Program Summary

Monday, August 22
8:00 A.M. Registration
10:00 A.M. Opening Session
1:30 P.M. General Session
7:45 P.M. Public Meeting: "Sense Perception"
           Moody Institute of Science Film
9:00 P.M. Discussion—"The Critic's Corner"

Tuesday, August 23
7:00 A.M. Devotions
8:30 A.M. Symposium: "Vitalism vs Mechanism"
10:00 A.M. Break followed by discussion of sym-
           posium papers
1:30 P.M. Field Trip: University of Washington
           Medical School Facilities for Psychi-
           atric Treatment
8:00 P.M. Public Meeting: "Can The Scientist
           Bring Peace"

Wednesday, August 24
7:00 A.M. Devotions
8:00 A.M. Field Trip: Mt. Rainier Area

Thursday, August 25
7:00 A.M. Devotions
8:30 A.M. Session on Education
1:30 P.M. General Session
3:00 P.M. Concluding comments from the Presi-
          dent of the ASA and Devotions

OFFICIAL PROGRAM

Fifteenth Annual
Convention
of the
American Scientific
Affiliation
(Incorporated)
A group of Christian scientific men, devoting
themselves to the task of reviewing, pre-
paring and distributing information on
the authenticity, historicity, and
scientific aspects of the Holy
Scriptures in order that
the faith of many in
Jesus Christ may
be firmly
established

August 22-25, 1960
MARSTON LOUNGE
SEATTLE PACIFIC COLLEGE
Seattle, Washington
General Information

Reception Desk:
Seattle Pacific College—Watson Hall—West Bartona entrance. Phone: ATwater 4-7700.

Registration:
8:00-10:00 a.m., Monday, August 22, 1960. If you arrive late please register on the day you arrive.

Registration fee:
The registration fee is $2.00 for members of the ASA and $1 for other adults who wish to participate in the convention activities. Payment is requested to help defray costs of the convention; however, all sessions of the convention and especially the two evening public meetings are open to the public.

Payment for the Mt. Rainier tour will be approximately $4.00 additional—this does not include meals.

Accommodations:
Rooms—$1.00 per person per night. Bedding is to be furnished by the individual unless other arrangements have been made. For extra charge bedding can be furnished by rental. Those desiring rented bedding please inform Harold Wiebe at Seattle Pacific College in advance.

Meals—By advance reservation meals can be purchased at the college cafeteria—breakfast $0.45, lunch $0.60, dinner $1.00 (except on Sunday when dinner will be $1.50).

Meetings:
All sessions, unless otherwise announced, are to be held in Marston Lounge which is adjacent to the cafeteria. The Tuesday evening public meeting is scheduled for McKinley Auditorium on the college campus.

Program

Monday, August 22

8:00 A.M. Registration
10:00 A.M. Opening Session—Marston Lounge
Chairman—Harold T. Wiebe, Ph.D.
Genetic Chairman of Convention
Invocation—John R. Hewitt, M.D.
Welcome—Dr. C. Dorr Demaray, President
Seattle Pacific College
Response—H. Harold Hartzler, Ph.D.
President of the ASA
Orientation—Harold T. Wiebe
Paper—A CHRISTIAN PHILOSOPHY OF
SCIENCE
Norman D. Lea, P.E.

11:30 A.M. Adjournment
12:00 Noon Lunch
1:30 P.M. General Session
Chairman—Richard A. Hendry, Ph.D.
Department of Chemistry, Texas Tech College, Lubbock, Texas
THE BEARING OF SOME RECENT DISCOVERIES IN PALEOBOTANY ON INTERPRETATION OF GENESIS I—
Herbert L. Hargert, Ph.D.
SECONDARY AND TERTIARY STRUCTURE OF PROTEINS AND THE SIGNIFICANCE OF THIS IN THE BIOLOGICAL WORLD—Virgil H. Freed, Ph.D.

2:45 P.M. Break
3:00 P.M. ANNUAL BUSINESS MEETING
Chairman—H. Harold Hartzler, President
Secretary-Treasurer's report—
Walter R. Hearn
Local Section Activities—F. Alton Everest
Journal of the ASA—Delbert N. Eggenberger
ASA Planning Commission—Henry D. Weaver, Jr.

4:45 P.M. Adjournment
5:30 P.M. Dinner
7:45 P.M. Public Meeting
SENSE PERCEPTION
Moody Institute of Science Film
F. Alton Everest, D.Sc.
Director, Moody Institute of Science, Santa Monica, California

9:00 P.M. “The Critic’s Corner”
Chairman: J. Frank Cassel, Ph.D.
Chairman, Department of Zoology, North Dakota State College, Fargo, North Dakota

Tuesday, August 23

7:00 A.M. Devotions: Delbert N. Eggenberger, M.S.
7:30 A.M. Breakfast
8:30 A.M. SYMPOSIUM—VITALISM VS MECHANISM
Chairman—Ian J. Tinsley, Ph.D.
Assistant Professor of Agricultural Chemistry, Oregon State College

1
A CHRISTIAN PHILOSOPHY OF SCIENCE

Norman D. Lea, P.E., Vice President
Foundation of Canada Engineering Corp., Limited
Vancouver, B.C., Canada

Science is in need of a sound Christian philosophical base upon which to build its superstructure of conceptual schemes. In enunciating such a Christian philosophy of science care must be taken to avoid the pitfalls of the past and to carefully identify the areas of validity, both of scientific enquiry and of Christian philosophy. Science can and should be used in Christianity but science does not and cannot encompass Christianity. A sound Christian philosophy springs from a personal encounter with Christ the creator and sustainer of the universe. It views science as a tool. It constitutes the best world-and-life view for a scientist. Since man by wisdom cannot know God, science cannot achieve or explain the least empirical concepts of origin, purpose, truth, morality, uniformity of nature and the reliability of the observer's senses and mind. A Christian philosophy of science derives from revelation an explanation of these, but cannot, except through science, validly derive the more empirical physical concepts.

THE BEARING OF SOME RECENT DISCOVERIES IN PALEOBOTANY ON THE INTERPRETATION OF GENESIS 1

Herbert L. Herzeg, Ph.D.
Research Chemist
Olympic Research Division
Rayonier, Inc., Shelton, Washington

A brief summary of the sequences of fossil forests that once existed in the western United States will be presented. It will be shown that ecology and composition of these forests since the Eocene epoch is very similar to flora presently in existence in Southwestern Asia, Central America, and the Southeastern United States. These observations strongly support the principle of uniformity and cannot be rationalized with the "gap" or catastrophic interpretation of Genesis 1. Consideration of the means by which floras move appears to strongly support the present age assignments of the Tertiary by modern geologists. This, in turn, would mean that the events recorded in Genesis have taken place over a vast period of time. Gaps in the fossil record not explained by evolutionary hypothesis will be discussed.
SECONDARY AND TERTIARY STRUCTURE OF PROTEINS AND SIGNIFICANCE OF THIS IN THE BIOLOGICAL WORLD

Virgil H. Freed, Ph.D.
Professor of Agricultural Chemistry
Oregon State College

Organization and structure at the cellular and tissue level are of utmost importance to the living organism. However, this organization and structure start at the molecular level within the cell for it is at this level that the progress of certain key functions are determined. A specific example of this is the permeability which is thought to be governed by the instantaneous shape and structure of the proteins of the cytoplasmic membrane.

Protein structure is characterized at three levels. The first of these has to do with the number and kinds of amino acids making up the protein molecule. The second level of the problem consists of the arrangement of the amino acids and the types of chemical bonding involved. The third element of protein structure is the order and shape assumed by the aggregate molecule. It is this third element of structure that determines the functional efficiency of the protein as a biological catalyst. Such agents as drugs, high energy radiation or modification of respiratory activity in the cell may result in modification of the tertiary structure of proteins and have significant consequences.

Part II The Limitations of the Senses

Part I The Wonder of the Senses

The stimulation of the sensory receptor, the passing of feeble bursts of electrical impulses to the brain and then the interpretation and perception in the brain, these comprise the mechanics of the system by which we maintain contact with our environment. Stratton's classic psychological experiment involving inverting vision was repeated by Dr. Irwin A. Moon, manager of M. I. of S., to drive home the important concept that we do not see with our eyes but with our brains. Gravity cues are important in this visual orientation and conjectures are made concerning life in space under zero-gravity conditions.

ANNUAL BUSINESS MEETING

H. Harold Hartzler, Ph.D.
President, American Scientific Affiliation

SENSE PERCEPTION

A Moody Institute of Science Film

Dr. F. Alton Everest, Director
Moody Institute of Science
Santa Monica, California

Part I The Wonder of the Senses

The stimulation of the sensory receptor, the passing of feeble bursts of electrical impulses to the brain and then the interpretation and perception in the brain, these comprise the mechanics of the system by which we maintain contact with our environment. Stratton's classic psychological experiment involving inverting vision was repeated by Dr. Irwin A. Moon, manager of M. I. of S., to drive home the important concept that we do not see with our eyes but with our brains. Gravity cues are important in this visual orientation and conjectures are made concerning life in space under zero-gravity conditions.

Part II The Limitations of the Senses

The entire electromagnetic spectrum, including radio waves, infrared, ultraviolet, x-rays, cosmic rays, etc., is "light" as much as the narrow band to which our eyes respond. The world of ultrasonics reveals to us how limited are our "hi-fi" ears. The sense of taste is very crude as it cannot distinguish between apple, pear, onion or potato without help from the sense of smell and touch. Furthermore our minds interpret sensory information in the context of past experience as illustrated so beautifully by the Ames demonstrations. The scientist is well aware of these limitations and much of his research activity is devoted to instrumentation to extend and confirm his senses. Acknowledgment of these limitations emphasizes the folly of basing judgments of eternal value upon sensory data.

"THE CRITIC'S CORNER"

Moderator: J. Frank Cassel, Ph.D.

A member of the Executive Council has proposed allocating a session for the presentation of ideas without the formality of submitting a paper for presentation at a regular session of the convention. It is hoped that several will come prepared to use this session as a sounding board for new ideas, to discuss the implications of certain positions supported in the ASA, or other matters of mutual interest to members of the ASA.

It is not necessary to announce a proposed topic for discussion in advance; however, we have invited Mr. Herb Seal to open the first session with a discussion of a study he is completing under the direction of the Graduate School of Education at San Francisco State College. Mr. Seal is a member who has served as Family Relations Counselor and as Consultant in Pastoral Psychology.

1. VITALISM VS MECHANISM FROM A BIOCHEMICAL POINT OF VIEW

Walter R. Hearn, Ph.D.
Associate Professor
Department of Biochemistry and Biophysics
Iowa State University, Ames, Iowa

An introduction to the controversy between vitalism and mechanism is presented, with a brief historical orientation. Naive vitalism tends to attribute force and motion to living organisms alone; naive mechanism may be said to confuse the mechanical description of a thing with its total description. As a biochemist, the author maintains that the goal of biochemistry, "to describe the phenomena of biology in the language of physics and chemistry," is a worthy one. Some achievements of mechanistic biochemistry and some possible future developments are pointed out. The success of science in providing mechanical explanations of life processes renders a naive vitalism unsatisfactory today; however, the inherent inability of science to deal with questions of purpose at the personal human level may be said to render a naive mechanism unsatisfactory also. Some examples of vitalistic and mechanistic points of view are presented and critized in an attempt to derive a personal synthesis for a Christian philosophy of life.

2. VITALISM AND EMBRYOLOGY

Robert C. Frost, Ph.D.
Professor of Biology
Westmont College
Santa Barbara, California

The recent advances of biochemical genetics are certain to intensify investigation into the chemical basis for differentiation. Experimental embryology has already embraced a biochemical approach, and a wedging of the two disciplines at this level is to be expected. The subordinate mechanisms of gene control as they apply to developmental regulation will provide the common ground for this convergence of interest.

The mechanistic approach of science has already delved deeply into developmental processes. It would appear that the grave of vitalism is more securely sealed with each advancing step that science takes. Yet, to the Christian man of science who is committed to theistic world view, perhaps the issue is not as lifeless as some might think. For instance, the author of one of the leading principle texts in biology describes vitalism, in his chapter on embryology, as a doctrine of the supernatural. Can one adhere to a belief in the supernatural without being a
vitalist? Can one be both a mechanist and a vitalist or are the two terms mutually exclusive? Might there be an alternative position? Clearly these are issues which need redefining. Embryology provides a suitable historical perspective from which the problems can be defined and discussed.

3. THE MIND-BRAIN PROBLEM

John C. Sinclair, M.S.
Pre-Dotalor Research Assistant in Physiology
U.C.S.F. Medical Center, San Francisco

Explanations of human behavior in terms of the brain or of the mind are two complimentary ways of looking at the same entity. Mind is the pattern of activity of the constituent parts of the brain. When this pattern of activity is interrupted, mind ceases to exist.

Our personalities are expressed by the unique responses we make to sensory stimuli. The past evolution, development, biochemistry, society and habits play in our so-called "voluntary behavior" will be discussed. God is considered to be a factor in man's environment, which involves events one would not expect if there were no God. Man's freedom of choice makes him morally responsible for his behavior.

Behavior requires a sensory system to provide sensory patterns. It requires reflex (synaptic) connections with specific motor effectors. It requires a memory or feedback modification or monitoring of this response. These essentials provide the material basis for the expression of the mind.

FIELD TRIP
(Tuesday Afternoon)
CONDUCTED TOUR OF UNIVERSITY OF WASHINGTON MEDICAL SCHOOL FACILITIES FOR PSYCHIATRIC TREATMENT

Theodore L. Dorpat, M.D.
Assistant Professor of Psychiatry
Department of Psychiatry
University of Washington School of Medicine

The tour will cover parts of the University Hospital of special interest to a group of scientists. Then they will be escorted through the Psychiatric Out-Patient Department and the Psychiatric In-Patient Service. The facilities will be explained by experts in the mental health professions. These include occupational therapists, social workers, psychologists and psychiatric nurses.

Following the tour, the group will meet for a lecture and discussion period. The lecture by Dr. Dorpat will be on Psychiatric Treatment. It will include a discussion of the contributions made by various social and biological sciences to modern psychiatric treatment. Following this there will be a period in which questions about the tour or the lecture can be discussed.

PUBLIC MEETING
(Tuesday Evening)
Lecture
CAN THE SCIENTIST BRING WORLD PEACE
Robert M. Page, Ph.D.
Director of Research
U.S. Naval Research Laboratory
Washington, D.C.
teristics can be given only in Christian institutions, it is the
inexplicable duty of the Bible Institutes, the Christian
Colleges, and the Theological Seminaries to thoroughly
ground their students in this area.

Several members of the ASA are currently contributing
material for a suitable text book in this field. The co-
authors are Dr. Howard Cramer—Geology, Dr. Henry
Weaver, Jr.—Chemistry, Dr. Alfred A. Kraus, Jr.—Phys-
ics, and Peter W. Stone—Mathematics and Astronomy
and editor.

SOME PROBLEMS IN HIGH SCHOOL
BIOLOGY

R. R. Bower, Science Instructor
Beaverton High School, Beaverton, Oregon

Teaching biology in the secular high school can be
very rewarding from the Christian viewpoint. Student
concepts are determined to a considerable degree by those
of the teacher. This is evidenced by students who awav a
belief in evolution for erroneous reasons and others who
express opposition for equally erroneous reasons. The in-
roduction to one standard text being used states the im-
portant propositions that "there is no place in science for
beliefs not supported by facts" and "scientific principles
are accepted only if they check with all the known facts."
These certainly provide a framework for evaluating many
phases of biology besides the evolutionary hypothesis.

This applies in two ways. Students with religious in-
struction have frequently been taught Bishop Ussher's
dating for man, that most of the fossil finds for man are
false, etc. It is the Christian teacher's responsibility to
point out that it is just as wrong not to consider informa-
tion that apparently does check with the facts as it is to
accept beliefs that are not supported by facts.

On the other hand, a number of examples will illus-
trate that secular texts on biology must be read with dis-
cernment. An especially interesting illustration is the
"evidence" for evolution from vestigial organs. The text
ably show that the various organs are controlled by
genres. Then the facts are disregarded and these vestigial
organs are made the product of use-and-disuse. But in
the following chapter of one text we find "The use-and-
disuse theory would be a lovely theory if true" and "so
the use-and-disuse theory must be considered false."

Other examples are presented to illustrate the need for
critical reading and evaluation of material presented in
high school texts on biology.

THE PROBLEM OF CULTURAL
RELATIVITY

David D. Moberg, Ph.D.
Chairman Department of Social Sciences
Bethel College, St. Paul, Minnesota

Even while he vociferously attacks cultural moral rela-
tivity, the typical evangelical Christian applies the con-
cept in his daily life and in his interpretations of Scriptu-
esthe problem reflects the rapid social change of
ternational society, the growth of man's knowledge, the close
contacts between diverse groups of people made possible
by modern transportation and communication, and de-
velopments in modern science.

This problem affects all Christians, not merely social
scientists. Are there any universal and absolute Christian
standards of what is right and what is wrong?

CREATION A FINISHED WORK

William J. Tinkle, Ph.D.
Former Head of Science Division
Taylor University, Upland, Indiana

This paper considers the question "Did God Create or
is he creating now?" Since God has the power to do either,
some Christians say the answer does not matter. The au-
thor believes it is a foundation principle.

God's activity in the universe at present is properly
called providence and is essentially different from crea-
tion. Genesis 2:1 states "Thus the heavens and the earth
were finished, and all the hosts of them." These concepts
will be discussed.

REPORT OF NEUTRON RADIATION
ON ROSE BUDS

Dr. Howard Cramer, Geology

Dr. Alfred A. Kraus, Jr., Physics

Dr. Peter W. Stone, Mathematics and Astronomy

The remarkable series of variations obtained by neu-
ton radiation of Queen Elizabeth will be shown in color
and briefly described.

Relative roles and methods of treatment will be given
along with discussion of applicability to other plant ma-
terials which can be propagated by budding.

No positive mutations were obtained in any of the
varieties radiated. For example, R. Multiflora buds
though affected and giving various mutations such as
greatly reduced growth, did not show any variations
from the recessive white to the dominant color factors
such as magenta or red. Pedal number was not increased
in either R. Multiflora or one of the red varieties used.

The bearing of all of these results on the theory of ev-
olution will be discussed.

SUGGESTIONS OF THINGS TO SEE

In And Around Seattle

For Wives and Families

In Seattle:
Woodland Park—Fine zoo and rose gardens
University of Washington campus
Chittenden Locks—The largest in the Americas except
for those at Panama raise and lower a steady flow of
pleasure craft and some sea going vessels between the
salt waters of Puget Sound and the fresh waters of
Lake Union and Lake Washington
Seattle's International Settlement—where East meets West
and Oriental arts and costumes may be purchased
or just admired.

Little Theater
Boeing Airplane Company—Home of the B-52 and per-
haps the nations most modern super-sonic wind tun-
el facilities.
Numerous Land and Water Tours of Seattle and sur-
rounding scenic area.

Ferries from Seattle To:
Winslow—30 minutes. An inexpensive way to ob-
tain a dazzling view of Seattle's seven hills by
night.
Bremerton—1 hour. Naval Shipyards.
Victoria, B.C.—4 hours. Delightful cruise through
inland waterway to picturesque and typically
English setting. A "shopping" tour the ladies
speak of for years.
MEMBERS OF EXECUTIVE COUNCIL

H. Harold Hartuler, Ph.D. (1960*) President
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Mankato State College, Mankato, Minnesota

Henry D. Weaver, Jr., Ph.D. (1963) Vice President
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Goshen, Indiana

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Delbert N. Eggenberger, M.S., (1957)
Research Chemist
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Administrative Assistant, Consolidated Mining and Smelting Company
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Irving A. Cowperthwaite, Ph.D., (1943)
Plant Engineer
Thompson Wire Company, Milton, Massachusetts

John P. Van Haisma, Ph.D., (1942)
Professor of Organic Science
Calvin College, Grand Rapids, Michigan

The Objects of The American Scientific Affiliation are:

(1) To investigate the philosophy and findings of science as they are related to Christianity and the Holy Scriptures.

(2) To disseminate the results of such studies to both the Christian and secular worlds.

—Article I of ASA Constitution

Doctrinal Statement

The members of the Affiliation shall subscribe to the following doctrinal statements:

(1) The Holy Scriptures are the inspired Word of God, the only unerring guide to faith and conduct.

(2) Jesus Christ is the Son of God and through His atonement is the one and only mediator between God and man.

—Article II of ASA Constitution

Convention Committee

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Seattle Pacific College
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