

Chemical Predestination Guided Life Origins, Biochemist Says

Chemical predestination—and not chaos or accident—guided the origin, evolution and reproduction of substances essential to all forms of life, suggests a biochemist from the University.

"Life chemicals called peptides could also have been produced in prebiological times without the help of nucleic acids, generally considered vital for such reproduction," said Gary Steinman, assistant professor of biochemistry. His findings appear in an article in the August issue of the Proceedings of the National Academy of Sciences.

Steinman's experiments were designed to simulate the conditions under which peptides of biological interest first appeared on the early Earth. He found that amino acid building blocks that may have existed billions of years ago seem to prefer to link up in pep-

ptide combinations that occur in a wide variety of proteins, including those found in hormones, enzymes and viruses.

The University findings contradict the widely-held viewpoint that peptides, which can grow into much longer protein molecules, were formed from the haphazard, random combination of amino acids.

Steinman says that the characteristic structures of different amino acids as well as other measurable factors appear to dictate that they would have combined into the types of peptides now found in living things.

"In fact," said Steinman in an interview, "based on what many laboratories have learned about the physical, chemical and environmental conditions that may have existed in prebiological times, the onset of life would have been almost impossible to pre-

vent." In recent work, Steinman found that once a peptide is formed it seems to promote the formation of other peptides. For example, when he combined the two common amino acids, leucine and alanine, the extent to which they hooked together could be increased dramatically by adding another peptide.

Summarizing the work reported in the article, Dr. Steinman concludes: "Unique, biologically pertinent peptide sequences may have been produced pre-biotically (before life appeared) without nucleic acids."

In a sense, a sort of built-in 'predestination' can be identified at several levels of biological order. Thus the organization necessary for living systems to have appeared primordially should not be looked upon as a rare, chance, improbable phenomenon."

Two University Scientists Say Handicapped Need Social Curriculums

The physically and mentally handicapped are in need of curriculums that stress social skills as well as vocational training, two University behavioral scientists emphasize.

Arthur E. Gravatt, associate professor of family relationships, and Stella R. Goldberg, assistant professor in the department of child development and family relationships, both in the College of Human Development, conducted a nine-month study at Skills, Inc., of Bellefonte, a Pennsylvania sheltered workshop for handicapped persons to determine the social needs of these persons.

An important finding was that more direct and open discussion with other adults is urgently needed to enable the handicapped to better understand their relations with others.

The social scientists also found that tabooed topics such as sexual behavior, contraception, marriage and parenthood need to be discussed with the handicapped.

"These people believe they should have an opportunity to discuss such experiences," said Gravatt, director of the project.

He said that the development of social and community skills has been overlooked in the past because society felt it "had to be protected from the handicapped."

Society also has assumed that handicapped persons should be protected and sheltered, he added.

In addition to vocational rehabilitation, the study brought out that the handicapped need more opportunities to learn by interacting independently with the community

and with a greater degree of freedom and responsibility. A two-month follow-up study was conducted this summer to ascertain what adjustment was made by the handicapped persons involved. Findings showed that some are working and living away from home, and others are living at home and seeking employment. Only one had not been heard from.

As a result of the project, said Gravatt, Skills, Inc., is making instruction in social-community living a permanent part of its program along with instruction in home-making for independent living.

Based on the study, also, a special curriculum for teaching social and community skills will be published in December. The curriculum, Gravatt said, will be applicable to educational settings including both secondary schools and institutions.

The social and community skills program was organized around the concepts of self, the family and the community. Dr. Goldberg and Gravatt met with the 20 participants weekly at the shelter during the nine-month period. The program was financed by the Pennsylvania Department of Public Instruction.

Findings of the project, entitled "A Report on a Demonstration Project on Social and Community Skills for Retarded Youth in a Sheltered Workshop," were presented by Gravatt at the recent Conference of the International Association for the Scientific Study of Mental Deficiency at the University of Montpellier, France.

Architects, Designers' Feud Examined

That years-old, but obscure feud between architects and interior designers is not just another American peculiarity.

The "deep-rooted misunderstanding" also has plagued interior designers in Western Europe, says David B. Van Dommelen, associate professor of family housing and home art who has just returned from the International Federation of Interior Designers' Congress held in Amsterdam.

A truce is the aim of most interior designers; but that doesn't seem especially likely.

"It's a pretty shabby relationship right now," Van Dommelen said.

"We have the same problems here as the European interior designers," he added.

Van Dommelen, who is preparing a report on the meetings for the American Home Economics Association, said that because architects are unconvinced that interior designers can "relate" to an architect-designed building, there is hesitancy to include interior designers during the planning of a structure.

Owing to the strictly professional feud, a "total approach"—the merging of all areas of men's environment

which incorporates both exterior and interior designs—is often overlooked; and an incongruous completed structure can result.

Van Dommelen, who attended the three and one-half day meeting during the summer, said that by discussing the problems of the architect and the interior designer, "some headway was made."

Much of the misunderstanding, he said, has developed because the architect wants to remain "dominant" when designing a structure.

Nationally known for his books on interiors and interior design, Van Dommelen teaches graduate and undergraduate courses in family housing and home art in the College of Human Development.

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"The Vibrations" One of Pennsylvania's best dance groups, winner of State College's battle of the bands last August, will be at the "Bug Out" on Benner Pike Saturday night October 7th from 8:30 to 11:30 p.m. The boys will be taking reservations for Penn State Fall, Winter, and yes... Spring functions on this night. Representatives from University fraternities, sororities and other social groups are asked to attend the "Bug Out" to audition "The Vibrations" as well as to have a good time.

Or/Direct Any Correspondence to: "The Vibrations" % Mark P. Bixby RD#1 Linden, Penna. 17744 Phone 717-398-2054

IN PHOTO—Left to Right—"The Vibrations" Paul Miller, Mike Yohe, Stan Kreitz, Rick Wilhelm, Andy Mitchell

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Social-life majors, take a look at Charles Van der Hoff. He can't play the guitar. Never directed an underground movie. And then look at his ears! A bit much? Yes! But--Charles Van der Hoff can hear a bottle of tart, tingling Sprite being opened in the girls' dormitory from across the campus!

What does it matter, you say? Hah! Do you realize that Charles Van der Hoff has never missed a party in four years? When he hears those bottles

of Sprite being uncapped--the roars--the fizzes--the bubbles--he runs! So before you can say anti-existentialism, he's getting in on that tart, tingling, slightly tickling taste of Sprite. And delicious refreshment--as well as a good time--is his.

Of course, you don't have to have ears as big as Charles Van der Hoff's to enjoy the swinking taste of Sprite. You may just have to resign yourself to a little less social life.



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