of the annual motion of the fixed stars due to the translation of the whole solar system in universal space, and to the true proper motion of the stars. The difficult problem of numerically separating these two elements, the true and the apparent motion, has been effected by the careful study of the direction of the motion of certain individual stars, and by the consideration of the fact that, if all the stars were in a state of absolute rest, they would appear perspectively to recede from the point in space toward which the Sun was directing its course. But the ultimate result of this investigation, confirmed by the calculus of probabilities, is, that our solar system and the stars both change their places in space. According to the admirable researches of Argelander at Abo, who has extended and more perfectly developed the work begun by William Herschel and Prevost, the Sun moves in the direction of the constellation Hercules, and probably, from the combination of the observations made of 537 stars, toward a point lying (at the equinox of 1792·5) at 257° 49′·7 R.A., and 28° 49′·7 N.D. It is extremely difficult, in investigations of this nature, to separate the absolute from the relative motion, and to determine what is alone owing to the solar system.*

If we consider the proper, and not the perspective motions of the stars, we shall find many that appear to be distributed in groups, having an opposite direction; and facts hitherto observed do not, at any rate, render it a necessary assumption that all parts of our starry stratum, or the whole of the stellar islands filling space, should move round one large unknown luminous or non-luminous central body. The tendency of the human mind to investigate ultimate and highest causes certainly inclines the intellectual activity, no less than the imagination of mankind, to adopt such an hypothesis. Even the Stagirite proclaimed that "every thing which is moved must be referable to a motor, and that there would be no end to

* Regarding the motion of the solar system, according to Bradley, Tobias Mayer, Lambert, Lalande, and William Herschel, see Arago, in the *Annuaire*, 1842, p. 388–399; Argelander, in Schum., *Astron. Nachr.*, No. 363, 364, 398, and in the treatise *Von der eigenen Bewegung des Sonnensystems* (On the proper Motion of the Solar System), 1837, s. 43, respecting Perseus as the central body of the whole stellar stratum, likewise Otho Struve, in the *Bull. de l'Acad. de St. Pétersb.*, 1842, t. x., No. 9, p. 137–139. The last-named astronomer has found, by a more recent combination, 261° 23′ R.A. + 37° 36′ Decl. for the direction of the Sun's motion; and, taking the mean of his own results with that of Argelander, we have, by a combination of 797 stars, the formula 259° 9′ R.A. + 34° 36′ Decl.