

OFFICIAL PROGRAM

Twelfth Annual Convention

OF THE American Scientific Affiliation

(INCORPORATED)

A group of Christian scientific men, devoting themselves to the task of reviewing, preparing 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 27-29, 1957

GORDON COLLEGE
& DIVINITY SCHOOL
BEVERLY FARMS, MASS.

PROGRAM SUMMARY

Tuesday, August 27

- 8:30 A.M.—Registration
- 10:30 A.M.—Opening Session
- 1:30 P.M.—Symposium on Origin of Life
- 8:00 P.M.—Philosophy Session

Wednesday, August 28

- 7:00 A.M.—Field Trip
- 2:00 P.M.—General Session
- 4:00 P.M.—Business Meeting
- 7:30 P.M.—Discussion Groups

Thursday, August 29

- 8:30 A.M.—Psychology Session
- 9:45 A.M.—Psychology Symposium
- 2:00 P.M.—Symposium on Age of Man
- 8:00 P.M.—Public Meeting
Moody Science Film

GENERAL INFORMATION

Registration:

It is important that you register upon arrival. The registration table in the lobby of Frost Hall (the stone building) will be receiving registrations from 2:00 to 5:00 and from 7:30 to 9:00 on Monday afternoon and evening and on Tuesday morning from 8:30 to 10:30.

A registration fee of \$2.00 will be requested to help defray costs of the convention.

Accommodations:

Rooms are available in Frost Hall (the Divinity School Building) and in Wood Hall (now girls' dormitory). Room assignments will be made at the time of registration.

Meals will be served in the dining room in Frost Hall during the three days of the convention: Tuesday, Wednesday, and Thursday.

The total charge for board and room will be \$12.00. Adjusted charges will be arranged for those who are not able to be present for the entire three days of the Convention.

Meetings:

All sessions, unless otherwise announced, will be held in Frost Hall.

Location:

Gordon is located just north of the city of Boston at Exit 7 on the circumvential super-highway, Massachusetts No. 128. Signs will guide you from the exit to the school.

Convention Motto:

That they may see and know, and consider, and understand together that the hand of the Lord hath done this, and the Holy One of Israel hath created it. Isaiah 41:20

PROGRAM

Monday, August 26

8:00 P.M. Geological movie for early arrivals "In the Beginning" by Socony Oil Co.

Tuesday, August 27

8:00 A.M. **Breakfast.**

8:30-10:30 A.M. **Registration**

10:30 A.M. **Opening Session**

Chairman—Dr. Irving A. Cowperthwaite
Invocation

Welcome—Dr. T. Leonard Lewis, President of Gordon College & Divinity School

President's Report—Dr. Harold Hartzler

Announcements—1. General
2. Field Trips
3. Discussion Groups
4. Darwin Centennial Report

11:30 A.M. **Adjournment**

12:00 Noon **Lunch**

1:30 P.M. **Symposium on Mechanistic Views of the Origin of Life***

Chairman—Dr. Wilbur L. Bullock

WILBUR L. BULLOCK—Introduction: Historical Setting from a Biological Viewpoint

KARL K. TUREKIAN—Primitive Earth Conditions and the Origin of Life

RICHARD A. HENDRY—Physio-Chemical Synthesis of "Biological" Compounds

WALTER R. HEARN—The Formation of Living Organisms from Non-living Systems

R. LAIRD HARRIS—Theological Aspects of Mechanistic Views of the Origin of Life

Discussion: Questions will be answered by Panel.

5:00 P.M. **Adjournment**

6:00 P.M. **Dinner**

8:00 P.M. **Philosophy Session**

Chairman—Mr. Harry Leith

M. THOMAS ROTHWELL—Cosmic Purpose and the Problem of Belief

VIVIAN DOW—

T. HARRY LEITH—Some Thoughts on a Christian Philosophy of Science

10:00 P.M. **Adjournment**

Wednesday, August 28

6:00 A.M. Devotions—Dr. John R. Howitt

6:20 A.M. Breakfast

7:00 A.M. Field Trip—Drs. Wilbur L. Bullock and T. Harry Leith in charge. Combined biology and geology field trip along the Massachusetts North Shore. There is a beautiful low tide at 0740. Let's hope for good weather!

Field Trip—Mass. Inst. of Technology. Dr. Donald R. Carr in charge. Time to be announced.

12:30 P.M. Lunch

2:00 P.M. General Session

Chairman—Dr. Marlin B. Kreider

THEODORE T. THIENEMANN—The Myth of the I.Q. Tests

RUSSELL HEDDENDORF—Toward a Study of the Function of Religion

DAVID O. MOBERG—Christian Beliefs and Personal Adjustment in Old Age (read)

RUSSELL L. MIXTER—Stepwise Creation

JAMES O. BUSWELL, III—ETS-ASA report on joint meeting at Wheaton College, June 12-14.

4:00 P.M. Annual Business Meeting—Dr. H. Harold Hartzler presiding

5:00 P.M. Adjournment

6:00 P.M. Dinner

7:30 P.M. Discussion Groups**

I. The Teaching of Science

Chairmen—Mr. Wayne F. Fris *aw*
Dr. Wilbur L. Bullock

II. The Validity of Data

Chairmen—Dr. Herbert W. Feely
Mr. T. Harry Leith

III. Christian Morals and Ethics in Business

Chairmen—Dr. Donald R. Carr
Dr. Irving Cowperthwaite

IV. The Future of the American Scientific Affiliation

Chairmen—Dr. H. Harold Hartzler
Mr. Wayne U. Ault

10:30 P.M. Adjournment

Thursday, August 29

7:00 A.M. Devotions—Mr. Delbert N. Eggenberger

7:30 A.M. Breakfast

8:30 A.M. Psychology Session

Chairman—Dr. Norvell L. Peterson

PRESTON P. PHILLIPS—Parapsychology and Space-Time Continuum

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DONALD TWEEDIE—The Means and End of Psychotherapy

TANDY SULLIVAN—A Consideration of Sociological and Psychological Principles Used in Alcoholics Anonymous

9:45 A.M. Symposium on The Christian Approach to Mental Illness

Panel: Hildreth M. Cross, Ph.D.

George P. Dillard, M.D.

Norvell L. Peterson, M.D.

(Chairman)

Louis V. Sorrentino, M.D.

and others.

The symposium will consist of short (10 min.) presentations of views and discussion in the areas:

a) What does psychiatry have to offer Christians?

b) Psychosomatic medicine and the Christian faith

c) Psychoneurosis and Christian living

d) Is mental or emotional illness different from spiritual problems?

e) Is psychotherapy brainwashing?

Questions from the floor will be invited.

12:00 Noon Adjournment

12:30 P.M. Lunch

2:00 P.M. Symposium on the Age of Man*

Chairman—Mr. James O. Buswell, III

JAMES O. BUSWELL, III—Introduction: The Evidence for Prehistoric Man

EDWIN A. OLSON—Radiocarbon Dating: a Tool in Fixing Chronology of the last 50,000 Years

WALLACE A. BROECKER—Glaciation and Correlation Studies

Discussion: Questions will be answered by Panel.

5:00 P.M. Adjournment

6:00 P.M. Dinner

8:00 P.M. Public Meeting

Chairman—Dr. H. Harold Hartzler

Address: "Cultures of Man and the Communication of the Gospel"—

Dr. William A. Smalley, Anthropologist and Linguist, American Bible Society.

Moody Science Film—"Facts of Faith"

Closing Devotions—Mr. Alton E. Everest

* The Symposia are designed to allow an hour or more for questions from the floor to be answered by the panel members. Participation is encouraged.

** The discussion groups will occur simultaneously and will be composed of about eight participants each with enough discussion group leaders to accommodate everyone. Please sign up in advance.

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ABSTRACTS OF PAPERS

Glaciation & World-Wide Changes in Climate

Wallace S. Broecker, Ph. D.
Columbia University,
Lamont Geological Observatory
Palisades, N. Y.

Evidence for major changes in local climate has been found in a large number of geographically separated geologic systems. Surface ocean temperature, sea level, size of pluvial lakes, characteristics of major river systems, and extent of continental glaciers all show changes which have been related to oscillations between glacial and interglacial type climates. The development of the C14 method of age determination allows the events in these systems to be correlated in time. At the present the chronologies back to 25,000 years B. P. have been fairly well established. They all indicate the same pattern of events; glaciation reaching a maximum close to 18,000 years ago, a gradual retreat culminating in a sharp readvance 11,800 years ago. This readvance was short lived and was followed by a major retreat which seems to have marked the end of the Wisconsin glacial period. The unified picture obtained provides excellent evidence for the validity of the concept of oscillation of climatic conditions on a global scene.

Theological Aspects of Mechanists Views of the Origin of Life

R. Laird Harris, Ph. D.
Chairman Old Testament Dept.
Covenant College and Seminary
St. Louis, Mo.

The usual theological view of the past is that God created matter *ex nihilo* and created life by fiat or rather created various forms of life by successive fiats arranging for their reproduction after their kinds. The creating of life appears to be the prerogative of the Creator.

It is difficult to define life. We associate with the living state such things as metabolism, consciousness, self-determination, self-propagation, purpose, and intelligence. These may not all be applicable to plant life. In simpler plants these characteristics may escape observation. Self-propagation seems to be the main and universal characteristic.

Obviously, life includes the mechanical. The older vitalists forgot this when they held that organic compounds could not be synthesized. Our arms are levers, our heart a pump, our eyes are cameras. But are they no more? Mechanisms can not experience the consciousnesses of sight, thought, etc. We speak of electronic brains with thought and memory. This is perhaps a dangerous misnomer for what is mere complicated calculation.

If life is mechanical it should be capable of synthesis. If it is not, I see no expectation that com-

plicated proteins, when synthesized, will be any more alive than urea, ammonia, etc.

The Bible seems to speak of animal life and death in terms similar to man's, except for the future life of man's spiritual nature. The Bible does not speak much of the life of plants. Some philosophies have held that matter itself has qualities of life. The Bible, however, seems always to distinguish the living from mere matter and from dead matter. Human life in the Bible is not treated as merely a mechanism plus a soul. It is like animal life in a way, and yet it has a value in God's sight beyond the mechanical.

The Formation of Living Organisms From Non-Living Systems

Walter R. Hearn, Ph. D.
Asst. Prof., Dept. of Chemistry
Iowa State College
Ames, Iowa

Mechanisms for the development of complex catalytic systems and the organization of these systems into the prototypes of living organisms are today the most speculative aspects of the theory of "pre-biological evolution." Most authors considering the problem conceive of an extremely gradual accumulation of the properties now characteristic of living things, in separate stages, with no sharp line of demarcation between non-living and living systems. A number of "model" systems have been proposed which illustrate how such transitions may have occurred, in accordance with known principles of thermodynamics and kinetics.

Modern biochemical investigations have revealed many details of present-day biological processes: the coupling of endergonic synthetic reactions to such exergonic processes as anaerobic fermentation and oxidation; photosynthesis; and the chemistry of the genetic transmission of information. Since it has generally been possible to study such "life-processes" in "sub-living" systems prepared by fractionating living cells, it seems reasonable that such systems or their prototypes might have come into existence independently and combined to form more complex systems favored by "natural selection" because of their greater efficiency. At any rate, this hypothesis has provided an impetus for additional biochemical research. Some current lines of investigation bearing on this problem are discussed.

Toward a Study of the Function of Religion

Russell Heddendorf, M.A., Ph. D. Res. Comp.
Instr. of Sociology,
Shelton College
Ringwood Borough, N. J.

An attempt is made to re-conceptualize the notions of the eminent French sociologist, Emile Durkheim, in his work "The Elementary Forms of the Religious Life." The terms dealt with are sacred rites, beliefs, and social structure. The method of re-conceptualization is to refine substantive statements from the

work which contain meaningful statements concerning the concepts. A list of specific properties is filtered from the refining process. From these properties, which are inherent in the work of Durkheim, new conceptual meaning for the terms are developed.

Durkheim's main thesis is that the function of religion should be the unification of society. It is pointed out, however, that such a function is relevant in only a particular type of society and that it will change with the nature of society. It is the assertion of this paper, therefore, that the function of religion can be best understood only when it is understood in terms of some unchangeable dimension. Durkheim's point that the function of religion should be the unification of society is refuted when the statement is made "that the function of religion can best be fulfilled by relating to the least knowable aspects of the sacred in a speculative, spiritual way." The consequences of such a view are indicated.

The paper closes with an attempt to show how a historical study of the Pilgrims might be useful in clarifying and developing the point of view.

Physico-Chemical Synthesis of "Biological" Compounds

Richard A. Hendry, Ph. D., Dept. of Chemistry
U. of Ill., Urbana, Illinois

In recent years, many scientists have shown considerable interest in the problem of the origin of life. As a result, several mechanistic explanations have been proposed to account for the conversion of inorganic matter into organic matter similar to that presently found in living organisms. Attempts to explain the origin of life, in this manner, rest upon the plausibility that inorganic matter could have been converted by physio-chemical means, under the conditions which existed during the pre-biological period, to small, organic molecules, such as amino acids, sugars, and the purine and pyrimidine bases. Such an approach as this would also require an explanation of the formation of more complex substances, such as proteins and nucleic acids. Of the many reactions that have been suggested to account for this conversion, several of them have been tested in the laboratory.

Experimental evidence which has been found to support such a hypothesis will be presented and discussed, along with other aspects of the problem.

Some Thoughts on a Christian Philosophy of Science

T. H. Leith, M. A., Ph. D. Res. Comp.,
Chairman Science Division
Gordon College
Beverly Farms, Mass.

By way of illustration of an apologetic for science this paper purposes to discuss certain contemporary definitions of the word 'creation' as applied to the

physical universe. There is apparently considerable confusion among both scientists and metaphysicians as to the underlying assumptions of these terms and as to their implications. It is the intent of this brief analysis to point out the need for clarification essential to the development of any adequate critique or synthesis.

As an aid to delimiting the questions involved, the ideas of a 'time of creation' involved in an expanding universe (of either the single or cyclic type) and in an infinite universe will be considered. Here the questions of age determination and entropy will be used to reveal certain anomalies inherent in these cosmologies when compared with one another and with empirical concepts of physical law.

Some rather more philosophical constructions based on these will then be analyzed and the logical facets involved outlined. On the basis of this outline, a suggested statement for the use of the term 'creation' in the formation of an apologetic and in defining doctrinal ideas will be presented.

Christian Beliefs and Personal Adjustment in Old Age

David O. Moberg, Ph. D.
Assoc. Prof. Sociology
Bethel College, St. Paul, Minn.

Relatively little systematic investigation has been made of the effects of religious faith upon the individual's mental health. Several studies of adjustment in old age have included among their findings references to the relationship of religious beliefs to personal adjustment. These studies are limited in that they have not systematically made these beliefs a major focus of attention.

This paper reports on the methods, findings, limitations, and implications of a study directly related to the subject. An ex post facto experimental design based upon 219 old persons residing in old people's homes and similar institutions in the Twin City Metropolitan Area related the findings on a "religious belief score" scale to those on the Burgess-Cavan-Havighurst Attitudes Inventory which measures personal adjustment in old age. Controlled groups of matched "believers" and "non-believers" resulted in the finding of superior personal adjustment among the "believers."

It is concluded that present knowledge indicates that for the limited samples of population that have been studied the holding of orthodox or conservative Christian beliefs in old age is related to good personal adjustment.

Radiocarbon Dating—A Tool in Fixing Chronology of the Last 50,000 Years

Edwin A. Olson, M. S.
Lamont Geological Observatory
Columbia Univ., Palisades, N. Y.

Radiocarbon dating — one of the more bazaar applications of radioactive decay — is, for the most

part, a method of determining the time since organic relics were alive. Wood, cloth, peat, charcoal, and burned bone are among the organic types dated. Since radiocarbon dating is based on physical principles that are subject to rigorous mathematical expression, the dates obtained should ideally be absolute. One must remember, however, to distinguish between the date of an organic sample and the inferred identical date for events suggested by other evidence in the sample area.

Depending upon the method used, the carbon of a sample is converted into a solid, liquid, or gaseous compound; it is then measured electronically to determine the relative amount of radioactive carbon-14 present. Owing to radioactive decay, the carbon-14 in an organic substance decreases with time following the death of the organism. Hence, the residual C-14 concentration is a measure solely of the time since the maximum, or living, concentration of C-14 was present in the sample. The sample age so determined rests on two assumptions for which there is much supporting evidence: (1) the living concentration of C-14 is constant with time, place, and organic type and (2) the C-14 measured includes no extraneous carbon introduced in nature or by man.

For dates back to 50,000 years ago, the radiocarbon method is useful to archeologists, glacial geologists, anthropologists, and paleontologists.

Parapsychology and the Space-Time Continuum

Preson P. Phillips, Jr., Th. D.
Pastor, Bible Presbyterian Church
Durham, N. C.

Space. The first dimensional "mystery" that the parapsychologist had to face was the discovery that ESP and PK seem to be completely independent of distance. In analyzing thousands of accounts of "spontaneous experiences" dating back into the last century one would find, for instance, that people are just as likely to "sense" that their loved ones are in danger, whether separated from them by a few yards, miles, or thousands of miles. The relationship always seems to be the deciding factor. This was confirmed by laboratory research.

Time. It should not be expected that time would show a limiting relationship if space fails to do so. This was confirmed. Those understanding the nature of the spirit world have always realized that those personalities whose habitat is heavenly or infernal (outside of time), especially God Himself, do, under certain conditions and for certain purposes, impart knowledge of the future to men. From generation to generation there has repeatedly appeared an apparently "natural" form of precognition. Well-attested cases of "spontaneous" precognition and laboratory-controlled precognition will be discussed.

Much effort has been expended to interpret the facts of parapsychology in some way other than admitting that under some conditions men have

access to knowledge of the future. But in recent years, physical science, psychology and parapsychology have emerged from an era of seeking to "explain away" psi's independence of space and time into an era of effort to explain this apparently established fact. The epistemological, casual and fatalistic objections will be answered by the "group mind," "dimensional," "extra-dimensional," "n-dimensional" and biblical answers.

Cosmic Purpose and the Problem of Belief

Mel-Thomas Rothwell, Ph. D.
Eastern Nazarene College
Wollaston, Mass.

Immanuel Kant engaged the vital issues of human thought when he said: "Two things fill the mind with ever new and increasing admiration and awe, the oftener and more steadily we reflect on them: the Starry Heavens Above and the Moral Law Within." The two worlds to consider, physical space and biological man, provide the aspects of existence basic to the solution of cosmic purpose and the problems of belief and morals. The wider teleological argument for God rests properly not only on the specific restricted evidence of design and fruitful adaptation, but on the interconnectedness of physical nature, life, and human experience.

Does the universe warrant a belief in a Creator? Are his traces strong enough to capture the faith of contemporary man? Mechanistic naturalism regards the principles of physical science sufficient to explain everything man can, and should, believe. New Humanism marks an improvement over mechanistic naturalism in that it seeks to do justice to the organic and man as well as to the inorganic. It does not, however, look for nor expect cosmic support for the development of human values. Christian Realism holds that man lives in a world in which intelligence and purpose are somehow structurally present.

Nels F. S. Ferre declares that two basic needs of the modern world are adequate authority and intrinsic motivation. Authority should be based on reason and fact, plus faith. A valid moral standard cannot logically stand alone. It is related to the rest of man's experience, revealing the need of God, and, consequently it gets more support from faith in God's existence.

In conclusion the contribution of philosophy, science, and religion is vital to man's understanding of his temporal and eternal welfare and existence.

A Consideration Of Sociological And Psychological Principles Used In Alcoholics Anonymous

Dr. Tandy Sullivan
Beverly Farms, Mass

Due to the fact that throughout the country the number of alcoholics is rapidly increas-

ing, there is a growing ministry of the church among these people who have become addicted to alcohol. The author, cognizant of the peculiarities of this problem, has attempted to analyze and illustrate the plight of the alcoholic. Because this is a psychological and sociological problem resulting from basic needs of the personality as well as a spiritual problem, the church must be ready to accept a method of ministry without compromising its testimony. Alcoholics Anonymous is an organization which has realized the needs of the alcoholic personality and has succeeded in meeting the sociological and psychological needs without meeting spiritual needs of the individual. Realizing that the church is not making allowances for the needs in the two former fields, the author has felt constrained to make this study and hopes that it will in some way implement the ministry of the church to the alcoholic.

The Myth of the I.Q.

Theodore T. Thienemenn, Ph. D.
Chairman Language Dept., Gordon College
Beverly Farms, Mass.

The Weshsler-Bellevue Test is one of those anonymous powers which control large areas of the American life. Its authority has grown to such extent that its general acceptance appears to be the proof of its validity. Even though its rationale is considered to be almost a self-evident truth, a few questions should be raised as to its validity. What are the scientific suppositions underlying this "intelligence test?" Are these suppositions, if valid at all, also in harmony of the Christian concept of man? Is intelligence, indeed, almost the same as the IQ? The 11 subtests of the Weshsler-Bellevue Scale are considered in the light of these questions.

In the final result we came to the conclusion that there is little justification for the use of this testing within the frame of a Christian philosophy of man. If thought-control is a readily rejected interference into the dignity of man in a democratic society, even more so is the very questionable prediction of the inabilities and incapacities of individual achievements on the ground of the IQ scale.

Primitive Earth Conditions and The Origin of Life

Karl K. Turekian, Ph. D., Asst. Prof.
Yale University, New Haven, Conn.

In mechanistic views of the origin of life three factors have come into critical focus: (1) the nature of the original atmosphere: reducing or oxidizing, (2) the nature of the energy source for the production of complex organic molecules, and (3) the nature of the medium (the hydrosphere usually) envisaged in which the more complex reactions are initiated and sustained. Briefly the status of each

is reviewed: The reducing atmosphere defended by Urey and others has been under sustained attack primarily by Rubey. Recent reports indicate that a variety of high energy sources are capable of disentangling any molecular assemblage containing hydrogen, carbon, oxygen, and nitrogen and generating hydrogen cyanide and aldehydes. These will react subsequently independent of environment of original energy source to form amino acids and other complex molecules provided an aqueous medium is available. In many arguments this aqueous medium is tacitly assumed to be a large continuous ocean not dissimilar to the present day seas. Many geologists and geochemists prefer the hypothesis of an accumulating hydrosphere which inherently means a small, probably discontinuous primordial surface water mass. This view would eliminate some of the probability arguments inherent in a "thin organic soup" hypothesis.

Mechanistically speaking, life probably started in ephemeral puddles where chance conditions (such as those in the bottom of certain present day African lakes) would permit the experimentation necessary to initiate a self-reproducing organic complex in a thermodynamically hostile environment. In such a case it becomes useless to dwell on possible world wide conditions such as an oxidizing or reducing atmosphere or to calculate statistics for polypeptide formation in thin oceanic soups.

The Means and End of Psychotherapy

Donald Tweedie, Ph. D.
Chairman, Psychology Dept.
Gordon College, Beverly Farms, Mass.

The process of psychotherapy in psychopathology is a pertinent point of discussion in a learned society today because of the widespread effect of and interest in chemotherapy, or chemohypnosis which has been stimulated by the use of 'tranquilizers', the so-called 'wonder drugs' of mental health. This process is further enhanced in the interest of a Christian learned society in view of the very intense attempts presently to find the point and extent of complementation of psychiatry and religion. I shall attempt to unite these seemingly divergent topics (i.e., chemotherapy and the relationship of psychiatry and religion) by developing the following three theses:

The use of tranquilizing drugs is not to be construed as psychotherapy nor confused with it. These drugs are very helpful as a support to psychotherapy but are decidedly less than 'miraculous' even as supportive. Instead of causing extinction of the psychotherapeutic profession (as has been propheesied by some, both lay and professional) tranquilizing drugs greatly increase the demand for trained personnel.

The analysis of personality dynamics is a means of psychotherapy but not sufficient in itself to obtain its end and it is certainly not itself the end.

I shall further suggest that the proper end of

psychotherapy is the radical reorganization of the psyche through the Christian experience of regeneration. I will also suggest some of the factors prerequisite to such a synthesis of personality dynamics.

Concurrent Discussion Sessions

- A. The Teaching of Science
 - 1. In secular and in Christian schools
 - 2. Training of scientists to meet the needs of the nation today
 - 3. The scientific method
 - 4. Methods of presenting facts and theories
- B. The Validity of Data
 - 1. Basic assumptions
 - 2. Instrumentation and techniques
 - 3. Subjectivity and the role of the philosophy of the observer
- C. Christian Morals and Ethics in Business
 - 1. Fair profit
 - 2. Honesty in business relations and advertising
 - 3. "Non-profit institutions" and government contracts
 - 4. Fair employment practices
- D. The Future of the American Scientific Affiliation
 - 1. Objectives and responsibilities toward fellow Christians and toward fellow scientists
 - 2. The role of popular and technical writing
 - 3. Directories for professional contacts and speaking engagements

The discussion group leaders will apportion the time between subtopics and will encourage everyone to participate. The membership is encouraged to be prepared with concise views prior to the convention. This will provide a most profitable time for everyone. The group leaders will summarize and edit the opinions and suggestions of his group for the benefit of the Affiliation.

Other program participants not identified elsewhere

James O. Buswell, III, M.A.
Instr. Anthropology
Wheaton College
Wheaton, Ill.

Donald R. Carr, Ph.D.
Vice Pres. & Director
Isotopes, Inc.
Westwood, N. J.

Hildreth M. Cross, Ph.D.
Prof. Psychology
Taylor University
Upland, Ind.

George P. Dillard, M.D.
Resident Neuro-psychiatrist
V.A. Hospital
Augusta, Ga.

Miss Vivian Dow, Ph.D. Cand.
Boston University
Boston, Mass.

Herbert W. Feely, Ph.D.
Research Geochemist
Isotopes, Inc.
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Wayne F. Friar, M.A.
Instr. Biology
The King's College
Briarcliff Manor, N. Y.

Marlin B. Kreider, Ph.D.
Physiologist, Q.M. Res.
& Development Center
Auburndale, Mass.

Louis V. Sorrentino, M.D.
Resident Psychiatrist
Boston State Hospital
Boston, Mass.

MEMBERS OF EXECUTIVE COUNCIL

H. Harold Hartzler, Ph.D. (1960*), President
Professor of Mathematics
Goshen College

Wilbur L. Bullock, Ph.D. (1961) Vice President
Assoc. Prof. Zoology
University of New Hampshire
Durham, New Hampshire

Hendrik J. Oorthuys, M.S. (1958) Secretary-Treasurer
Assistant Professor of Electrical Engineering
Purdue University
Lafayette, Indiana

Delbert N. Eggenberger, M.S. (1957)
Research Chemist
Armour and Company
Chicago, Illinois

John R. Howitt, M.D. (1959)
Superintendent, Hospital
Port Arthur, Ontario

*Year of retirement from Council

PAST COUNCIL MEMBERS

Brian P. Sutherland, Ph.D. (1956)
Administrative Assistant, Consolidated Mining
and Smelting Co.
Trail, British Columbia

Russell L. Mixer, Ph.D. (1954)
Chairman, Division of Science and Professor
of Zoology
Wheaton College
Wheaton, Illinois

J. Laurence Kulp, Ph.D. (1953)
Associate Professor of Geology
Columbia University
New York, N. Y.

Roger J. Voskuyl, Ph.D. (1952)
President, Westmont College
Santa Barbara, California

F. Alton Everest, E.E. (1951)
Associate Director
Moody Institute of Science
Los Angeles, California

Allan A. MacRae, Ph.D. (1950)
President and Professor of Old Testament
Faith Theological Seminary
Wilmington, Delaware

Edwin Y. Monsma, Ph.D. (1948)
Professor of Organic Science
Calvin College
Grand Rapids, Michigan

Marion D. Barnes, Ph.D. (1947)
Research Chemist
Lion Oil Company
El Dorado, Arkansas

Peter W. Stoner, M.S. (1945)
Chairman Dept. of Mathematics, Engineering
Astronomy
Pasadena City College
Pasadena, California

Russell D. Sturgis, Ph.D. (1944)
Head, Department of Chemistry
Ursinus College
Collegeville, Pennsylvania

Irving A. Cowperthwaite, Ph.D. (1943)
Plant Engineer
Thompson Wire Company
Milton, Massachusetts

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

**The Objects of the American Scientific Affiliation
are:**

- "(1) To integrate and organize the efforts of many individuals desiring to correlate the facts of science and the Holy Scriptures.
- (2) To promote and encourage the study of the relationship between the facts of science and the Holy Scriptures.
- (3) To promote the dissemination of the result of such studies."

—Article I of ASA Constitution

Each candidate for membership in the ASA must sign the following statement:

"I believe the whole Bible as originally given to be the inspired word of God, the only unerring guide of faith and conduct. Since God is the Author of this Book, as well as the Creator and Sustainer of the physical world about us, I believe there can be no discrepancies when both are properly interpreted. Accordingly, trusting in the Lord Jesus Christ, the Son of God, my Saviour, for strength, I pledge myself as a member of this organization to the furtherance of its task.

Signed"
—Article II of ASA Constitution

Notes

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CONVENTION COMMITTEE

General Chairman:

Irving A. Cowperthwaite, Ph. D.
Chief Engineer
Thompson Wire Co.
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