

ASTRONOMY

Earth Predates Some Stars

Astronomer-mathematician presents new theory of creation of universe, estimates that small astronomical systems came into being earlier than large ones.

► THE EARTH and other planets in our solar system are much older than many of the stars in our Milky Way galaxy of stars and nebulae, Dr. David Layzer of Princeton University told members of the American Astronomical Association meeting in Amherst, Mass.

"Small astronomical systems came into being earlier than large ones," Dr. Layzer stated in presenting his new theory of how the universe such as we know it was created.

The great cluster of galaxies, each containing a myriad of stars, in the constellation of Virgo, the virgin, will one day become a cog in a much larger wheel, the Princeton astronomer-mathematician predicted.

The universe began with matter in gaseous form uniformly distributed through space, Dr. Layzer believes. This gas began to expand some two billion years or so ago, and will continue to expand for billions of billions of years. But sometime in the distant future there will be more contraction than expansion. The expansion-contraction cycle is repeated every ten billion billion years, he calculates.

Dr. Layzer visualizes the universe, which is ten billion billion trillion times as massive as the sun, as being created in this manner:

"As the universe expands, small condensations form, releasing just enough energy to maintain the expansion. As the expansion continues these condensations convene into clusters of condensations, these in turn into larger clusters, and so forth. In short, the expansion generates a hierarchy of rather loosely-knit clusters within clusters.

"The coming together of small clusters to form a large cluster gives rise to disruptive tidal interactions among the small clusters. These persist, of course, even after the large cluster has itself become a member of a

still larger cluster. Thus energy is continually funnelled from the clusters of every given level of the hierarchy to the smaller clusters on the next lower level."

Such systems do not always build up into larger ones, however, but sometimes dissolve. When a cluster gains energy, it becomes less compact and is more easily dissolved by tidal disruption, Dr. Layzer pointed out. When a cluster loses energy, it becomes more compact and less susceptible to tidal disruption.

In addition to clustering and funnelling, Dr. Layzer considers that gravitational contraction also played a vital role in the evolution of stars and the solar system.

The key to Dr. Layzer's theory of the creation of the universe is a continuing supply of energy liberated by the local clustering of matter. Mathematically, he has calculated the energy of an "expanding, homogeneous, spherical Einstein universe," and believes the result bears out his premise.

Science News Letter, January 10, 1953

PSYCHOLOGY

Psychologist Reports "Mom" Blaming Childish

► MOM IS not necessarily to blame for the psychological quirks of her children. Parents as well as children have rights.

Psychologists and psychiatrists were taken to task for their mother-blaming complexes of recent years by Dr. Jane Loevinger, Washington University psychologist, speaking before the American Association for the Advancement of Science meeting in St. Louis.

Parenthood should be recognized for the sake of mothers and fathers as well as for children, she argued. Parents are not of interest merely for the sake of the child. Adults who have children are people as well as parents.

In reading "how to be a perfect parent" books, each parent chooses that advice on how to raise children least appropriate to him, she finds. Each parent seeks rationalizations for the most irrational aspects of his behavior.

Mothers who read about child-rearing are those who are already overburdened with conscience. Dr. Loevinger believes this emphasis on child's rights and mother's duties serves to increase the anxiety difficulties of parents.

The mother-blaming complex, Dr. Loevinger suggested, is an aspect of immaturity, just as much as the traits of the child that are labeled "momism."

Science News Letter, January 10, 1953

Why Die Before Your Time?

YOU CAN LIVE YEARS LONGER . . . By Knowing the Unconscious Ways in Which You May Be Shortening Your Life. A Prominent Doctor Now Shows You How to Recognize Them and What to Do

STOP AND THINK! Will you die before your time? Are you doing things to your mind and body that will shorten your life?

Are you taxing your heart without knowing it, working and playing too hard? Are you straining vital organs, eating improper foods, letting worries prey on your "nerves"? Are you ignoring danger signals of ailments that could be "caught in time"?

PARTIAL CONTENTS

OVERWEIGHT — 12-day diet that can slim you, help you live longer; yet eat as much as you like.

YOUR HEART — How various diseases of heart originate. How to avoid them. New treatments for this killer.

SMOKING — Who should not smoke. How to stop—if you must.

HIGH BLOOD PRESSURE — Learning to live with it. A simple, pleasant routine that adds years to lives.

ALCOHOL — How a few ounces a day can help you live longer.

SUCCESSFUL FAILURES HAVE ULCERS — Sensible way to treat it. How to live happily with one.

CANCER — who gets it? What does not cause it. Amazing records of cures. What will often cause it.

MEETING STRAINS OF EVERYDAY LIVING — Recuperating quickly from intense strain. A sensible routine that minimizes strains.

HOW TO KILL YOURSELF BY BEING YOUR OWN DOCTOR — How do you know it's just a headache, indigestion, or "run-down" condition?

Stop Killing Yourself

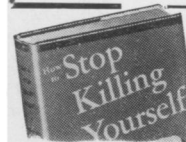
Now a prominent preventive medicine specialist, Dr. Peter J. Steincrohn, describes the 30 enemies that may rob you of long life. His new book, "How To Stop Killing Yourself," tells you the unconscious ways in which YOU may be shortening your life; how to recognize them; what to do about them!

Dr. Steincrohn tells you how various diseases of the heart originate, how to avoid them. He gives you a simple, pleasant routine that can add years to the lives of high blood pressure sufferers. He tells how to live happily with an ulcer—what to do about insomnia, constipation, smoking, drinking. The book includes a 12-day diet that slims you down for longer life; fascinating case histories about others that show you how to live longer, happier.

Read Book FREE for 5 Days

SEND NO MONEY

Mail coupon today to get this book for 5 days' FREE examination. Read a chapter or two. If not convinced it can help you (or someone dear to you) combat the forces that may rob you of longer life . . . send the book back and owe nothing. Or keep it and send only \$2.95 plus postage and handling charge in full payment. Mail coupon now—without money if you prefer. Wilfred Funk, Inc., Dept. K901, 33 W. 46 St., New York 36, N. Y.



WILFRED FUNK, Inc.,
Dept. K901, 33 W. 46 Street
New York 36, N. Y.

Please send me—for 5 days' FREE EXAMINATION—Dr. Steincrohn's new book, *How to Stop Killing Yourself*. If I decide to keep it I will send you \$2.95 plus postage and handling charges. Otherwise I will return it, without the slightest further obligation.

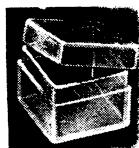
Name (Please Print)

Address

City Zone No. State (if any)

Check here if enclosing \$2.95 WITH this coupon, and WE will pay all postage and handling charges. Of course, the same 5-day return privilege, for full refund applies. (Canadian Orders—send 25c extra for carrying charges. Only U. S. currency accepted.)

CARGILLE TRANSPARENT BOXES



20 for \$1.00 & up

For small OBJECTS & SPECIMENS Useful in ALL LABORATORIES Fine for HOME WORKSHOPS, etc. Write for New Leaflet SNL-TPB

R. P. CARGILLE LABORATORIES, INC.
117 Liberty Street New York 6, N. Y.

