

to celestial knowledge by a passion which dominates his nature. He can no more avoid doing astronomical work, whether in the line of observations or research, than the poet can chain his Pegasus to earth. I do not mean by this that education and training will be no use to him. They will certainly accelerate his early progress. If he is to become great on the mathematical side, not only must his genius have a bend in that direction, but he must have the means of pursuing his studies. And yet I have seen so many failures of men who had the best instruction, and so many successes of men who scarcely learned anything of their teachers, that I sometimes ask whether the great American celestial mechanician of the twentieth century will be a graduate of a university or of the backwoods.

Is the man thus moved to the exploration of nature by an unconquerable passion more to be envied or pitied? In no other pursuit does success come with such certainty to him who deserves it. No life is so enjoyable as that whose energies are devoted to following out the inborn impulses of one's nature. The investigator of truth is little subject to the disappointments which await the ambitious man in other fields of activity. It is pleasant to be one of a brotherhood extending over the world, in which no rivalry exists except that which comes out of trying to do better work than anyone else, while mutual admiration stifles jealousy. And yet, with all these advantages, the experience of the astronomer may have its dark side. As he sees his field widening faster than he can advance he is impressed with the littleness of all that can be done in one short life. He feels the same want of successors to pursue his work that the founder of a dynasty may feel for heirs to occupy his throne. He has no desire to figure in history as a Napoleon of science whose conquests must terminate with his life. Even during his active career his work may be of such a kind as to require the coöperation of others and the active support of the public. If he is disappointed in commanding these requirements, if he finds neither coöperation nor support, if some great scheme to which he may have devoted much of his life