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Climate Cycles and the Development of Civilization

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Abstract For Second Edition

Since preparing this paper I reviewed how is this paper, which covers many fields of science, ever going to be reviewed and revised by people in the various fields of science in time to be of help in solving the environmental problems of our planet. To facilitate the review and modification of this paper, I am reviving a proposal that I discussed at the December 1945 New York City Meeting of the A.A.A.S. Section on the History and Philosophy of Science. For each partition of this paper I am indicating at which stage out of 20 possible the material is at, i.e., one out of A to T; and I am indicating which phase of the problem is being addressed such as: philosophy, mythology, science, decision-making, engineering, production, or emergency-action.

Abstract

I start with an examination of goals for human civilization and a discussion of general systems theory and the MIT Radiation Laboratory Zeitgeist. Then I move to addressing the problems of climate change by looking at the mean annual temperature anomalies of Iceland are plotted for the last 1100 years as an indicator of European temperatures. High temperatures are correlated with creative events like the building of cathedrals, the renaissance, and the industrial revolution. Low temperatures are correlated with degenerative events such as the Dark Ages and the Inquisition during the Little Ice Age. On this scale the temperature is getting colder in 1982, but plotting mean temperatures for 1880 to 1987 indicates that the temperature is going up now in an erratic oscillating mode that does not confirm either of the major hypotheses. To estimate the future trend of the temperature on Earth, we must compare two approaches: (1) extrapolation of the historical cycles of glaciation, and (2) simulation of the atmosphere including both natural sources and human sources of carbon dioxide. Then using Peter Checkland's definitions of Client, Decision-Taker, and Owner of a systems problem, we try to find who is the owner of the climate change problem. The glaciation cycles of the Earth are classified into a hierarchy of Ice Eras, Ice Epochs, and Ice-Age Cycles. Then the stages in development of the human brain are correlated with the Ice-Age Cycles, and in particular the major changes in human society in the last two cycles (200,000 years). This leads to a new hypothesis on what happened to the Neanderthal Man in relation to the last glacial cycle.

These studies lead to the conclusion that over many cycles the indigenous people of each cycle should be considered the owners of the climate change problem. In the current cycle the women of the world should be the owners of the problem, because their rights were seriously curtailed by the Neanderthal use of force to establish the patriarchy to control social information which would last for 6000 years. Both the women of the world and the indigenous peoples need to develop a geophysical consciousness to understand what choices we have in changing the Earth's climate cycles, such as remineralizing the soil and reforestation to replace the role of glaciation in this Ice Epoch.

Keywords; Brain, Carbon-Dioxide, Climate, Glaciation, Indigenous, Neanderthal, Owner, Patriarchy, Phase, Reforestation, Remineralization, Stage, Systems, Women.

* Note: In different data bases Fred B. Wood, Sr., is identified as Fred Bernard Wood or Fred B. Wood, III.

Identification of Stage of Development and Phase of
Development of Incomplete Manuscripts

The reason for the existence of this series of "working paper drafts" is that preliminary interdisciplinary studies of the interaction between engineering science and society have to be done by conference or by correspondence between individuals who are interested in the subject, but may be geographically distant from each other. After some correspondence and exchange of notes, the material may be referred to someone in the social sciences who may be better prepared to continue the investigation of the problem or it may be revised for submission to one of the engineering or scientific journals.

Where articles may be at different stages of development, we have to pay more attention to the process of solving problems, including the statement of the problem, forming and testing hypotheses in the process of scientific research. It is important that such work be properly identified so that preliminary hypotheses are not confused with logical conclusions. An investigation of the social consequences of some invention or a new scientific concept might go through the following stages:

A: Background reference material.	K: Checking science data w. art.
B: Brief reading of references.	L: Testing of hypotheses.
C: Study and discussion.	M: Preliminary report writing.
D: Summarizing of earlier work.	N: Circulation for criticism.
E: Definition of current problem.	O: Revision or presentation.
F: References for specific prob.	P: Publication.
G: Study of specific problem.	Q: Group discussions.
H: Preliminary hypotheses.	R: Review in practice.
I: Checking hypotheses with data.	S: Popular version for public.
J: New data and experiments.	T: Technical vers. for soc. sci.

It is proposed that documents contain a horizontal listing of these stages with those already covered underlined. It is also recommended that the phase of the study be indicated, i.e., whether a particular section or report is primarily: PHILOSOPHY, MYTHOLOGY, SCIENCE, DECISION-MAKING, ENGINEERING, PRODUCTION, or EMERGENCY-ACTION.

STAGE OF DEVELOPMENT OF THIS PART OF REPORT:

A B C D E F G H I J K L M N O P Q R S T
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PHASE OF PROBLEM DEALT WITH IN THIS PART OF REPORT:

PHILOS- OPHY	MYTH- OLOGY	SCIENTIFIC RESEARCH	DECISION MAKING	ENGINEER- ING	PRODUC- TION	EMERGENCY ACTION
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- +APPENDIX D - A LIBRARY FRAMEWORK TO ASSIST IN GENERATING A HANDBOOK FOR
A SHAREABLE COEVOLUTION WITH THE BIOSPHERE

GOALS FOR HUMAN CIVILIZATION

A candidate list of goals for human civilization is as follows:

- (1) Support a sharing of coevolution with the biosphere (immediate success measured by our ability to deal with climate change cycles);
- (2) Support the human drive for knowledge;
- (3) Support the human drive for inventing tools;
- (4) Support the human drive for spirituality, art, & music; The mathematical representation of Teilhard de Chardin's concept of "Love" by R . Wayne Kraft still needs to be evaluated [1];
- (5) Support the human drive for a more equitable allocation of energy resources (compute exchange of resources on the basis of EMERGY [2]);
- (6) Support the human drive for equitable sharing of information resources. (Compute status by calculating COMMUNICATION ENTROPY, NEGENTROPY(*), AND SYNTROPY [3]). *Note: Use of term "Negentropy" from Brillouin discontinued by Lamb by 8/27/71, see footnote;
- (7) Support the human drive for ecological balance that insures that life can continue on planet Earth.

The "PARTNERSHIP WAY" that was surviving on the Island of Crete 5000 years ago is a prototype for a modern "PARTNERSHIP WAY", if more explicit coverage of goals (1), (2), & (3) is included.

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Special Note: There are two sets of footnotes in this paper: (1) The first set appears as "footers" for the first few pages, and (2) The second set appears as "endnotes" at the end of the paper.

1] R. Wayne Kraft, "What Is Energy?" General Systems, Vol. XXIV, 1979, pp. 209-238

2] Howard T. Odum and Jan E. Arding, "Emergy Analysis of Shrimp Mariculture in Ecuador." University of Florida, Gainesville, FL 322611, March 1991.

3] George G. Lamb, "Basic Concepts in Subjective Information Theory, Thermodynamics, and Cybernetics of Open Adaptive Societal Systems," with handwritten revisions by author on 8/27/71 on copy from Progress of Cybernetics. J. Rose, Ed., Vol. 3; VII-10, p. 1231-1248, 1970. (Presented at International Congress of Cybernetics, London, 9/1969)

GENERAL SYSTEMS THEORY AND THE MIT RADIATION LABORATORY ZEITGEIST

My objective here is to use a general systems viewpoint of nature in an engineering mode of operation to recapture the spirit or zeitgeist of the MIT Radiation Laboratory of 1940 to 1945. I am using the philosophy of testing scientific hypotheses that I learned in Professor W. K. H. Panofsky's graduate course in the classical theory of electricity and magnetism in 1947 at U.C. Berkeley. My quest is also inspired by some lectures of Professor Gerald Horton of Harvard on thematic hypotheses in the philosophy of science at a AAAS Meeting in 1963. Where I am crossing the boundaries of many fields of science, I am exposed to the danger of making a number of errors. That is the danger a pioneer must take when putting things in gear for a fresh attack on the problems of our human civilization.

In Fig. 1 a hierarchy of levels of phenomena in nature in respect to planet Earth is displayed. The central core of the diagram comes from J. G. Miller's book on living systems.[1] Some of the major problems of our civilization are listed on the left of the diagram with arrows pointing to the appropriate levels of phenomena.

Nutrition forms a major coordinating link between phenomena of different levels. In approximately 10,000 years the depletion of trace minerals from the agricultural soils leads to vegetable products that are deficient in some of the trace minerals, leaving humans more susceptible to new diseases such as Alzheimer's and AIDS. The collapse of the forests from poor nutrition can lead to increasing carbon dioxide that acts as a signal for the Earth to go into glaciation. The normal function of the glaciation is for the glaciers to grind up rocks to a fine powder that forms the basis for remineralizing the Earth so that life can continue on Earth for another 10,000 years. The question we need to attack in regard to climate change is what impact does the cutting of major forests and burning of fossil fuels have in disrupting the normal climate change cycle? This will be discussed later on in this paper in connection with Fig. 4 on the hierarchy of geophysical cycles in the functioning of planet Earth.

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LAST 1100 YEARS EUROPEAN TEMPERATURE ANOMOLY

The mean annual temperature anomalies of Iceland are plotted for the last 1100 years as an indicator of European temperatures in Fig. 2. [2] The data of Fig. 2 came from a report commissioned by the C.I.A. in 1974 and is also available in a book by the Impact Team.[3] During periods of warmer climate great creative projects were developed in Europe such as the period of building of great cathedrals from 1000 A.D. through 1200 A.D. During the next warm period from 1285 A.D. to 1550 A.D. Europe experienced a renaissance in the arts and music. During the period 1860 A.D. to the present Europe and in turn the United States of America experienced the Industrial Revolution.

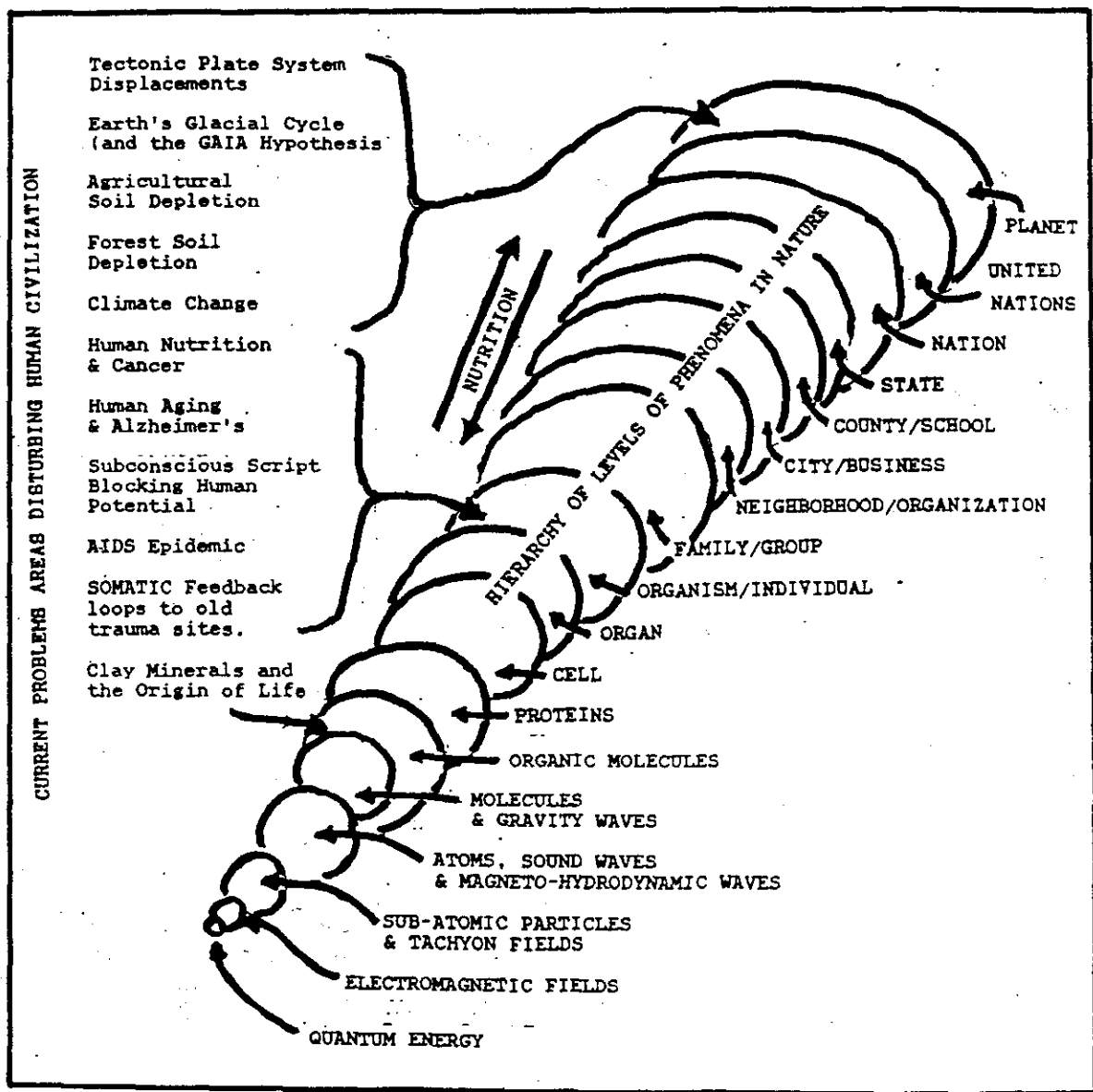


Fig. 1. Hierarchy of Levels of Phenomena in Nature.

CLIMATE CYCLES & CIVILIZATION

During the colder periods in between Europe experienced the Dark Ages from 1180 A.D. to 1380 A.D., and a series of inquisitions during the Little Ice Age from 1540 A.D. to 1912 A.D. The function of including this figure is to show the general nature of the sociological impact of climate change on the 1000 year range or little ice age range. Later on in connection with Fig. 5 the biological and social impact of the 100,000 year range of climate change will be discussed.

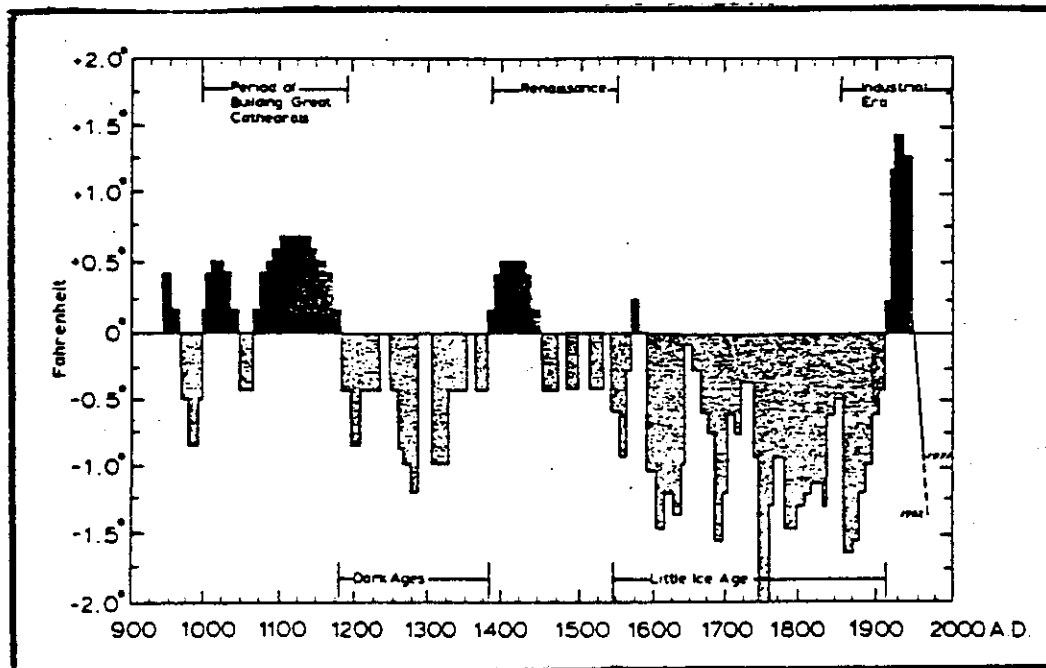


Fig. 2: Temperature Anomalies for Iceland for 1100 Years.

LAST HUNDRED AND TWENTY YEARS OF TEMPERATURE CHANGE

The mean temperature for the Northern Segment of the Northern Hemisphere (22.6 deg N to 90 deg N) is plotted in Fig. 3 from Hansen (1981) (updated to 1987).[4] Hamaker's prediction of warming gradually levelling off to cooling is shown by dashed lines.[5] In this figure the solid curved line is the five-year running mean temperature. The dots are annual mean values. Around 1962 the annual mean temperature values stayed close to the five year running mean. Since 1963 the annual values have jumped erratically around the five-year running mean. The solid straight lines are trend lines to show the time periods when the temperature was rising and the time period when the temperature was going down. The dashed line is Hamaker's projection of the future made in 1984.

PREDICTION OF COOLING OR WARMING ?

On this scale the temperature is getting colder in 1982, but plotting mean temperatures for 1880 to 1987 indicates that the temperature is going up now in an erratic oscillating mode that does not confirm either of the major hypotheses. The prevailing prediction appearing in the public newsmedia is that we have a simple greenhouse

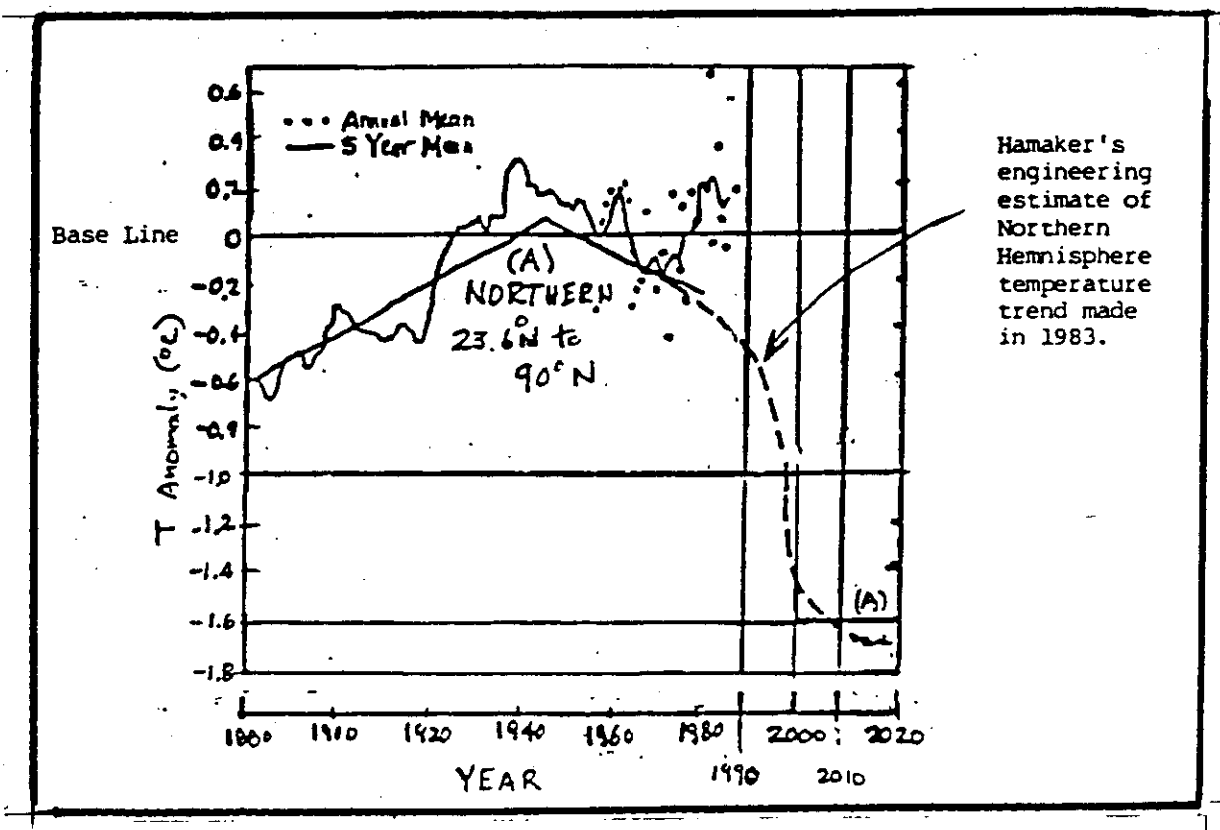


Fig. 3. Last Hundred and Twenty Years of Temperature Change Northern Latitudes (23.6 N to 90 N)

In 1982 Hamaker and Weaver published a book predicting that the CO₂ warming would lead to more water being evaporated into the atmosphere which would lead in time to a snow and ice build-up leading to glaciation. [6] Recently an article by Gifford and de Vernal described the possibility of this current greenhouse warming leading to glaciation. [7]

To estimate the future trend of the temperature on Earth, we must compare two approaches: (1) extrapolation of the historical cycles of

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glaciation, and (2) simulation of the atmosphere including both natural sources and human sources of carbon dioxide.

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WHO IS THE OWNER OF THE CLIMATE CHANGE PROBLEM ?

Then using Peter Checkland's definitions of Client, Decision-Taker, and Owner of a systems problem, we try to find who is the owner of the climate change problem. [8] To attempt an answer, I review the last 2.4 million years of glacial cycles for regularity of geophysical processes and fragments of sociological consequences.

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WHO IS THE OWNER OF THE CLIMATE CHANGE PROBLEM ?

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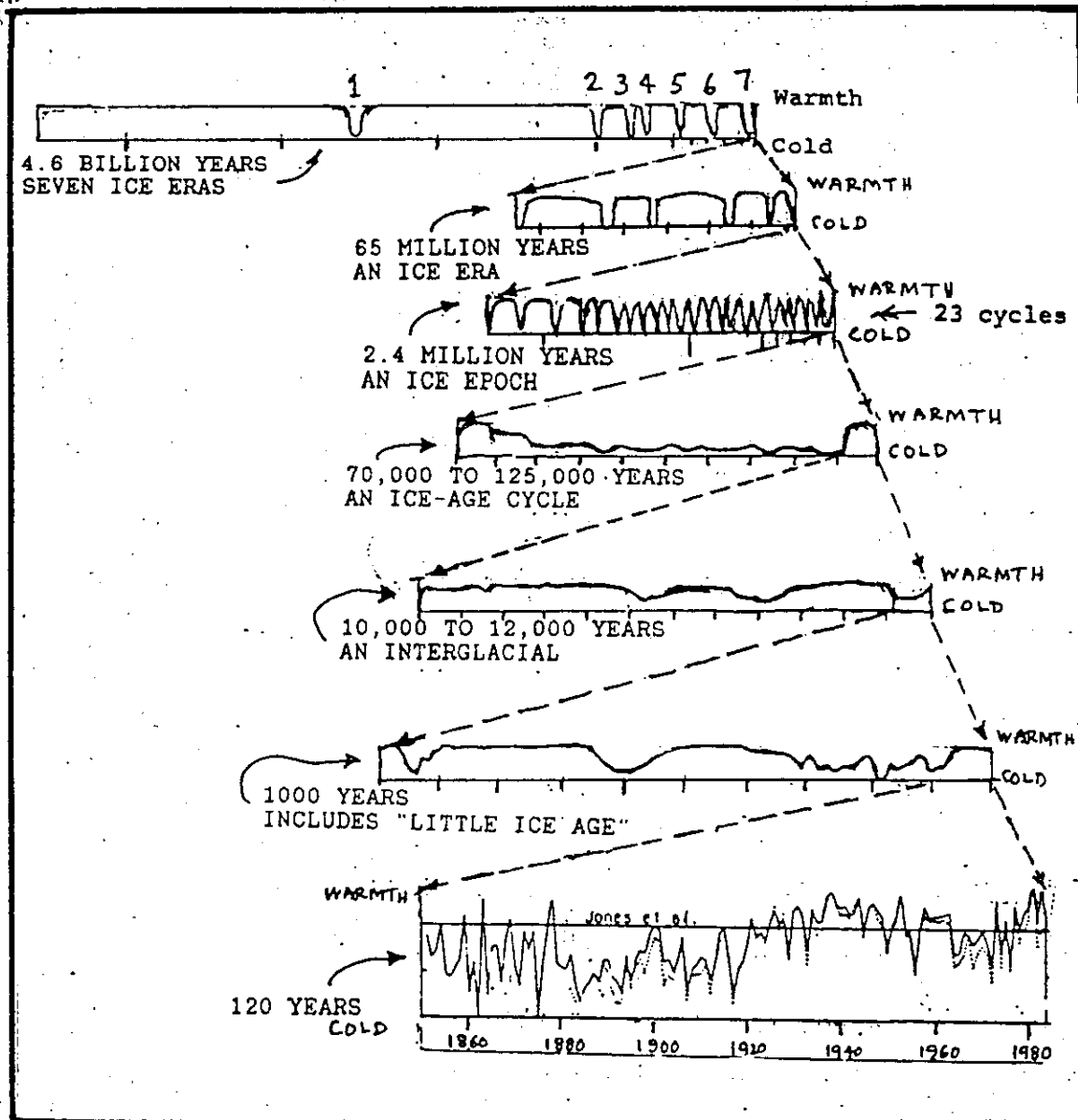


Fig. 4. A series of time charts, each one embracing a fraction of the one before, depicts the swings between cold and warmth that have characterized the climate of the earth for billions of years.

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CLIMATE CYCLES & CIVILIZATION

-65,000,000 years b.p.		Source of high level of radiation on surface of earth causes major genetic mutations. (probably natural nuclear reactor going critical or impact of asteroid) Same period as extinction of dinosaurs. Our ape-like ancestors lost the ability to synthesize vitamin C. Possibly changed genetic code for clock time for puberty from 6.5 years to 13 years. Genetics code change for increased frequency of sexual intercourse survived. This compensated for loss of vitamin C synthesis capability.
-5,000,000 years b.p.		Separation of homo erectus from ape evolution.
-2,400,000 years b.p.	(0)	Start of current Ice Age Epoch with average of 100,000 years per cycle. Ape cousin's brain size is still 500 cc. Human brain size increased 20 cc every 100,000 years, until it became 1,500 cc. (Bortz, also Calvin)
-2,300,000 years b.p.	(1)	<p>The glacial cycle of 100,000 years provided the engine and the patriarchal social system organized the implementing tools for a rapid expansion of human brain size and increasing intelligence.</p> <p>In the 21st cycle Nature provided a break in the cyclic system through a mutation in the DNA enabling the CroMagnon Daughters of African Eve to spread over the Planet and to support a partnership way of life backed by a feminist ideology with goddesses.</p>
-2,200,000 years b.p.	(2)	
-2,100,000 years b.p.	(3)	
-2,000,000 years b.p.	(4)	
-1,900,000 years b.p.	(5)	
-1,800,000 years b.p.	(6)	
-1,700,000 years b.p.	(7)	
-1,600,000 years b.p.	(8)	
-1,500,000 years b.p.	(9)	
-1,400,000 years b.p.	(10)	
-1,300,000 years b.p.	(11)	
-1,200,000 years b.p.	(12)	
-1,100,000 years b.p.	(13)	
-1,000,000 years b.p.	(14)	
-900,000 years b.p.	(15)	
-800,000 years b.p.	(16)	
-700,000 years b.p.	(17)	
-600,000 years b.p.	(18)	
-400,000 years b.p.	(19)	
-300,000 years b.p.	(20)	
-200,000 years b.p.	(21)	
-100,000 years b.p.	(22)	
		CroMagnon people (21st echelon) Neanderthal (22nd echelon) people appear at same time as the completion of conquest of planet by CroMagnon daughters of African Eve with dominant Mitochondria DNA by peaceful sex with other sub-species including Neanderthal except residual groups near edges of glaciers.
-10,000 years b.p.	(22A)	End of 22-nd Ice Age Cycle
-6,000 years b.p.	(22B)	Domestication of horses by Neanderthal men.
-5,900 years b.p.	(21.5)	Domestication of CroMagnon women by Neanderthal Men to establish Patriarchy on Planet. Much of Neanderthal gene pool lost by dominance of CroMagnon Mitochondria DNA.
+0 years b.p.	(23)	End of Interglacial Warm Period.

Fig. 5. A Chronology of the Development of the Human Brain run in parallel with the Ice-Cycles of the Present Ice Epoch (-2.4 million years to Present)

DEVELOPMENT OF HUMAN BRAIN WITH GLACIAL CYCLES

Then the stages in development of the human brain are correlated with the Ice-Age Cycles, and in particular the major changes in human society in the last two cycles (200,000 years) and are tabulated in Fig. 5. The concept of this mode of rapid expansion of the human brain size is attributed to the microbiologist, William H. Calvin.[9] This has been explained in a paper by Fred B. Wood, Sr., at the 1991 ISSS Annual Meeting.[10] The start of this Ice Epoch and the verification of earliest man has recently been verified.[11]

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A HYPOTHESIS ON WHAT HAPPENED TO THE NEANDERTHAL MAN

This leads to a new hypothesis on what happened to the Neanderthal Man in relation to the last glacial cycle. In most of the 100,000 year glacial cycles the sub-species having the larger brains seized the best

CLIMATE CYCLES & CIVILIZATION

remaining land areas with food resources, leaving the indigeneous peoples to starve or be killed off, if they got in the way of the "Winter People." Then at the end of the glaciation, the "Winter People" expanded to claim the land uncovered by the melting glaciers, the people with the larger brains grew to be a majority of the human population.

The apperance of African Eve with her dominant mitochondria DNA changed this process on the 22-st cycle. The 22-st echelon of Winter People's genes got lost in the gene pool of the Cro-Magnon descendents of African Eve, even when the Neanderthal Men won battles with Cro-Magnon men over territory.

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DOMESTICATION OF HORSES BY NEANDERTHALS

Six thousand years before present (bp) the Neanderthals retreated to the edges of the melting glaciers. There they successfully domesticated horses.[12] I propose the hypothesis that Neanderthal men locally identified as Kurgans in what is now the Ukraine made a very interesting logical step of comparing force, power, and information processes. It appears that they recognized that they had lost the battle of force against the Cro-Magnon people.

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DOMESTICATION OF WOMEN BY NEANDERTHALS

After the appreciation of their new energy source (horses) the Neanderthal Men conceived an ingenious trick of combining ideology (substituting male gods) with a military strategy of killing off women over 13 years of age (who believed in the female goddesses) to reconquer the planet for the patriarchal system. They probably looked at this project as the domestication of women as a logical step following the domestication of horses. The domestication of women was delayed in remote areas and islands like Crete.

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INDIGENOUS PEOPLES PART OWNERS OF CLIMATE CHANGE PROBLEM ON BASIS OF 2.4 MILLION YEAR RANGE

These studies lead to the conclusion that over many cycles the indigenous people of each cycle should be considered the owners of the climate change problem. Julian Burger has identified the indigenous peoples and their problems in the book, The Gaia Atlas of First Peoples.[13]

DESCENDANTS OF AFRICAN EVE PART OWNERS OF CLIMATE CHANGE PROBLEM ON BASIS OF 2 X 100,000 YEAR RANGE

After the mutation of the mitochondria DNA of African Eve to become dominant about 200,000 years ago each generation of humans became a larger fraction descended from African Eve until now almost all humans are descended from African Eve of 200,000 years ago. This situation

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tended to terminate the cycle of larger brains with each glacial cycle.

WOMEN PART OWNERS OF CLIMATE CHANGE PROBLEM ON BASIS OF 6000 YEAR RANGE

In the current cycle the women of the world should be at least the partial owners of the problem, because their rights were seriously curtailed by the Neanderthal use of force to establish the patriarchy to control social information which would last for 6000 years. The establishment of the patriarchy 6000 years before present (bp) has been documented by Riane Eisler in the book, The Chalice & The Blade. [14] David Loye and Riane Eisler have published a book to help groups of people develop programs to work for a partnership way to supersede the patriarchal system. [15] The current problems of the patriarchal society have also been described by Anne Wilson Schaef When Society Becomes An Addict. [16]

GAY AND LESBIAN PEOPLE PART OWNERS OF CLIMATE CHANGE PROBLEM ON THE BASIS OF 5800 YEAR RANGE

Gay and lesbian people have been discriminated against since the beginning of the documentation of the patriarchal principles with the start of the Hebrew Religion approximately 5800 years ago. In the Jewish Calendar, Sept. 15, 1958 AD becomes the start of Jewish Year 5719 A.M, so that Sept. 15, 1991 AD becomes 5752 A.M.

BLACK AFRICANS PART OWNERS OF CLIMATE CHANGE PROBLEM ON BASIS OF 373 YEAR RANGE

In 1619 the first boat load of African Black Slaves were delivered to British American Colonies and West Indies. Between 1680 and 1786 2,130,020 Black African Slaves were still alive after their capture in Africa, detention awaiting loading onto boats, shipment across the Atlantic, holding in American ports, and the first years breaking in to working as slaves.

LABOR CLASS PART OWNERS OF CLIMATE PROBLEM ON BASIS OF 172 YEAR RANGE

In 1820 the first labor unions comparable to the present form of labor unions in the U.S.A. were formed to deal with workers rights in the

CLIMATE CYCLES & CIVILIZATION

newly developing capitalist industrial organizations in the U.S.A.

REMNANTS OF THE COMMUNIST PARTY PART OWNERS OF CLIMATE CHANGE PROBLEM ON BASIS OF 75 YEAR RANGE

In 1917 with the Bolshevik Revolution in Russia starting the development of the Soviet Union, Communist Parties became historically significant on world economic battlefield. The failure of the Communist Parties to remain stable in 1991 in the Soviet Union and earlier in Eastern Europe brought an end to a 75 year era in history. The remnants of the Communist Parties of the World represent a valuable resource pool of political experts who can work diligently on the solution of world problems, once they regroup and redefine their goals. If they don't include a geophysical consciousness with their social consciousness, the coming climate changes could generate more dictatorial government agencies around the world that wipe out any new gains by the new communists.

DISABLED AND ENVIRONMENTALLY CHEMICAL SENSITIVE PEOPLE PART OWNERS OF CLIMATE CHANGE PROBLEM ON BASIS OF 20 YEAR RANGE

Starting in about 1972 a movement gained momentum to provide ramps at public buildings so people in wheel chairs could enter the buildings. Also momentum gained in the drive to have no-smoking areas in public buildings, restaurants, etc. Some public buildings now have notices prohibiting perfumes and other sources of chemical to which some people are allergic.

AIDS AND ALZHEIMER'S PATIENTS PART OWNERS OF CLIMATE CHANGE PROBLEM ON THE BASIS OF 12 YEAR RANGE

There are now 4,000,000 Alzheimer's patients in the U.S. There are anecdotal reports of about 20 Alzheimer's patients being cured in the last 10 years. Only one case is supported by verifiable data and CAT scans of the brain. [19] In 1991 100 Alzheimer's patients condition improved remarkably in some drug testing.

Form No. A-0003-D

STAGE OF DEVELOPMENT OF THIS PART OF REPORT:

A B C D E F G H I J K L M N O P Q R S T
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[19]

[19]
[20]

There now is a book on reducing the risk of Alzheimer's [19]

CLIMATE CYCLES & CIVILIZATION

PHASE OF PROBLEM DEALT WITH IN THIS PART OF REPORT:

PHILOS- OPHY	MYTH- OLOGY	SCIENTIFIC RESEARCH	DECISION MAKING	ENGINEER- ING	PRODUC- TION	EMERGENCY ACTION =====
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OWNERS OF CLIMATE CHANGE PROBLEM NEED GEOPHYSICAL,
SOCIAL, AND INDIVIDUAL CONSCIOUSNESS TO PERCEIVE
AND FIGHT FOR THEIR RIGHTS

Both the women of the world and the indigenous peoples need to develop a geophysical consciousness to understand what choices we have in changing the Earth's climate cycles, such as remineralizing[17] the soil and reforestation to replace the role of glaciation in this Ice Epoch.

CARBON DIOXIDE BUDGET AS A TRANSFORMING TOOL FOR SHOWING
THE OWNERS OF THE TOOLS OF PRODUCTION HOW TO CONVERT TO
ENVIRONMENTALLY ENHANCING PRODUCTS AND SERVICES

A carbon dioxide budget based on the Leontief Input-Output table of the economy can help us manage the reduction of carbon dioxide producing activities and the increase of activities that absorb carbon dioxide. This will lead to indicative planning in which the carbon dioxide budget shows the owners of the tools of production, i.e., the electric power companies, the petroleum companies, reforestation agencies, rock dust marketing companies, thermal electric solar power companies, etc. For example the Center for the Economic Conversion of Mountain View, California, could assist Chevron Oil USA to produce and market soil trace minerals for soil remineralization; General Electric Co. to manufacture rock grinders for the production of trace mineral rock dust for remineralization of the soil; Bechtel Corporation to build thermal solar electric power generating plants similar to the LUZ Corp. design, Chrysler Corp. to produce electric automobiles, etc.

Form No. A-0003-D

12/24/45
Reprinted 06/09/92
REV 06/23/92

STAGE OF DEVELOPMENT OF THIS PART OF REPORT:

A B C D E F G H I J K L M N O P Q R S T
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PHASE OF PROBLEM DEALT WITH IN THIS PART OF REPORT:

PHILOS- OPHY	MYTH- OLOGY	SCIENTIFIC RESEARCH	DECISION MAKING	ENGINEER- ING =====	PRODUC- TION	EMERGENCY ACTION
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PROGRAM MUST BE SUPPORTED BY A BALANCED
SERIES OF COMPUTER SIMULATION PROGRAMS
OF THE CLIMATE CYCLE

Computer simulation programs must be developed that meet the requirements of appropriate organizations such as the Association for Computer Simulation and the American Society for Cybernetics. Mini-Models being developed by Howard T. Odum and Elisabeth C. Odum. Super-Models described by A. Henderson-Sellers and K. McGuffie.

File No. A-1282-H (10 PAGE VERSION) 4/30/92
File No. A-1282-I (12 PAGE VERSION) 5/05/92
File No. A-1282-J (13 PAGE VERSION WITH 4 APPENDICES COMING) 5/06/92
APPENDIX A A-1282-K1
APPENDIX B A-1282-L1
APPENDIX C A-1282-M1
APPENDIX D A-1282-N1
File No. A-1282-J2 7/7/92

CLASSIFICATION OF MATERIAL BY FUNCTION:

PHILOSOPHY MYTHOLOGY SCIENCE DECISION-TAKING
ENGINEERING PRODUCTION-TOOLS EMERGENCY-ACTION

STAGE OF DEVELOPMENT OF THIS WORKING PAPER: SEPR NO. 6, July 1959, page 3:

A B C D E F G H I J K L M N O P Q R S T

- A: Searching for background reference material.
- B: Brief reading of background material.
- C: Study and discussion of background material.
- D: Summarizing of previous research worker's results.
- E: Definition of the immediate problem.
- F: Tabulation of references for specific problem.
- G: Brief study of the specific problem.
- *H: Formulation of preliminary hypotheses.
- *I: Checking of preliminary hypotheses for agreement with known data.
- J: Collection of new data or setting up experiments.
- K: Checking of hypotheses with cultural values in art, music, poetry, ethics, religious experience, etc.
- L: Critical testing and revision of hypotheses.
- M: Preliminary report writing.
- N: Circulation of preliminary reports to others for criticism.
- O: Revision of reports.
- P: Publication of articles.
- Q: Experimental use of ideas with small groups of specialists and/or laypeople.
- R: Review of the value of hypotheses as tried in practice.
- S: Preparation of popularized versions for public use.
- T: Preparation of more technical versions for

CLIMATE CYCLES & CIVILIZATION

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424 pages

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5/6/92
Rev. 07/10/92

APPENDIX TO A-1282-J2

A-1282-K1

APPENDIX A - PLAN TO PLOT WORLD PROBLEMS ON
AN INTENSITY VS. TIME TO GO CRITICAL SPREADSHEET

Fred B. Wood, Sr.

It is planned to update the spreadsheet in Report No. A-791-BC, "Values in Decision Making on World Problems," 2/26/86 for SGSR Annual Meeting, May 26-30, 1986, Philadelphia.

It will also include additions in Table I in Report No. A-832/918-FBW, "A Logical Division of the Development of Coevolution with the Biosphere into Philosophical, Scientific, Engineering, Educational, Decision and Action Components." Also numbered as A-832-A.

An alternative form of this matrix is shown in Report No. A-934, "Do The Fourth World Groups Have To Know Whether The World Is Flat or Round? , page 0-12, 9/26/87.

This type of analysis uses John Platt's table of world problems as a base (Science, 1969) in which the vertical axis is the "grade" of the problem and the horizontal axis is the predicted time range for the problem to go critical. The grade is defined as the number of people affected by the problem times the intensity of the problem.

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APPENDIX TO A-1282-J2

A-1282-L1

APPENDIX B - PLAN FOR MATRIX OF GEOPHYSICAL HYPOTHESES PLOTTED
AGAINST ROWS OF EVIDENCE AND EXPERIMENTS

Fred B. Wood, Sr.

It is planned to update the matrix from Report No. A-832-I, 6/1-5/1987, "Philosophy of Testing Hypotheses and Matrix of Climate Theories Vs. Evidence." ISGSR, Budapest, Hungary.

PHILOSOPHY

Physicists often have to decide upon what competing scientific theory to use in their work, before they have a proof of which theory is correct. For many years physicists have accepted Einstein's special theory of relativity on the basis of a matrix of rows of hypotheses and columns of experiments which showed that the special theory of relativity was only theory that didn't have any disagreements with the experiments.

Here I shall attempt to apply the same techniques to the conflicting theories of climate change. In the separate report A-832-I, forty-five experiments and data sets have been identified plus one significant philosophical principle, namely the GAIA HYPOTHESIS. Twelve competing theories of climate change have been identified in the report A-832-I.

*

APPENDIX C - PROPOSED MATRIX OF COLUMNS OF SOCIO-ANTHROPOLOGICAL
HYPOTHESES PLOTTED AGAINST ROWS OF EVIDENCE AND TESTS

Fred B. Wood, Sr.

Blanks to be filled
in as research pro-
gresses.

HYPOTHESES

EXPERIMENTS
TESTS &
EVIDENCE

DEVELOPMENT OF HUMAN BRAIN WITH GLACIAL CYCLES
A HYPOTHESIS ON WHAT HAPPENED TO THE NEANDERTHAL MAN
DOMESTICATION OF HORSES BY NEANDERTHALS
DOMESTICATION OF WOMEN BY NEANDERTHALS
INDIGENOUS PEOPLES PART OWNERS OF CLIMATE CHANGE PROBLEM
MILLION YEAR RANGE
WOMEN PART OWNERS OF CLIMATE CHANGE PROBLEM ON BASIS OF
GAY AND LESBIAN PEOPLE PART OWNERS OF CLIMATE CHANGE
BASIS OF 5800 YEAR RANGE
BLACK AFRICANS PART OWNERS OF CLIMATE CHANGE PROBLEM ON
RANGE
LABOR CLASS PART OWNERS OF CLIMATE PROBLEM ON BASIS OF
REMNANTS OF THE COMMUNIST PARTY PART OWNERS OF CLIMATE
BASIS OF 75 YEAR RANGE
DISABLED AND ENVIRONMENTALLY CHEMICAL SENSITIVE PEOPLE
CLIMATE CHANGE PROBLEM ON BASIS OF 20 YEAR RANGE
AIDS AND ALZHEIMER'S PATIENTS PART OWNERS OF CLIMATE C
THE BASIS OF 12 YEAR RANGE

Hindu Chronology
Hopi Indian Chronology
Worldwide Indigenous Science
Network (Pamela Colorado)
Hebrew-Christian Chronology
Mixed Media Concepts from
Bolivia (Carlos Aliaga Uria)
Western Science Tests (ISSS)

[illegible]

Ref: Pamela Colorado, "Wayfinding and the New Sun." Noetic Sciences Review, No. 22, Summer 1992

Ref: Carlos Aliaga Uria, "Mixed Media Sophohistoric Ideography and Its Key Role in Accelerating the Understanding and Implementation of Phenomena such as Global Climate Stabilization and Massive Human Liberation." Denver, Colorado: ISSS, SIG on Global Climate Change, July 14, 1992.

Ref: Carlos Aliaga Uria, "The Andean Mithronnia and the Old Mithra," The Lehra Institution, Casilla 3126, La Paz, Bolivia, May 19, 1992.

5/8/92
Rev 7/10/92

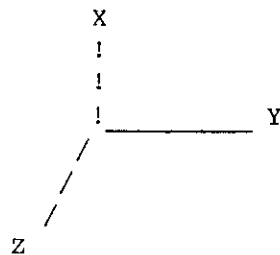
APPENDIX TO A-1282-J2

A-1282-N1

APPENDIX D - PLAN FOR A LIBRARY FRAMEWORK TO
ASSIST IN GENERATING A HANDBOOK FOR A SHAREABLE
COEVOLUTON WITH THE BIOSPHERE

Fred B. Wood, Sr.

See Handbook for a shareable strategy of coevolution with the Biosphere.
Fred Bernard Wood, Editor, Edition 2.5A, 9/14/90, 134+ pages. Section 1:
Philosophical Approach, page 1-1, Classification coordinates used in
quasi-completeness test and in organizing library structure.



X Dimension: Physics->Chemistry->Biology->Psychology->Sociology
with subdivisions in each field of science.

Y Dimension: PHASE of work PHILOSOPHY->MYTHOLOGY->SCIENCE->DECISION-
MAKING->ENGINEERING->PRODUCTION->EMERGENCY-ACTION

Z Dimension: (1) ASTROPHYSICS, COSMOLOGICAL EVOLUTION & CYCLES.
f(time) (2) PHYSICAL-CHEMICAL EVOLUTION
(3) BIOLOGICAL EVOLUTION
(4) GEOPHYSICAL EVOLUTION & CYCLES
(5) SOCIOLOGICAL EVOLUTION & CYCLES
(6) TECHNOLOGICAL EVOLUTION
(7) CONSCIOUS COEVOLUTION WITH THE BIOSPHERE