

ASTRONOMY

More Worlds in Heavens, Perhaps, Than Supposed

Sir James Jeans Makes Assertion Based on His Theory That Sun Was Huge Nebula When Planets Were Born

OTHER planets, perhaps some of them inhabited, circulating about other suns or stars than ours, may be much more numerous than formerly supposed, Sir James Jeans, famed British scientist, states in a letter to the London scientific journal *Nature* (June 20).

Sir James bases his assertion on a theory of the origin of the planets propounded by him in 1916, now reclothed with modern figures. This is the famous tidal theory. Another star passed close to the sun, and gravitational attraction caused each to elongate in the direction of the other, just as the moon and sun raise bulges in the waters of the ocean and thus cause the tides. But the two stars passed so close that the matter in the sun's bulges was drawn completely away from it into two long streamers which later condensed into the planets.

If the sun and the other stars were of their present sizes at the time, calculations show that the chance of such an event happening in a period of 2,000,000,000 years is only 1 in 2,500,000,000, practically nil. This led astronomers to the conclusion that the formation of the sun's planets was an extraordinarily unusual event, and that even if the universe had existed many millions of times longer than now supposed, there must be very few other inhabited worlds, or even none.

But Sir James assumes that the sun at the time it gave birth to the planets was a huge, diffuse nebula, extending as far as the orbit of the present outermost planet. Back in 1916, when Sir James first proposed his theory, this was Neptune. Now the outermost planet is Pluto. Assuming Pluto's orbit as the outer limit of the nebula would make the sun's diameter 5,000 times its present size.

If at that time all the other stars were enlarged in the same proportion, the chances of a planet-forming encounter, Sir James calculates, would be 18,300,000 times as great as for their present sizes. In a period of 2,000,000,000 years, which is now supposed to be about

the age of the present universe, the chance of such an encounter is one in eight. Among the thousands of billions of stars that compose the visible universe, this blessed event must have occurred many times. Instead of being barren, the universe may be crowded.

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PSYCHIATRY

Decreased Drug Addiction May Have Complex Cause

A "GHOST" hospital without patients would be a rarity these days, but there is one class of patients which is actually decreasing in numbers. These are the drug addicts, whose supplies have been cut off by wartime shipping conditions.

"Narcotic Farm," until recently a thriving U. S. Public Health Hospital for drug addicts, at Fort Worth, Texas, found itself so hard up for patients that it is now being used as an overflow

for St. Elizabeths Hospital in Washington.

Psychiatrists have observed that drug addiction is apt to decrease in wartime anyway, but there is some disagreement as to the reasons. Dr. Lawrence Kolb of the U. S. Public Health Service believes that the shortage of drugs, plus effective control measures, explains it.

The number of hospitalized drug patients is no index to the total number of addicts, anyway, because so few of them submit voluntarily to treatment. The "cure" is not particularly pleasant. The Fort Worth hospital, "Narcotic Farm," recruited its patients from persons convicted of drug peddling, who were found to be addicts themselves and sent to a hospital instead of a jail.

It has been estimated that at least 95% of peddlers are also drug addicts. After they have been persuaded to "take the cure," lack of supplies will now force many of them into other lines of endeavor, particularly with wartime employment on the increase. Lack of supplies and lack of peddlers cut down the number of new drug addicts taking their place in the hospitals.

After they have been cured of the drug habit, can they become useful citizens? Yes and no, say psychiatrists. Without thoroughgoing psychiatric treatment, they remain sick people whose craving for drugs was only one symptom of a diseased personality.

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FORMIDABLE

This worker at one of the General Electric's war plants is putting together the turret armament for an airplane, not a battleship. The metal sleeves on the gun barrels keep them from swaying when the plane travels at more than 300 miles an hour.