A PEEP INTO SPACE

Can the Finite Mind of Man Measure the Universe?

THE LIMITS OF THE VISIBLE.

Science Says the Bounds of the Stellar System Are Definable and That the Universe Is as an Island of Stars In an Infinite Ocean of Ether.

To the visible universe there are attainable limits. It may be that the greatest telescopes have not yet reached the bottom, or the boundaries, of the entire system, but they have almost done so.

This is shown by the thinning out of the fainter stars. These stars, as a whole, are the most distant; and if they were unlimited numerically every increase in the penetrating power of telescopes would bring previously unseen ones into view, in proportionately undiminished numbers.

As a fact, however, there is a rapid falling off in the proportionate numbers at great distances. This is shown by Kapteyn's "law of star density." Taking the "parsec" as the unit of measurement (a parsec is equal to nineteen million million miles), the density of the stars at increasing distances comes out as follows: At 0 distance, 1.00; at 50 parsecs, 0.99; at 135 parsecs, 0.86; at 213 parsecs, 0.67; at 540 parsecs, 0.30; at 850 parsecs, 0.15.

This does not mean that the absolute number of stars decreases with increase of distance, but that the ratio of their number to the volume of space occupied decreases in the proportion shown, so that at a distance of 850 parsecs there are only 15 per cent as many stars as there should be if there had been no falling off in relative density.

Various counts and estimates of the actual numbers included within various limiting distances have been made, and these show that the total number of stars in the visible universe is numerable and probably does not exceed a thousand millions at an outside estimate.

The fact that a fairly definite shape or outline has been found for the visible universe is in itself a proof that it is not unlimited in extent. We are virtually certain that it expands around us in such a manner as to assume roughly the form of a flat, irregular disk, the more distant parts or edges of which lie in the plane of the Milky way. It is thus like a floating island of stars in the ocean of space.

Space itself may be infinite, although what we call the universe is not. As to other universes existing beyond the limits of ours and invisible to us, that is purely a speculation, which appears more or less probable according to the manner in which one's mind approaches it.

But, at any rate, there is no positive evidence of the existence of such outer star systems. From time to time one hears suggestions that this or that nebula is an "outside universe," dimly shining to us from its millions of crowded stars across immeasurable tracts of intervening space. But it is far more probable that no nebula or other object visible in the mightiest telescope is unconnected with the universe to which our sun and our earth belong.

As to the continuance of the Creator's work in forming new suns and new planets, of that there can be no question. This work is, in truth, visibly going on before us in the heavens. There is the utmost variety of ages among the stars, just as there is among the human beings in a crowd. If our lives were lengthened so that a year would be but as a second to us we should see the stars around us disappearing and new ones springing into existence, as we see flowers fading and fresh ones blooming in the garden.

To return for a moment to the question of the infinitude of space, it is well known that the human mind cannot conceive a limit to space, for the instant you attempt to fix or imagine such a limit your imagination flies beyond it. You have got to think of an outside as well as of an inside.

And if you fly to another imagined boundary instantly another outside expanse stretches away before you! It is, then, perfectly legitimate to suppose that, while the visible universe is limited, the invisible universe has no bounds. In comparison with that, all that we see, or can ever see, is, truly, infinitely less than as a grain of sand to a desert or a drop of water to an ocean.—Garrett P. Serviss in New York Journal.

Accurate Information.

"We had about the centurion in our Bible class today. What's a centurion, pop?"

"A centurion, my son, is a man who has lived to be a hundred years old. I'm glad you take after me and like to know things."—Baltimore American.

Warned.

May—Maud, dear, did you know that the last legislature passed a law punishing kidnaping very severely? Maud—No. But what of it? May—Well, if you aren't careful Cholly Softleigh's relatives may cause you trouble.—Pittsburgh Press.

A Long Drink.

Extract from a sentimental l[illegible] "Last night I sat in a gondola on [illegible]ice's grand canal, drinking it all [illegible] and life never seemed so full before." London Mail.

If we desire the flowers of paradise we must sow the seeds.

THE MAN IN THE BOX.

He Startled but Did Not Unnerve the Express Car Messenger.

The messenger was alone in the express car, and the train was making fast time about 200 miles outside of San Francisco. At the last stop the messenger had been very sorry to see an ordinary rough box loaded from the truck. The experience was common enough, but it always depressed him a little.

Having set things to rights, he sat down near his little writing desk and dropped into a doze. A sudden lurch of the train roused him, and, as he stretched himself awake, what was his consternation at seeing that the lid of the rough box was lifted about three inches!

Express messengers live in daily expectation of train robbers, and the thought flashed through his mind in the twinkling of an eye that one of those gentry was in the box.

As he got up from his chair he was relieved to see the lid quietly drop into its place. However, he knew that the bandit was no doubt watching his every movement from a hole bored in the side of the box and that what he did he must do cautiously.

Moving out of the hidden man's range of vision, he got his hands on a few nails and a hammer. Then he slowly worked his way through the lofty pile of packages, which he pretended to be rearranging, suddenly threw a heavy trunk on the lid of the rough box, jumped astride it and nailed down the lid securely. The imprisoned robber roared and struggled, but to no avail.

The messenger rushed to the rear of his car and looked back through the coaches. He could see the man's confederates "going through" the passengers, who held their hands aloft while a member of the gang "covered" them. The express car carried a valuable shipment, and the messenger determined to save it.

Grasping the lever that operated the automatic coupler, he put every ounce of strength he possessed into one terrific jerk. The drawheads parted, and a gap almost instantly opened between the express car and the coaches. Running back through his car, barring the door as he went, the messenger reached the front door and shouted to the engineer to open his throttle. The engine and the express car leaped forward, but not a minute too soon.

The bandits, emerging from the coaches, were insane with rage when they saw themselves foiled and poured volley after volley from their rifles into the fast fleeing car.

From the next station a coach and engine with a posse armed to the teeth went back to the relief of the stalled train, from which the bandits had long since fled. The express car and engine, under a heavy police guard, proceeded to San Francisco. The bandit was unboxed at the police station, and an ugly looking customer he proved to be. He got a sentence of twenty years in the penitentiary.—Wells-Fargo Messenger.

Compulsory Drinking.

Compulsory abstinence would have seemed a complete inversion of the natural order to some of our ancestors. They believed in compulsory drinking, and in some old county mansions may still be seen, I believe, a ring let into the wall of the dining hall for the punishment of the man who would not or could not drink his allotted share of liquor.

The culprit's arm was fixed in the ring, and he was given choice of drinking in the ordinary way or having the liquor he refused poured down his sleeve; hence the medieval jest, "Leaving's sleeving."—London Standard.

Animated Scenery.

Of sanctuaries for the eighteenth century debtor the value of the theater must not be overlooked. As long as the actor was in the bounds of the playhouse he was safe. There was John Palmer, for instance, who lived in his dressing room at Drury Lane for months. But engagements, even at Drury Lane, come to an end, and at length Palmer was required at the Haymarket. The journey was a dangerous one. Necessity, however, always fosters invention. They packed him in a cabinet, put the cabinet in a cart and called him "scenery."

Wasn't the Uniform.

A sailor under the influence of liquor went to the main entrance of a New York theater recently and presented a ticket. The manager refused to admit him, telling him that his money would be refunded at the box office.

"Don't you respec' y'r country's uniform?" asked the bibulous one.

"Sure," retorted the manager. "Take it off and I'll put it in a stage box."—Philadelphia Ledger.

Infallible.

"Do you believe that there is really something which can invariably tell when a man is lying?"

"I know it."

"Ah, perhaps you have seen one of the instruments?"

"Seen one? I married one."—Houston Post.

Dying Without a Will.

In the event of one's dying intestate the heirs come in for their share of the estate as established by the laws of the particular state in which the property is found. In the event of no will and no heirs the property goes to the state.—New York American.

Time to Quit.

[illegible]hief—Why did Burglaleer reform? [illegible]—The last safe he drilled and [illegible] only contained a picture post ca[illegible] [illegible]e state prison.—Judge.

He th[illegible] eat the kernel must crack the [illegible]rsian Proverb.

HAMS OF WESTPHALIA.

Processes by Which They Are Cured and Flavored.

The famous Westphalian hams, which are eaten without cooking, are cured by an elaborate process that has been worked out patiently and skillfully by generations of expert workmen. A writer in the New York Sun thus describes the process:

After being rubbed thoroughly with a solution in which there are 100 pounds of salt to one pound of saltpeter, the hams are placed on cement floors, or in vats, and thickly strewn with salt. They lie under salt for two weeks and then pass to a vat that contains a 22 per cent solution of brine. They remain in that solution for eighteen days. Every day they are shifted in the vat; the hams on the bottom are brought to the top, and vice versa.

At the end of the eighteen days the hams are packed, one upon another, in a cool, dry cellar, where they remain for four weeks, in order to ripen—that is, to take on color and become tender. Then the salt is washed off with a stiff brush dipped in lukewarm water, and the hams are put to soak for twelve hours in fresh water. After that they are ready for the smokehouse.

The smokehouses are two or three stories high, with holes bored in the flooring. The fires are kindled on the ground floor, and the meat is hung on the second and third floors. The fires are made entirely of beech wood, but the workmen constantly throw juniper berries and juniper twigs on the embers. The fire burns brightly. It is checked with beech wood sawdust whenever it burns too briskly.

The smoking continues for about eight days. Under the ancient curing methods, however, the hams were often kept in the smoke rooms for six weeks, and it is by this latter method that the best hams are still made by the country folk of Westphalia.

WHAT A MAN READS.

It Is a Big Factor In Determining His Course of Life.

A certain low form of aquatic animal life anchors itself to a rock and feeds on whatever the current brings. The average man feeds his mind in much the same way. He falls into line for current amusements. He reads only current literature. He listens to what happens to go by. He makes but little systematic attempt to shut out the unfit or to put himself in line for the fit.

The result is a defective grade of human life that rarely elevates society and often degrades it. If a man would make the most of himself, and that is manifestly the supreme purpose for which he was put into the world, it is worth his while to do his daily work where unclean things, mental and physical, are not made common.

It makes a good deal of difference in the worth of the man today as to whether his reading last night was "Hamlet" and "Isaiah" or "The Other Man's Wife," whether he went to the art institute or the burlesque show. An ancient teacher of well balanced mind gave this direction to his disciples as to the topics to be selected for deliberate thought:

"Finally, my brethren, whatsoever things are true, whatsoever things are honorable, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report, if there be any virtue and if there be any praise, think on these things."

To think on these things one must see and hear these things. To see and hear these things one must make an effort to do so.—Minneapolis Journal.

Sunlight and Vegetation.

The early rays of the sun exercise a more powerful effect in promoting rapid vegetation than the sun's light during the later hours of the day. The active little chlorophyll grains work faster and better in elaborating food for the plant under the action of the blue and yellow rays of the early morning than under the later violet and blue rays. Practical gardeners should make use of this fact by growing early produce as far as possible in a position where the plants will get the full benefit of the morning sun.—London Mail.

Siberia.

Siberia comprises 5,400,000 square miles, divided into the following regions: Western Siberia, comprising the governments of Tobolsk and Tomsk and the territories of Semipalatinsk, Akmolinsk and Semiryechshensk; eastern Siberia, the governments of Irkutsk and Yeniseisk and the territories of Transbaikal, Amur, Yakutsk, the littoral and one-half of the island of Sakhalin.

Not Mercenary.

Mr. Gottrox—My daughters, young man, are both worth their weight in gold.

Suitor—The fact that I am asking you for the smaller one proves, at any rate, that I am not mercenary.—Chicago News.

He Knew.

"Aren't you going to listen to the vox populi, Senator Headstrong?"

"Vox populi, nothin'! What have these here secret orders ever done for me?"—Buffalo Express.

Outclassed by a Long Shot.

Little Wifey—Did you tell Mr. Blinks that the baby had cut his first tooth? Big Hubby—It's useless. He has a hen which laid fourteen eggs in six days.—Philadelphia Ledger.

An even disposition is the best pillow on the sea of life.

WHAT'S DOING IT?

Strange, isn't it? But it is true, isn't it? The way some of your old friends and customers send their money to folks they do not know and for goods they have never seen.

You would naturally incline to the belief that people would prefer to buy goods after having had an opportunity to inspect them, and to make the purchase from people whom they know.

There was a time when shopping was largely a matter of personal contact. Today the distant store and the mail order house get into close touch with thousands, who are made acquainted with their goods and their methods of doing business. How is this done? Advertising—constant and effective advertising.

Many arguments are used to make customers out of the readers of advertising. These advertisements draw business from you and the other local dealers.

Consider the results obtained by the national magazine advertisers, and you will cease to wonder what is the magnet that draws to the city department store and the catalogue house, hundreds of miles away, the trade that you should enjoy. It is surprising that they do not take more dollars out of this community than they do.

Now mind you, The Observer is not talking just for its business but for yours as well, and for your neighbor's. For if you do not thrive, The Observer will not. Naturally, and somewhat selfishly, The Observer is interested in this community.