

loops and festoons resembling the star festoon which, in the constellation Perseus, garlands the black robe of night. Nor are varieties of color wanting to render the display more wonderful and more beautiful. Many of the stars which crowd upon the view are red, orange, and yellow. Among them are groups of two and three and four (multiple stars, as they are called), amongst which blue and green and lilac and purple stars appear, forming the most charming contrast to the ruddy and yellow orbs near which they are commonly seen.

But it is when we consider what it is that we are really contemplating that the true meaning of the scene is discerned. That the true lesson taught by the star depths is understood. Then we may say with the poet, but in another sense—

The floor of heaven
Is thick inlaid with patines of bright gold.
There's not the smallest orb which thou beholdest
But in his motion like an angel sings,
Still quiring to the young-eyed cherubim.

The least of the stars seen in the galactic depths—even though the telescope which reveals it, be the mightiest yet made by man, so that with all other telescopes that star would be unseen—is a sun like our own. It is a mighty-mass, capable of swaying by its attraction the motions of worlds, like our earth and her fellow-planets, circling in their stately courses around it. It is an orb instinct with life (if one may so speak), aglow with fiery energy, pouring out each moment supplies of life and power to the worlds which circle around it. It is a mighty engine, working out the purpose of its great Creator; it is a giant heart, whose pulsations are the source whence myriad forms of life derive support; and until the fuel which maintains its fires shall be consumed, that mighty engine will fulfill its work; until its life-blood shall be exhausted, that giant heart will throb unceasingly. And more wonderful yet, perhaps, is the thought that where all seems peace and repose, there is in reality a clangor and a tumult compared with which all the forms of uproar known upon earth sink into utter insignificance.

We know something of the processes at work upon our own sun. We know of storms raging there, in which fiery vapor masses, tens of thousands of miles in breadth, sweep onward at a rate exceeding a hundred-fold in velocity the swiftest rush of our express trains. We see matter flung forth from the depths beneath the sun's blazing surface to a height exceeding ten and twenty-fold the diameter of the globe on which we live. And we know that these tremendous motions, though they seem to take place silently, must in reality be accompanied with a tumult and uproar altogether inconceivable. We know that precisely as distance so reduces the seeming dimensions of these vapor masses, and their seeming rate of motion, that even in the most powerful telescopes they appear like the tiniest of the clouds that fleck the bosom of the summer sky, and change as slowly in their seeming shape; so distance partly, and partly the absence of a medium to convey the sound, reduces to an utter silence a noise and clangor compared with which the roar of the hurricane, the crash of the thunderbolt—the bellowing of the volcano, and the hideous groaning of the earthquake are as absolute silence.

What, then, must be our thoughts when we see thousands of stars, all suns like our own, and many probably far surpassing him in splendor, passing in stately progress across the telescopic field of view? The mind sinks appalled before the amazing meaning of the display. As we gaze at the wondrous scene an infinite

significance is found in the words of the inspired Psalmist: "When I consider the heavens, the work of Thy hands, the sun and stars which Thou hast ordained, what is man that Thou art mindful of him? or the son of man that Thou regardest him?"

It has been said that with the telescopes with which the Herschels have surveyed the depths of heaven twenty millions of stars are visible. But these telescopes do not penetrate to the limits of the star system. In certain parts of the Milky Way, Sir W. Herschel not only failed to penetrate the star depths with his guaging telescope (here spoken of), though the mirror was eighteen inches in width; but even when he brought into action his great forty-foot telescope, with its mirror four feet across, he still saw that cloudy light which speaks of star depths as yet unfathomed. Nay, the giant telescope of Lord Rosse has utterly failed to penetrate the ocean of space that surrounds us on all sides.

And even this is not all. These efforts to resolve the galaxy into its component stars have been applied to portions of the Milky Way which (there is now reason to believe) are relatively near to us. But in the survey of the heavens with powerful telescopes streams of cloudy light have been seen, so faint as to convey the idea of infinite distance, and no telescope yet made by man has shown the separate stars which doubtless constitute these almost evanescent star-regions. We are thus brought into the presence of star clouds as mysterious to ourselves as the star clouds of the galaxy were to the astronomers of old times. After penetrating, by means of the telescope, to depths exceeding millions of times the distance of the sun (inconceivable though that distance is), we find ourselves still surrounded by the same mysteries as when we first started. Around us and before us are still the infinite star depths, and the only certain lesson we can be said to have learned is, that those depths are and must ever remain unfathomable. Truly, the German poet Richter has spoken well in those wonderful words which our own prose poet De Quincy has so nobly translated; his splendid vision aptly expresses the feebleness of man's conceptions in the presence of the infinite wonders of creation:

"God called up from dreams a man into the vestibule of heaven, saying, 'Come thou hither, and see the glory of my house.' And to the angels which stood around his throne he said, 'Take him, strip from him his robes of flesh; cleanse his vision, and put a new breath into his nostrils, only touch not with any change his human heart, the heart that weeps and trembles.' It was done; and with a mighty angel for his guide the man stood ready for his infinite voyage; and from the terraces of heaven, without sound or farewell, at once they wheeled away into endless space. Sometimes with the solemn flight of angel wings they passed through Zapharas of darkness, through wildernesses of death, that divided the worlds of life; sometimes they swept over frontiers that were quickening under prophetic motions from God. Then from a distance which is counted only in heaven, light dawned for a time through a shapeless film; by unutterable pace the light swept to them, they by unutterable pace to the light. In a moment the rushing of planets was upon them; in a moment the blazing of suns was around them.

"Then came eternities of twilight, that revealed but were not revealed. On the right hand and the left towered mighty constellations, that by selfrepetitions and answers from afar, that by counter-positions, built up triumphal gates, whose architraves, whose archways, horizontal, upright, rested, rose, at altitude, by spans