

An Hour with the Editor

THE INFINITIES

"Why do you speak of infinite space?" asked a correspondent, and he adds that for all any one knows space may be limited. The infiniteness of space is not a demonstrated fact, but a logical inference. Space means room, not locality. If we can suppose a limit to space, the limit must separate it from something else which is not space. Such an idea may be expressed in language, but it cannot be grasped. Absence of space is simply unthinkable. It is the same as to infinity of time. Either a beginning or an end of duration is unthinkable.

There is not much to be gained by pursuing this line of thought, except to add that if there is a first Cause, a controlling Power, a Deity, or call it what you will that is immanent in the Universe, It or He must also be eternal. The word Universe has just been used. It is commonly employed to signify all material things, and in a sense it does. It signifies the same thing as the Greek words "to pan" (the "o" is pronounced as if it were "owe"), which means "the all." Our word comes from the Latin "universitas," which was a derivative from the words "unus" meaning "one," and "verto" meaning "I turn." To a spectator on the earth all the stars seem to turn at the same time and in the same direction, and from this we see how the term Universe came to be applied to the heavens.

But we are not obliged to infer from this apparent uniformity of motion that all the stars, which we can see with the naked eye, and much less all those that we can discern with telescopic appliances belong to one stellar system. Ever since the time of the elder Herschell astronomers have been inclined to the opinion that the stars which we see are all moving in obedience to the same law as that which moves the planets around the Sun, only the stars and the Sun are revolving around a great central orb of surpassing magnitude and grandeur. Herschell drew a somewhat fanciful picture of the Universe as it might appear to one who could stand outside of it and watch its motion; but investigation has not yet progressed far enough to enable any one to speak with definiteness on this point. It seems to be established that the Sun and its attendant planets are moving through space at the rate of about 12 miles a second, but what is the goal of the journey or whether it is circular or in a straight line must for the present remain a matter of surmise. The fact that such stellar motions as we are able to observe are circular or elliptical seems to be evidence that the motion of the Sun and its attendants is also in a circular or elliptical direction.

But while it is necessary to assume that space is limitless, the study of the heavens shows that there may be limits to the area over which stars are found. There are great "holes" in the sky in which the best appliances cannot find any indication of the existence of stars. In other places the stars seem to thin out at the remotest distances. Hence it is inferred that there may be a limit beyond which there are no stars. But on this point no one can speak with certainty, for it may be that if we could reach the remotest star which the telescope with the aid of photography has been able to detect, although there might not seem to be a single star beyond, yet there might be somewhere in the unfathomable empty depths into which we looked other groups even greater than that upon which we gaze nightly. There seem to be unanswerable objections to the idea entertained by some people that the number of the stars is infinite. One seems sufficient. If the number were infinite, it would follow, even though the light from each of them was infinitesimal, that the sum total of their light would be infinite brilliance, and this we know is far from being the case. Therefore we may feel assured that, no matter how inconceivably numerous the stars may be, there is a limit to their number.

The position of the earth in respect to the visible Universe, meaning by visible what may be seen with every appliance available to astronomy, seems to be approximately central. The Milky Way appears to be the stellar Universe, all the stars, including our own Sun, really belonging to it. This wonderful thing may be likened to a smoke ring. Its dimensions are incomprehensibly vast, and it is made up of all the stars. Whether or not the more distant nebulae form part of it may be open to question, but it seems to have been pretty well established, at least that is what astronomers now think, that all the stars do belong to the Milky Way. Perhaps an illustration may be useful in this connection. Stand in the centre of Yates street at night at the point where it intersects Broad and look up the street. You will observe that the lights near you seem separate from each other, but that further up the street they converge and you know that if the rows of light were long enough they would only appear at the extreme end as a more or less brilliant mass of light. You would know that all the lights were a part of the same system. This would be more nearly like the stellar universe if instead of two rows of light there were many rows all extending in the same direction and your position was somewhat near the centre. Towards the sides and near at hand in every direction you could distinguish individual lights with dark spaces between, but in the distance in the line of the lights there would be no "holes" and the whole range of vision in that direction would be a mass of light growing less and less brilliant. Now suppose your position was in a great circle of lights, surrounding a space in which there were no lights and without any lights outside of the ring, there would be "holes" or vacant places, and places where the

lights would seem to be few, other places where they would seem to be many and others where all the lights would be merged into a mass. This is just such an appearance as the Milky Way presents when it is properly charted.

As to the vastness of the stellar Universe we are again in the field of conjecture, although calculation can aid us to some extent. The result of such calculations and conjectures is that the most remote star of which anything is known may be 500 times 400,000 times as distant as the Sun is from the earth, and for the purpose of so indefinite a calculation the distance of the Sun may be placed at 100,000,000 miles. Therefore if you multiply 100,000,000 by 400,000 and the product by 500 you will reach a figure which may possibly be approximately the distance between the earth and the most remote star. This is a very rough measure of the depth of the stellar Universe in one direction, and it is probable as deep in the opposite direction; possibly it is as deep in all directions. In other words it may be a sphere having a diameter of 40,000,000,000,000 miles. It would take light 3,500 years to journey from the most remote star to the earth, supposing these figures to be correct. They may, however, be very much indeed within the mark; they are not at all likely to be beyond it. To show how wide a margin must be allowed in these calculations, we may mention that the latest estimate of the size of the star Sirius is that it may be either 10,000, or 100,000 times as great as the Sun. The above approximation of distance may likewise be very much indeed short of the actual facts. We will add that the total number of stars visible with the naked eye is about 5,000, and an observer can never see half of these at the same time.

THE ROMAN EMPERORS

After the death of Caracalla, Rome was for three days without an emperor. Various competitors craved the coveted though dangerous honor, but the choice of the Guards fell upon Macrinus. Of the administrative ability of this man there was no doubt, and it may be said with truth that to it he owed his downfall. Macrinus was a civilian, and on the only occasion when he was called upon to exhibit military qualities, he displayed indecision and cowardice. He saw the urgent necessity for reforms in the affairs of state, but lacked the strength of character to carry them into effect. In order to secure the favor of the soldiers, he brought before them his son, Diadumenianus, a youth of ten and of exceptionally attractive personality, and conferring upon him the title of Augustus, presented him as their future ruler. He also continued the extravagant pay and donatives which Caracalla had granted them. Towards the recruits he pursued a different course. Recognizing that he could not win safety to himself cut down the pay of the older Guards, he determined that the new force, which he thought it necessary to be raised to offset the Praetorians, should be placed on a footing less perilous to the state. This was a wise conclusion, but it was either reached too late to be possible of execution, or Macrinus lacked the ability to carry it out. The result was that profound discontent arose in the ranks of the recruits, and it would have broken out into open rebellion, if there had been a leader equal to the occasion. Macrinus might have been able to have accomplished his objects and given Rome what he ardently desired, a stable and equitable government, if it had not been for events, which seem more like the invention of some writer of romance than veritable history.

Mention has already been made of Julia, mother of Caracalla. This unhappy woman, who had seen one of her sons slain by the other, and the latter fall a victim to the assassin's knife, a woman who had risen from obscure origin to the highest place in the Empire open to one of her sex, broke down under her terrible anguish and sought refuge from it in suicide. Her sister Julia Maesia was made of sterner stuff. She was immensely rich and was banished from Rome to Antioch by Macrinus. She took with her her two daughters, Soaemias and Mamaea, each of whom was a widow with an only son. The son of the elder daughter was named Bassianus, and he, at his grandmother's suggestion, was consecrated to the ministry of high priest to the Sun. The chief temple of this cult was at Emesa, and thither the youth was sent. He is described as of a particularly handsome figure and exceedingly attractive in manner. He bore some resemblance to Caracalla, and his grandmother encouraged the belief that he was in point of fact a son of that emperor, although thereby she sacrificed the reputation of her daughter. At Emesa there was a large detachment of recruits, who were chafing under the severe restrictions imposed upon them by Macrinus. It was the custom of the soldiers to resort to the temple of the Sun, and there they would behold daily the elegant youth whom they were told would have been their emperor, if it were not that Macrinus had usurped his place. Julia Maesia caused money to be distributed freely among these men, and made it known that it was a gift from the young priest, who felt for them the compassion to which Macrinus was a stranger. She also caused the lad to assume the revered name of Antoninus. These things appealed to the restless and not very well treated garrison of Emesa, and in the year following the ascension of Macrinus to the imperial throne they formally proclaimed the young priest emperor. This was in the year 218. A proclamation was at once issued in which it was declared that

Antoninus, as he unhesitatingly called himself, had taken up arms to revenge his father's death and to relieve the soldiers from the oppression of Macrinus. It is to be remembered that the alleged father who was to be avenged was Caracalla, who was in point of fact his uncle. The proclamation produced a profound effect in all the camps of Syria, and the garrisons mutinied; slew their officers and declared for the Pretender. Macrinus at first treated the uprising with disdain, but when it grew more serious, he advanced against the rebel forces with an army sufficient to overthrow them. For a time it seemed as if he would be successful. At a great battle near Antioch the Praetorian guards were driven back by the enemy, when Julia Maesia, Soaemias her sister and all their women attendants rushed into the fray and animated their soldiers with fresh courage. Even this would not have been sufficient, if the young Antoninus himself, had not for the first and only time in his life displayed the courage and capacity of a leader. He mounted his horse and sword in hand rushed upon the troops of Macrinus, while the enunch Gannys suddenly displayed all the qualities of a successful general. The fate of the Empire thus hung in the balance, and it was then that the courage of Macrinus failed him. Instead of remaining on the field to take the victory which was waiting him, he was seized with sudden fear and fled precipitately. The Praetorians at once surrendered to Antoninus, and a few days later Macrinus and his son were put to death. Thus in a 20-days' campaign was the imperial crown gained by this audacious youth, on whose behalf the absurd pretence of legitimate heirship was made.

When news of the result of the battle reached Rome, the Senate was congratulating itself upon the fact that Macrinus was about to overthrow a foolish uprising. The information came in the shape of a letter from the youthful claimant of the crown, who informed the Senate that he had been elevated to the high post by the soldiers, that he represented the murdered Caracalla, that he had assumed the name of Marcus Aurelius Antoninus and that he intended to be governed in his conduct by the example of Augustus Caesar, to whom he compared himself in point of youth and by that of the great Marcus, whose precepts he declared he would observe. He gave the Senate to understand distinctly that his tenure of office was not in any way dependent upon its sanction, and that he was emperor because the soldiers so proclaimed him and because he was hereditary ruler of the Empire. This bold step, for although other emperors owed their elevation purely to the will of the Praetorians, they were careful at some stage to ask the endorsement of the Senate, was the formal end of popular sovereignty in Rome the semblance of which had long departed. It is interesting to note that this, the first active intervention of women in determining the affairs of Rome, resulted in the extinction of even a colorable pretence that the Roman people had any right to a voice as to who should govern them.

The new emperor leisurely followed his letter to Rome, spending months in luxurious dallying. He does not seem to have been a vicious youth, but only one who was inordinately fond of pleasant living and personal adornments, which certainly became him well. The result of his entry into Rome must be reserved for another article.

TALES FROM THE CLASSICS

The Arabian Epic of Antas

Fifteen hundred years ago a body of horsemen of the famous tribe of Abe left Sheerekah to travel across the desert in search of adventure. In those days, and for many centuries after, this nation of shepherds, as the Arabs were called, considered might was right, and plundering one's neighbor a legitimate business. So this band of shepherd-warriors traveled by night and day until they reached the country of Caktan where dwell the tribe of Jeyreela.

Because of this people's great strength the Arabians feared to make an attack, and would have passed on their way, when their attention was arrested by the sight of a black woman of magnificent proportions leading camels on the outskirts of the village. Shedad, known as the Knight of Jirwet, so greatly admired this black-skinned Amazon, that he determined upon possessing her. Dismounting, he made his way stealthily to her, and seizing her in his arms, placed her before him in the saddle and rode away. But the men of the Jeyreela tribe, seeing from a distance what had been done, gave chase to the Abians, and a fierce encounter took place during which Shedad nearly lost his life. Eventually the marauders were successful and secured a large amount of booty to convey home.

Jeykeclak, the black woman, in the course of time, bore a son, of beauty no less than his mother, and of wonderful dexterity and strength. More than this, he possessed the attributes of courage and integrity, so his father greatly favored him, though having been born of a slave, and being of a different race than the Abians, he would never have held so high a place among the warriors had it not been for his many deeds of prowess.

He was called Ontar, and from the time he was able to wield a javelin he made the cause of the weak and the distressed his own. One of his earliest encounters was with Daji, a servant of Shas, Daji was an enormous man who had never met defeat at the hands

of an antagonist. One day when the poor man and widows and orphans were driving their camels and flocks to the wells, Daji hurried before them, and forbade them to touch the water, claiming the wells in the name of his master. He was such a great bully that one and all feared him and they dared not pass him by, though they pleaded with him tearfully. At length, swollen with misplaced authority and conceit, he laid hands upon one of the women camel drivers; no one dared to take her part, until Antar, passing by, unable to endure the sight, burst through the crowd, and called Saji by a name that made the bully pause in amazement that a black slave should insult an Arab. Surprise restrained him only for a moment. The next moment he rushed upon Antar. Only one blow did the latter receive, and then he seized Daji and threw him upon his back. He thrust one hand under his thighs and with the other he grasped his neck, and raising him by the force of his arm, he dashed him against the ground and his length and breadth were all one mass.

Antar received only praise for his deed, and the women of the tribe were especially grateful that he had championed one of their sex. Among the women was Abia, fair of skin, with melting dark eyes, and ringlets like clusters of the purple grapes, and Antar, a black slave, fell in love with Abia, a chief's daughter. From the day she first saw him, and praised his valor, his thoughts were all of her, and she was the motive behind his many noble deeds. He made verses to her in secret, and by night he dreamed of her, but he dared not ever address her by name.

He continued to distinguish himself by his brave exploits and by and by an opportunity offered for him to render such a service to the tribe that thenceforth he was no more known as a slave, but took his place in the highest rank of the warriors.

The horsemen had all left the camp, and Antar was in sole charge of the women and the slaves. It was a beautiful day, and there was music and merry-making. The young girls twined themselves with garlands, and danced to the music of the cymbals, and Abia was loveliest among them, and Antar watched her, adoration in his eyes. Suddenly there appeared a cloud of dust in the west, which rolled rapidly nearer and nearer. Before the Abians realized it a crowd of horsemen, some seventy in number, were riding down upon the camp, and the group of dancing girls, now huddled together in frightened confusion. In an incredibly short time the enemy had seized the women, old and young, and placing them on their horses behind them, had galloped away.

But Antar possessed an Arab charger, slim and fleet-footed, with a courage equal to her master's own. And the two bore after the thiefing enemy and overtook them. Abia was the first to be rescued and then he overtook the rest of the enemy and with his single arm performed such wonders that those who escaped the stroke of his death-dealing sword fled in dismay, leaving the women and the plunder they had taken.

To recount all of Antar's adventures would make too long a story. But the time came at last when he ventured to declare his love to Abia's mother. He won her sympathy, and interceded for him with her daughter, who confessed that she had loved Antar from the first. So famous had the hero now become that even the chief who was Abia's father was pleased that the marriage should take place, which it did, with all pomp and grandeur. From the most distant lands came famous knights to honor the nuptials of the renowned son of Shedad, and the beautiful daughter of Malik, and rich and rare were the presents they brought with them.

THE FEAR OF DEATH

Is the fear of death natural? The question is not easy to answer. It is quite certain that an infant has no physical fear of death, and we cannot tell at what stage education implants the fear in its mind. There does not appear to be any instinctive shrinking from death in the mind of a child. The youngest infant has a consciousness of hunger and instinctive knowledge that it is to be satisfied in some way through the mouth, but there does not seem to be any instinctive desire for life. True, the mental development of a young infant is not sufficient to enable it to differentiate between living and dying; but we think everyone who has had the opportunity of observing will assent to the proposition that all evidence points to the conclusion that the fear of death, simply as death, is acquired chiefly as the result of education.

We distinguish between physical and moral fear. It seems perfectly natural that a person, who is in the full enjoyment of physical health, should shrink from the idea of dying. Life is a very sweet thing when it is rightly lived, that is lived in accordance with the laws of our physical being; and that a person so living might regard the possibility of death with abhorrence is easily understandable. But it is hardly right to call this fear. Neither must we confuse fear of suffering with fear of death. There are savage races that fear physical suffering and hence are cowardly, but they regard the act of death with indifference. It is quite probable that the feeling of fear with which people regard death, and principally those who are born and brought up under Christian civilization, is almost wholly the result of education. To a certain degree we have a dread of death in proportion to what inducements we have for living. One who knows the Japanese

people well, speaking of their readiness to die for their country and their general indifference to death, said that they had so little to live for that this was not a matter of surprise; on the other hand, we must bear in mind that this indifference is by no means confined to the poorer classes. Therefore it is not explainable wholly on the ground that the life of the ordinary Japanese is one of privation, judged from our point of view. Persons who are familiar with the Hindu people say that some of them deliberately die to be revenged upon those who they think have done them an injustice. They do not commit suicide by violence, but simply die. To such people death must be absolutely without terror. The ancient Spartans were taught from their infancy to despise death. The Romans in the day of their national manhood taught that death for one's country was sweet. The followers of Islam to this day look upon death, if encountered for the sake of their faith, as an exceedingly desirable consummation of their efforts, and we know that many Mohammedans have much that makes life worth living even from our point of view.

One of the distinguishing features of the Christian faith is that it inculcates a fear of death because of the possible consequences. We are taught to believe that in some special manner we come under the jurisdiction of the Deity as soon as the breath leaves our body. We are told that then, either immediately or at some indefinite later period, we will be called to account for what we have done, and will be judged by an angry God, who will mete out to each of us the same measure of punishment, no matter how we may have lived, if we have not accepted a particular doctrine upon the exact nature of which there is not universal agreement. This very naturally implants a fear of death in the minds of those who believe it, for no one can ever be quite sure that he measures up to the alleged standard to which he must attain if he is to escape eternal punishment. Teachings of this nature logically beget a fear of death. There are undoubtedly millions of people in Christendom who are afraid to die, not because they dread any possible physical pain that may accompany the extinction of life, but because they dread what may happen after it.

The object of this article not being to discuss the reasonableness of the teaching referred to in the previous paragraph, we shall dismiss its consideration by saying that such a fear of death as is therein mentioned is purely the result of education, and does not in the least afford an answer to the question with which this article opened. Death is as natural as birth. As the latter marks the beginning, the former marks the end of our existence in our present form, that is as sentient, intelligent beings possessing physical bodies. Speaking from physical evidence, that is all any one can say, and it would seem to be quite as natural to regret having been born as to fear having to die. We have nothing to say about either process, and it would be strangely unnatural if we instinctively feared what is the inevitable consequences of our being alive. There is no reason for believing that the actual act of death is at all painful. The approach of the final moment may be accompanied with pain and perhaps in many cases with mental anguish due to one or more causes; but all of us suffer more or less pain and more or less anguish and are able to bear it. There may be those to whom it will seem as if they cannot die, that is as if the final exit of life from the body was something in which they could not perform their part; but no one need have any fear on this point. There is no much doubt that death is easy enough to bear, that there is no wrenching apart of soul and body, and that when the time comes to ring down the curtain we pass off the stage with as little consciousness of suffering as we had when we first came upon it.

Upon what sort of a stage we will then enter we may surmise, but we cannot hope to know with certainty; but there is one thing of which we can be very sure, namely, that the unknown role upon which death will usher us will be none the less acceptable to us because we have played our part in life with fidelity to the stage directions. It is not worth while to trouble ourselves about difficult points in theology in order to be able to face whatever may come after death with equanimity. William C. Bryant spoke the true word when he said:

So live that when thy summons comes to join
The innumerable caravan, that moves
To that mysterious realm, where each shall take

His chamber in the silent halls of death.
Thou go not, like the quarry-slave at night,
Scourged to his dungeon, but, sustained and soothed

By an unfaltering trust, approach thy grave,
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams.

Diogenes was searching for an honest man. "He will advertise that his summer resort has mosquitoes," explained the sage.—New York Sun.

"That was rough on Davis." "What?" "He stepped on a piece of orange peel, fell, and was arrested for giving a street performance without a license."—Ideas.

"Now that Mr. Greatwood is dead and buried, I understand his widow is trying to break his will."

"Pshaw! She did that twenty years ago." —Houston Post.