drawings of different ages, one set Roman, and the other Saxon, according to Mr. Ottley, are described in the *Archæologia*, vol. xviii.

<sup>27</sup> Montuola, i. 221.

<sup>28</sup> Seneca, *Qu. N.* vii. 25.