

R. BUCKMINSTER FULLER

INTUITION



Intuition

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R. Buckminster Fuller

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Contents

1 Intuition: Metaphysical Mosaic	5
2 Brain and Mind	151
3 Love	359
4 The Lord’s Prayer	365
5 The Lord’s Prayer – Second Version	375
Appendix	377
1 Resources	377
List of Figures	389
List of Tables	391
Index	393
Todo List	421

1: Breakdown wip into a file per chapter

BOOKS ABOUT R. BUCKMINSTER FULLER

The Dymaxion World of Buckminster Fuller by Robert Marx

R. Buckminster Fuller by John McHale

Wizard of the Dome by Sidney Rosen

R. Buckminster Fuller

Intuition

1972

**Doubleday & Company, Inc., Gar-
den City, New York**

To Buckminster Fuller

friend of the universe

bringer of happiness.

liberator.

With affectionate admiration

Ezra Pound

Spoleto

June 29th 1971

1 Intuition: Metaphysical Mosaic

The following thoughts regarding

The acquisition, commissioning
and naming

Of a new seventeen-ton

Ocean-cruising sloop

Occurred and were inscribed

Throughout the morning hours,

Immediately preceding the moment

At which the craft was lowered

By a giant motorized sling
Into her design destined
REALIZATION

Of waterborne existence At mid-
day July 31, 1968.

Life's original event

And the game of life's

Order of play

Are involuntarily initiated,

And inherently subject to modifica-
tion By the a priori mystery,

Within which consciousness first for-
mulates

And from which enveloping and
permeating mystery Consciousness
never completely separates, But
which it often ignores

Then forgets altogether

Or deliberately disdains.

And consciousness begins

As an awareness of otherness,

Which otherness-awareness re-
quires time.

And all statements by consciousness

Are in the comparative terms

Of prior observations of conscious-
ness

(“It’s warmer, it’s quicker, it’s bigger

Than the other or others”).

Minimal consciousness evokes time,
As a nonsimultaneous sequence of
experiences.

Consciousness dawns

With the second experience.

This is why consciousness

Identified the basic increment of
time

As being a *second*.

Not until the second experience

Did time and consciousness

Combine as human life.

Time, relativity and consciousness

Are always and only coexistent functions

Of an a priori Universe,

Which, beginning with the twoness of secondness, Is inherently plural.

Ergo:

All monological explanations of Universe

Are inherently inadequate And axiomatically fallacious.

There can be no *single key*

Nor *unit building block* of Universe.

Before humans had learned by experiment That light and other radiation

Have unique speed, Humans thought
of sight As being instantaneous.

Under this misapprehension

Classical science assumed

That every action had a *simultaneous*
reaction.

Since light *does* have a speed, And
there is no simultaneity, There are in-
herent event lags.

We learn that every event is triplex,
Consisting of an *action*

That has both a *reaction* and a *resul-*
tant.

These three inseparable functions of
an event Are nonidentical

And nonsimultaneous.

In the event called “diesel ship-at-sea”

The action of the ship’s propeller

Has a thrust pattern

To which the ship reacts by moving forward, Which also results, secondarily, In the ship’s bow elevated wave,

And its depressed transverse stem wave Which wave disturbances of the water

Are separate from the propeller’s thrust wave.

Ships appear to be so solid That they
negate human perception Of their
minute longitudinal contraction,
Which occurs initially as a conse-
quence Of the interaction of the ship's
inertia With the propeller's thrust.

This contraction

And its subsequent expansion

Could be observed in yesterday's
Loosely coupled railway trains, As
they jerkingly accelerated or stopped.

In addition to inherent duality of Uni-
verse There is also and always

An inherent *threefoldness* and *four-
foldness*

Of initial consciousness

And of all experience.

For in addition to (i) action, (2) reaction, (3) resultant, There is always (4) the a priori environment, Within which the event occurs, I.e., the *at-first-nothingness* around us Of the child graduated from the womb,

Within which seeming nothingness (fourthness) The inherently threefold Local *event* took place.

Whether our experience episodes
Are voluntary or involuntary, Pas-
sive or active, Subjective or objective,
Our brains always and only Isolate,
tune-in,

Modulate and document,

Store, retrieve and compare *in-*
formedly,

Or speculatively formulate,

In special-case increments of unique
concepts.

God gave humans a faculty Beyond
that of their and other creatures' Mag-
nificent physical brains — And that
unique faculty

Is the metaphysically operative mind.

Brains apprehend and register Store and retrieve

The sensorial information Regarding each special-case experience.

Mind alone can and does

Discover heretofore unknown Integral pattern concepts And generalized principles, Apparently holding true Throughout whole fields of experience. And once discovered by mind The concepts of the generalized principles Become additional special-case experiences, And are stored in

the brain bank And are retrievable
thereafter by the brain. But brains
and their externalized Detachedly
operating descendants — The elec-
tronic computers — Can only search
out and program The *already experi-
enced* concepts, And mind alone can
recognize and capture The unknown
and unexpectedly existent,

Ergo, unsearchable, unwatched-for—
Generalized principles.

If you do not know
The behaviors exist,
You cannot be
On watch for them.

Weightless, perceptive, prescient
mind Alone enabled humanity

Also to conceive of new, original

And objective ways to employ

The (only subjectively acquired) con-
cepts Of generalized principles, Such
for instance as *leverage*,

Which empowered men

To conceive of practical ways

To both elevate and move

Objects manifold their own weights,
Or that of their direct muscles'

Lifting, pushing and pulling abilities.

And this greatly augmented Human-
ity's competence To heed anticipato-
rily

The lessons of past negative experi-
ences, And with enlightened logic
To alter the environment

In ways permitted by nature, Which
would protect humanity Against
external and internal deprivations
While also increasing the sustenance
Of increasing numbers of humans

For increasing numbers of days Of
their potential life spans.

Or mind enables

A co-operative succession of humans

Both to discover and objectively employ
A complex family

Of generalized principles

Brought from

The weightless, timeless, Metaphysical
integrity and fidelity Of absolutely
orderly Eternal Universe;

Brought into

Time and energy synchronized
consciousness Of the physical evolution
scenario;

Brought by

Ajllurality of individually

And remotely operating— But interregenera
Inspiring and educating Exquisitely
prescient minds.

A typical family
Of generalized laws,
Thus interinspiringly discovered
By a plurality of human minds,
Would start with that first disclosed
by Avogadro
Of a constant number of molecules
In a given volume
Of any and all chemical elements
Isolatable in their gaseous state

Under identical conditions Of heat
and pressure, Which mathematically
Statable law

Compounded with Boyle's chemical
law

To informedly inspire Mendelyev
And a few other colleagues

To differentiate out and predict
The existence of a closed family
Of ninety-two

Regenerative chemical elements.

These elements, when found, They
said would display Such-and-such
Unique and orderly characteristics,

And they mathematically identified
in advance

The respective constituent quanti-
ties

Of the as yet undiscovered discrete
characteristics Of the as yet undiscov-
ered elements.

All the members of this interregen-
erative Information relay team

Did not know one another personally.

Their accumulatively inspired pre-
diction occurred At the historical mo-
ment

When, a century ago —

Only fifty-two

Of the ninety-two
Of those heretofore unexpected
chemical elements Had as yet been
discovered

And physically isolated

By humans on Earth —

Sir James Jeans said that Science is
The attempt to set in order The facts
of experience.

Mendeleyev, attempting scientifi-
cally

To find an order

In which to set

The first fifty-two chemical ele-
ments, Inadvertently uncovered

A previously unknown
System of regularities
Common to all fifty-two,
Which, if their implied generaliza-
tion
Proved in due course
To hold true,
Would require the presence in Uni-
verse Of the additional unknown forty
To fill in the membership vacancies
Occurring in the revealed periodic
behaviors Of the already discovered
chemical elements.
Since Mendeleev's prediction,
Every few years —

One by one—

All ninety-two have been identified

As being present in various abundances
In all the known stars of
the heavens, While ninety-one of
them Have been isolated by scientists
Somewhere on planet Earth,

And all of them have the exact characteristics
Predicted by Mendeleev
and his colleagues.

And all the foregoing Subjective
harvesting— Accomplished by individuals
Bound together

By naught other than intellectual integrity —
Has enabled still other

Remotely exploring

Educatively inspired individuals
First to discover

Then inventively to employ The orig-
inally unknown Uniquely recombin-
ing Synergetic behaviors — In struc-
tural groupings — Of those ninety-two
regenerative elements, Thereby at-
taining utterly surprising Structural,
mechanical,

Chemical and electromagnetic char-
acteristics, Which have enormously
increased

The relative advantage

Of ever-increasing numbers of humans
To cope with the challenges of life
By accomplishing ever more difficult tasks,
Previously considered impossible to do;

With ever less

Time, weight and energy investments,
Augmented exponentially

By ever-greater investment of unweighables
Of the metaphysical resources —

Of hours of thoughtful reconsiderations
Anticipations, conceptualizing,
Searchings and researchings, Calculations
and experiments.

But despite mind's ability
To capture, mathematically equate
And employ in conscious temporal-
ity

The eternal weightless generalized
principles,

Man cannot design

A generalized anything

He can only embody.

The eternal design's generalized
principles

In *special-case* employments

Of those *generalized principles*.

In confirmation of the foregoing

We note that

While Archimedes discovered
The generalized principle
Governing *displacement*—
Of all floating bodies —
In respect to the flotation medium
In terms of their respective volume
weight ratios

We cannot design
A generalized boat.
It must be a specific canoe
A ferryboat, or sloop—
And each of unique size and capabil-
ity and durability
For all special-case embodiments
Are entropically fated

To disintegrate in time
Whether the experience episodes
Are passive or active —
I.e., involuntary or voluntary,
Subjective or objective—
Brain always and only
Isolates, tunes in, documents,
Stores and retrieves
Special-case concepts.
Only mind can discover,
Comprehend, equate and employ
The absolutely weightless,
Ergo, purely metaphysical, General-
ized principles

Which, being weightless and unfailing, Must be eternal.

Synergy is one

Of those generalized principles.

It is defined scientifically

As behavior of whole systems

Unpredicted by behaviors

Of any of their separate parts.

Synergy is disclosed, for instance,

By the attraction for one another

Of two or more separate objects.

Such objects, however,

On closer inspection

Are themselves mass-attractively integrated Energy event aggregates,

Each of which is so closely amassed
As to be superficially deceptive
And therefore misidentified
By humanity's optically limited discernment, As *bodies* —
Separate "solid" bodies—
Despite that physics has never found
Any "solid" phenomena.
For instances of unpredictable Synergetically mass-interattracted
And mutually interco-ordinating phenomena, We witness the mathematical regularity With which objects
Accelerate toward Earth —
Or, as it is said,

“Fall” into Earth.

Or we witness the co-ordinate behaviors

Of the corotating, coorbiting

Earth and its Moon,

Or of any two or more neighboring,

Larger or smaller,

Uniquely amassed,

Separatedly and individually existing,
Harmonically frequenced,

Neighboring aggregates

Being both mass attractively

And precessionally reassociative

In the manner superficially identified by humans
As matter—

Be they metallic or nonmetallic.

Another intuitively interinspired

Experimentally informed

Scientific relay team's

Century-spanning accumulative
accomplishment By remotely exist-
ing individuals, Started with Tycho
Brahe's

Instrumentally harvested data On
the Sun's planets.

The *mass attraction* of those remotely separated, Seemingly *solid* planets — Which we now know to be Microcosmic aggregates Of energy events — Was first hypothetically explained By Kepler

To account for the geometrical regularities Of interco-ordination Of their elliptical orbits By the Sun's planets.

Kepler found the regularity For which he searched In the identical areas Of the different Pie-shaped segments of the sky— Some short and wide, Some long and thin — “Swept-out” in a given time By imaginary

radial tethers Tied to each of the planets From the same star-Sun center Around which they traveled, Each at vastly different distances And at vastly different rates.

“How and why,” asked Kepler, “Could these separate planets Act in such unitary co-ordination With one another and the Sun, Without any visible Mechanical or structural Interconnectors?”

Inspired by Brahe and Kepler, As well as by Galileo’s Rate-of-fall measurements And law-of-motion formulations, Isaac Newton hypothesized

That a body should move In an astronomically straight line Except as affected By other celestial bodies, Such, for instance, as manifest By Kepler's hypothetical Interplanetary attractiveness.

Newton calculated the straight line Tangential to its orbiting, Along which the Moon would move If it were not attracted by the Earth, And measured the rate at which the Moon Fell away from that line In toward the Earth.

He found that the rate of falling Corresponded exactly With Galileo's observation Of an accelerating-acceleration In the rate of Earthward fall, Which elegance of scientific agreement Reinspired Newton To evolve his mass attraction law, Which showed that the relative initial value Of Kepler's assumed mass attraction Could be determined

By multiplying the two interattracted masses By one another

And increasing the attraction value fourfold Each time the distance

Between the two bodies is halved.

This explained Galileo's observed

Accelerating-acceleration

Of bodies falling inward

Toward Earth.

Tested by the interim centuries

Newton's law has since come to explain
The interattraction integrities

Of all macro and micro behaviors of
Universe.

Because science has not found any
property Of any one of the bodies

Which, considered only by itself,
Predicts that the body will attract, Or
be attracted by another body — And,
even more surprisingly, With the rate
of that attraction

Increasing exponentially

As they approach one another—

It is in experimentally demonstrated
evidence That neither the phenomenon
mass attraction Nor its even more
surprising

Second power, algebraic rate Of in-
terattraction increase Can be dis-
closed

And humanly comprehended

Only by observation
Of the integral body characteristics
Of any one body
While disregarding
The mutually covarying behaviors
Of both bodies,
Or of all of a complex of bodies.
Comprising the observed system,
As comprehensively and progres-
sively measured
And mathematically described
In terms of relative proximity,
Relative mass and relative dimen-
sionings,
Relative velocities

And their respective
Rates of change.
Since both mass attraction
And accelerating-acceleration
Are experimentally demonstrable,
While no property of any one part
Has been discovered
Which predicts either the attraction
Or its accelerative gain —
And in fact
No property of one part
Considered only by itself
Predicts the existence of another
part—
Synergy is experimentally —

Which means scientifically—

Manifest.

Q.EJ>.

Synergy is the *only* word that *means*

Behaviors of a -whole system

Unpredicted by the separate behaviors

Of any of its parts.

As of 1970,

World-around questioning

Of three hundred university audi-
ences,

Averaging five hundred persons
each,

Finds the word synergy —

As well as the phenomenon it identifies —

To be known to less than three percent, Of university students or staffs.

As of 1970 also,

Persistent inquiry of general public audiences Discloses a knowledge of synergy

By only one percent of general society.

Because all the generalized principles

Thus far discovered

Are uniquely identifiable

Exclusively as

“Behavioral interrelationship”

Of two or more

Separate components—

Which, in turn, consist

Of energy event-aggregates —

The generalized principles

Are not to be confused

With the profusion of data

Concerning common characteristics
or statistics

Of separate components of systems,

Which are myopically

And oversimplifyingly observed

By an everywhere specializing society.

Such common statistics
Can be monitored satisfactorily By
the brain or
Its externalized adjunct, The com-
puter;
But unknown synergies
Of as yet unknown generalized prin-
ciples Which are inherently and ex-
clusively, Integral behaviors of two
or more, Cannot be programmed
for computer discovery Because the
relevant unknown behaviors
Are experimentally demonstrable
only in retrospect As existing only
between But not *of* or *in* any one part.

The synergetic behaviors Of a plurality of parts Are inherently unpredictable.

Development is programable; Discovery is not programable. Since the behaviors to be sought Are unknown,

Computers cannot be instructed To watch out for them.

Computers can “keep track” Of a complex of behaviors, But only human mind can discern The heretofore unknown Unique interrelationships Which exist *between* and not *of* The separate bodies.

Even less known and understood
Than the generalized principle Mass
attraction

Is the generalized principle of *precession*
And the synergetic phenomenon
Which it uniquely identifies.

Precession is the behavioral interrelationship
Of remote and differently ve-
locitied, Differently directioned, And
independently moving bodies Upon
one another's separate motions And
motion interpattemings.

Mass attraction is to precession As a single note is to music. Precession is angularly accelerating, Regeneratively progressive Mass attraction.

Because the Sun's planets

Did not fall into one another

Kepler's discovery of their elliptic orbiting As well as the solar system's motion Relative to other star groups Of the Galactic Nebula

Are all and only accounted for By *precession*.

Precession is uniquely dependent
Upon the entirely unexplained, Ergo
mystically occurring, Omnimotions
of Universe

Successfully hypothesized by Ein-
stein

In contradistinction

To Newton's assumed

A priori cosmic norm of "at rest."

Precession is a second-degree synergy

Because it is not predicted by mass
attraction Considered only by itself.

Mass attraction

Is experienced intimately by Earthi-
ans

As gravity's pulling
Inward toward Earth's center
Any and all objects
Within critical proximity
To Earth's surface,
And moving through space
At approximately the same speed
And in the same direction
As those of planet Earth.
Not until we learn by observation
That the mass attraction
Of any two, noncritically proximate
Bodies in motion
Imposes a motional direction
At ninety degrees

To their interattraction axis,
Do we learn of this second surprise
behavior

Of two or more bodies.

They no longer “fall-in,”

One to the other.

Thus is the Moon

Precessed into elliptical orbit about
the Earth

As the Earth and Moon, together,

Are precessed into elliptical orbit
around the Sun,

Yielding only in a ninety-degree di-
rection

To the Sun’s massive pull —

Being beyond
The critical proximity distances
For falling into one another.
Unlike ninety-nine point nine nine
nine
Percent of all humans,
Goddard, carefully heeding the laws
Of both mass attraction and preces-
sion,
Realized that an object,
Rocket-propelled or accelerated,
Into a different velocity—
And into a different direction
To that of the Earth's
Speed and course around the Sun —

Would have its gravitational pull
Toward the Earth
Reduced fourfold
Every time it doubled
Its distance away from the Earth;
Only a hundred miles out
From our Earth's surface
The attraction would be
So diminished
That it would permit the Moon's pull
To become significant,
At which distance
The rocketed object

Would lose its tendency To fall back
into the Earth, And now affected
dominantly By the integrated mass
attractions Of all other celestial bod-
ies, Would go into orbit Around our
Earth.

And to understand How little is that
One-hundred-mile distance Out from
Earth's surface At which *orbiting* Re-
places the tendency *To fall* back into
the Earth. We note that

The thickness of a matchstick Out
from the surface Of a twelve-inch di-
ametered Household “World Globe”
Is the distance at which Our first rock-
eted objects Do go into orbit.

Mass attraction and precession Pro-
vide the first scientific means Of elu-
cidating social behavior. When hu-
mans affect one another Metaphysi-
cally, The least thoughtful Goes into
local system orbit Around the most
thoughtful. When humans tense one
another

Physically,

The least strong

Falls into the other,

“Falls” in love.

When they repel one another physically
The least strong is rocketed into
remote system orbit.

Because the physical characteristics
Of an aggregate's separate components
And their respective submotions
Cannot explain the behaviors
Of their progressively encompassing
And progressively complex systems,
We learn that

There are progressive degrees of
synergy, That is to say,

Synergy-of-synergies,

Which means
Complexes of behavior aggregates
Holistically unpredicted
By the separate behaviors
Of any of their subcomplex-aggregates;
And because mass attraction
Does not predict precession Each
subcomplex-aggregate Is in itself
Only a component behavioral aggre-
gation Within an even greater
Behavioral aggregation,
Whose comprehensive behaviors
Are never predicted
By the component-aggregates alone.
It is, furthermore,

In experimentally disclosed evidence

That there is

A synergetic progression in Universe

—

An hierarchy of total complex behaviors

Entirely unpredicted

By their successive

Subcomplexes' behaviors.

This means that there exists

A synergetic progression

Of ever more encompassing systems

Of human experience discernibility

Which are spontaneously differenti-
ated

Into unique levels

Of cognitory consideration

In which the contained micro

Of any adjacent macro level

Never predicts the existence

Or the observed behaviors

Of the adjacently next most encom-
passing Macro level complex.

Thus are the *atoms*

Unpredicted by any

Of their individual

Neutrons, protons,

Positrons, electrons,

Neutrinos and antineutrinos

Et al.

Nor does any one atom

In itself predict

The family of

Periodically co-ordinate

Unique chemical elements

In ninety-two, self-regenerative varieties

Of mathematically incisive order;

Together with their several hundred

Of interspersed isotopes

To be coexistent

In complex but orderly array.

And the periodic behaviors

Of the chemical elements
And their isotopes
In turn fail to predict
Their aggregate behaviors
As molecular structurings
Of various, harmonically complexed,
Unique associabilities of atoms,
Known as chemical compounds.
Nor do the chemical compounds'
molecular structures
Have inherent characteristics
Which predict the level
Of organic associability
Of molecules as biological cells.
And the level of biological cells

Does not predict
Their association in turn
As biological tissue—
The first human
Naked eye-discernible level —
Of these synergetic behaviors.

And the level of tissues
Does not predict
Organic biological species
In a vast variety
Of permitted design alternatives,
Whose unique pattern structurings
Are chromosomically programmed
To replacingly aggregate
As regenerative organisms

Ecologically interacting
All around our planet
In chemical phase intercomplemen-
tations
All fundamentally actuated
By a combination of mathematical
symmetries and cycles
All pyramided upon
Mass interattraction of atoms
Dynamically hovering in orbits
Within critical “fall-in” proximity
Of one another.
Or fallen into
A single-bonded *-fluttering*
Or into double-bonded *hinging*

Or into triple-bonded *rigidity*
Or into quadruple-bonded *densification*—
Ergo all pyramided upon
Exponentially compounded
Synergies of mass attraction and preces-
sion.

When adequate acceleration
Is imparted to micro aggregations
Of atoms,
Sufficient for them to escape
The critical limits
Of both mass attraction
And precession intereffects,
Then radiation
At 186,000 m.p.s.

Of the separate energy quanta

Ensues,

And the generalized behavioral law

Is that cited by Einstein's

$$E = Mc^2.$$

Inasmuch as *mass attraction*

And its second-degree synergy, *precession*, Together with *radiation*, most prominently explain The *synergetic* interpatterning integrity

Of both macro and micro

Aspects of Universe,

And the fact that

Three out of four of the names

Of their behavioral identities

Are popularly unfamiliar,
Provides experimental evidence
That less than one percent of human-
ity
Has the slightest notion
Regarding the extraordinary princi-
ples
Kinetically structuring and cohering
The integrity of eternally regenera-
tive Universe.
While one percent of society
Has superficial awareness
Of the existence of mathematical reg-
ularities

Synergetically displayed by *mass attraction*

And supersynergetically displayed as *precession*,

No scientist has the slightest idea *What mass attraction is* Nor *why Synergy, precession or radiation* Exist or act as they do.

Nobel laureate physicists, In self-conscious defense Of their abruptly discovered ignorance In regard to such cosmically important matters (Understanding knowledge of which Society has accredited them with possessing) Shrug off the necessity to

explain By saying, “Here we will have to assume Some angels to be pushing things around.” Though popularly unrealized, It is in experimental evidence That the origins of science Are inherently immersed In an a priori mystery.

This explains why The history of science Is a history of Unpredicted discoveries And will continue So to be.

But within the mystery Lies the region Of humanly discovered phenomena Whose whole region Is progressively disclosing

An omni-integrity of orderliness, Of interactive and interaccommodative Generalized principles.

In view of all the foregoing The preponderance of as yet Scientifically uninformed peoples Explains why human awareness Has at first and for long Greatly misapprehended, For instance, as “solids”

The superficially deceptive microaggregates Which defied differentiating resolution, Into their myriads of separate parts, By the instrumentally unaided

Human sight.

Thus loving humans
Have unwittingly tutored
Their young to acquire
A whole body of reflexes
Labeled as knowledge,
All of which has since been invali-
dated
By experimental science's findings —
As armed with powerful instruments
For exploring
The ninety-nine percent of reality,
Which is inherently

Untunable directly by the human senses. Humans grope for *absolute* understanding, Unmindful of the a priori mystery Which inherently precludes *Absolute* understanding.

Unaware that their groping

Does not signify personal deficiency, And ignorant of the scientific disclosure Of fundamentally inherent mystery, They try to “cover up” their ignorance By asserting that no fundamental mystery exists.

The omniconmitment

Of the twentieth century's World-around society
To the synergy invalidated misconception
That specialization

Is desirable and inevitable,
Tends to preclude humanity's
Swift realization

Of its many misconceptionings
And its necessity to substitute therefore
Tactically reliable information.

Specialization is antisynergy.

In short, physics has discovered
That there are no solids,
No continuous surfaces, No straight
lines;

Only waves,
No things,
Only energy *event* complexes,
Only behaviors,
Only verbs,
Only relationships,
Which, once discovered, Can be kept
track of
And employed
By both the integral brain
And the extracorporeal computer
But may never be discovered origi-
nally
By those physically limited tools.
And the *why-for* and *how-come*

Of omni-interaccommodation
Of all the known family
Of weightless, eternal, generalized
principles —

Thus far discovered

By scientific observation

To be metaphysically governing

In elegant mathematical order

All Scenario Universe's

Interrelationships, transformations
and transactions, Without one prin-
ciple contradicting another— Are all
and together

Absolute mystery.

Offsetting the formidable dilemma

Of comprehensive social ignorance
Human mind finds
A new comprehending advantage
To be inherent in the discovery
That within all the foregoing
Progressively encompassing
Hierarchy of synergetic levels,
Each encompassing level does manifest
Synergetic behaviors
Unpredicted by the behaviors
Of any of its sublevels'
Components' behaviors —
Considered only by themselves.

Though neither known nor anticipated

By the status quo's present body of knowledge

This hierarchy of hierarchies
Constitutes a cosmic consistency,
Warranting its recognition
As a generalized law of Universe.

Knowledge is of the brain

Wisdom is of the mind

And there is herewith implicit An a priori wisdom-of-wisdoms.

Out of the a priori mystery

From time to time

Mind fishes a new

Generalized principle,
Which though absolutely unique
Always accommodates and inte-
grates
With all the previously discovered
Generalized principles.
All of which are originally apprehen-
sible
Only by weightless mind
Which alone of all phenomena
Can cope knowingly
With the etemality of principles.
The omni-interaccommodativeness
Of the totally known inventory
Of generalized principles

Constitutes progressive disclosure

Of a vast a priori design

To be governing Universe, Whose intellectual integrity bespeaks An a priori greater intellect Than that manifest in humans, All of which synergetic integral Is hidden from sight of humanity, As it is at present omnivictimized By a universally specializing antisynergetic, Anticosmological Educational process.

Wherefore it is also manifest that

Universe is the maximum, synergy-of-synergies Being utterly unpredicted by any of its parts Or by the hierarchy of synergies Of ever exponentially advancing degree — No complex stage Having been predicted By its parts.

For instance,

The chemistry and structure

Of the human's toenail

In no way predicts

The complex, organic behavior
Known synergistically As humans.

For humanity to comprehend In individually effective degree The life in Universe Which it is experiencing, It is logically required That humanity must develop

Self-initiated and self-disciplined reconsiderations Of its total inventory of experiences From which it may, hopefully, Gain a degree of knowledge

Adequate to humanity's

Spontaneous initiation

Of conscious and competent cooperation With the orderly processes Of universal evolution.

In order to accommodate

And abet evolution,
Humanity must heed
The synergistic hierarchy
And must commence by heeding
That human mind has discovered
And proved mathematically, Two
millennia ago
In Ionian Greece,
A generalized principle —
Corollary to synergy —
Whose mathematical characteristics
are statable as: The known behavior
Of whole systems
And the known behavior
Of some of its parts

Make possible the discovery

Of other —if not all —

Of the originally *unknown* Component parts Of the system.

Therefore in direct contradiction to present specialization, All educational processes Must henceforth commence At the most comprehensive level Of mental preoccupation, And that level is the one That consists of the earnest attempt To embrace the whole eternally regenerative phenomenon Scenario Universe.

And this is what children Try to do spontaneously Whenever they ask their parents Embarrassingly important Cosmological questions.

Evolution, most powerfully operative In the metaphysical spontaneity of children, Is trying to break through The barrier of ignorance of synergy and mystery Which as yet frustrate human understanding.

Perversely, the parents Tell them to forget Universe And to concentrate With A, B, C, 1, 2 and 3- Only with parts, Which process the parents Call “Elementary Education,” And reflexively misconceive As the essential beginning Of all learning processes.

In our now to be adopted Synergetically strategied Educational process We are aided

By scientists who preceded us, For Euler discovered

Early in the nineteenth century,
That all patterns of Universe Can be
resolved into three Conceptual differ-
entiations: *Lines, crossings* and *areas*.
Systems divide Universe Into a plu-
rality of regions: All of the Universe
Which is outside the system And all
of the Universe Which is embraced by
the system. Systems are inherently
polyhedral. Systems of thought
Divide the Universe

Into the conceptual and nonconceptual. Conceptual systems always consist of a constant relative abundance of the *lines, crossings* and *areas* in which $C + A = L + 2$

And because of this constant relative abundance whole pattern behaviors of all our experiences — when properly conceived — can be comprehensively differentiated, topologically equated, observed and considered.

Thus was Einstein synergetically

And equatingly advantaged, with
cosmological integration Of the known
behaviors of the whole physical Uni-
verse, As well as of behaviors of its
two principal parts, Mathematically
to predict and discover Heretofore
unknown

And unexpected behaviors
Of heretofore unrecognized
Constituents of the whole.
Intuitively stimulated
By experimentally demonstrable
Speed of radiation knowledge,
As well as by Brownian movement
And black body heat,

Einstein started holistically
With the concept of Scenario Uni-
verse

As an aggregate
On nonsimultaneous,
Complexedly frequenced,
And only partially overlapping
Ever and everywhere
Methodically intertransforming
events

Which conceptioning
Is superbly illustrated by an evening
Of overlappingly frequenced fire-
works.

$$E = Mc^2$$

And

$$C+A=L+2$$

Experimentally conceptualized By those partially overlapping Fireworks events

As one rocket is blasted off Before the previous rocket's Unique display has been completed And both a moving picture camera And a tripodded still camera Can be set

With their lenses left open

To register the whole evening's Fireworks program Both as a scenario

And as single, composite, static pictures Of all the light pattermings

That took place Against the black
void of sky.

And the synergetic relationships Of
the scenario footage And the “still”
photographs Together may become

The basic experimental evidence Of
fundamental self-education.

For $E =$ physical Universe, Which
consists of energy In two phases:

(One) *Energy associative,*

As matter = M,

Where critical proximity

Accounts for all the atoms

Either falling into one another Or
precessing into very local orbits.
(Two) Energy *disassociative*, As ra-
diation = c^2 ,

For the omnidirectional light-wave,
growth sphere Increases as the sec-
ond power Of the linear speed of light.

c = linear speed of all radiation c^2
= radiant growth rate of a spherical
wave. The radiant light discloses the
Trajectory lines of the successive
Rocket blast-offs

Whose trajectory lines = L Cross one another = C, As the local “burst” lines Complexedly define areas = A And the whole fireworks Demonstrate the patterning Of Einstein’s Universe as a Scenario Universe— Of “nonsimultaneous and only partially overlapping Transformation-events.” Again q.ejd.

And the black void Nothingness of night Backdropping the fireworks Is the omnipresent, A priori mystery.

And the real beginning of education Must be the experimental realization Of absolute mystery.

For the a priori Comprehensive and
permeative *Mystery* of Universe Is ap-
proximately unknown, Or is deliber-
ately side-stepped,
Or is just overlooked
By most educators,
And is politically acknowledged
Only as orthodox religions.
And again
Society's lack of knowledge
Of the a priori mystery,
And its pragmatic conditioning of its
reflexes
By leaving to its priests
What manner of response

They should make
To the innate intuitive awareness
Of the a priori mystery,
Permit the persistence
Of such ignorant cerebrations
As that which for instance
Invents atheism.
Tending to discount science
Society has no working knowledge
Which contradicts such assumption.
The scientific proof of synergy
Is, however, experimentally demon-
strable
And is experienced
In a myriad of ways.

As for instance

In the tensile strengths of alloyed metals, Such as chrome-nickel-steel — Which is severalfold stronger

Than the sum of the tensile strengths Of each of the separate metals

Which altogether comprise the alloy —

Metallic alloying is explained only by synergy.

Such high heats and stresses Were involved in a jet engine That it could not be realized Until chrome-nickel-steel Was discovered and produced. And the jet engine

Within only one decade of years Has
shrunk our Earth

Into a one-town dimension,

Which now realized accomplish-
ment

Was mysteriously unanticipated

By any scientific society

Of yesterday's

Governments, corporations,

Educators and politicians, Who even
now utterly disregard The mysterious
realization That synergy now permits

The logically predictable

Humanly conceivable and executable

Rearrangements of environmental
constituents, In ways which are suffi-
ciently favorable For the regeneration
of all life

Aboard our planet Earth

By producing ever more perfor-
mance With ever less pounds, min-
utes and watts Per each function
served.

And the more-with-lessing

Constitutes ever-increasing mastery
Of physical behaviors of Universe By
the metaphysically operative verb

Mind;

And all the foregoing

Implies incontrovertibly
The progressive realization
By humans on Earth
Not only of a vast
Universal design
But of a Universe Scenario,
Whose a priori conceptioning
Is clearly intent
To render Earth-riding humans
A comprehensive physical success,
Despite humanity's
As yet undiscarded
Ignorance, fear
And distrust of its mind.
But humans are designed,

(Again a priori)

Metaphysically equipped, and advantaged

First to apprehend, then comprehend
The significant potentialities Of
generalized principles

Permeating their physical experiences.

Thus were humans gifted

Imaginatively and teleologically To
employ and process

Complex information.

Thus also humanity is permitted
By the omni-intellectual, Weightless,
amorphous,

Metaphysical integrity of Universe—
Which we intuitively designate By
the sound word “god” To partici-
pate in meager degree Locally and
temporarily— In god’s own vast
Evolutionary designing capabilities.
And of all the designs
Thus far formulated by humans
None have been
As adequately anticipatory Of the
probable reoccurrences Of yester-
day’s experiences — Positive and
negative, Large and small, Frequent
and infrequent Sudden and slow—
And therefore as

Progressively comprehensive Com-
plexedly adequate, Economically
exquisite Powerfully eloquent And
regeneratively reinspiring To further
evolutionary perfection As is

The sailing ship.

It is visually obvious

Even to the inexperienced viewer
That the sailing ship is designed To
cope with nature's Most formidably
hostile Environmental conditions

For human survival, Those existing at the interface Of the ocean's and the atmosphere's Ofttimes tumultuous ferocity, Where, for long and most often, Of all places around Earth An unprepared, ill-equipped humanity Usually perished.

For it was the many lethal experiences With those myriad

Of awesomely demanding conditions Witnessed by a few fortunate survivors Which progressively invoked Man's subjective discovery And objective invention Of general engineering principles As well as the

foundations of mathematics From
which in turn he evolved Not only
competent naval architecture But
such other mathematical essentials
as Chronometers, compasses, charts
Spherical trigonometry, sextants And
celestial navigation, And thereby de-
rived

Instrumentally guidable safe passag-
ing Of multitonned vessels

Scudding along under full sail Over
the rocks and shoals permeated Great
ocean waters

Under the invisible conditions Of
night, fog and high seas.

And sailing ships
Unlike bulldozers
Do no damage to the sea, land or sky
While employing the windpower
Without any depletion
Of the vast wealth of universal energy.

And because the sailing ship's beauty
Is the unpremeditated consequence
Of omni-integrity in designing
Both its comprehensively anticipatory performance as a ship
As well as the technology of its building,
That functional beauty has inspired

The high-seas sailorman,
Voyaging safely within its womblike
hold,

Not only reproductively to proliferate
The successful prototype designs
But also spontaneously to identify
Sailing ships
As females.

Three quarters of our planet
Is covered by water.

And in developing the ability
To live at sea

And thereby to integrate
The world around occurring
But very unevenly distributed

Gamut of physical resources and
knowledge,

And thus ultimately to make all re-
sources

Available to the integrated produc-
tion

And distributive service of all hu-
manity

(Despite the world-around recurrent
formidable conditions), 56

Humanity has manifested

Its greatest comprehensively antici-
patory

Scientific designing effectiveness

In the high-seas sailing ship

The by-products of which have been
His establishment of a science-
founded,
World-embracing,
Scientifically laboratoried,
Search and research navigated,
Speed of light intercommunicated,
Industrial mass-production complex—
Out of which, in turn,
Has come, evolutionarily,
Humanity's mastery of sky and in-
terplanetary travel
And its biochemical conquest
Of physiological disorders
Of the human organism

And possibly soon to come

The adequate physical sustenance of
all mankind.

Key to humanity's scientific discov-
eries,

Technical inventions,

Design conceptioning

And production realizations

Has been a phenomenon

Transcendental to humanity's

Self-disciplined

Objective concentrations of thought

And deliberate acts —

A phenomenon transcendental to humanity's Consciously disciplined inventive capabilities.

That key is the first And utterly unpremeditated event In all discovery, invention and art. It is humanity's *intuitive* awareness Of having come unwittingly upon An heretofore unknown truth, A lucidly conceptual, Sublimely harmonic, Regenerative relationship Of a priori Universe — An eternal principle— And then moments later A second *intuitive* awareness

Regarding what the conceiving individual human Must do at once

To capture the awareness of And secure the usefulness of That eternally reliable generalized principle For all humanity

For now and henceforth.

Again and again, Step by step, Intuition opens the doors That lead to man's designing Of more advantageous rearrangements Of the physical complex of events Which we speak of

as the environment, Whose evolution-
ary transition ever leads Toward the
physical and metaphysical success Of
all humanity.

And because its design

Permits humanity to live anywhere

Around our planet's watery mantle

And because this sailing craft

We are now to launch

Is the epitome of design competence

—

As manifest at this moment

In the forever forwardly mounting
and cresting wave

Of design capability —

We herewith give

To this world-around dwellable

High-seas sailing craft

The name intuition.

During pauses in the post-launching
events The soliloquy persisted And
later that evening And for many days
thereafter

The following thoughts were in-
scribed:

I am now seventy-three years of age
And am eager to participate further
In humanity's designing functions —
That is, in metaphysically compre-
hending And mastering in orderly
ways The physical energy Universe's

Inexorably expanding momentary
disorders, And am aware that human-
ity Is approaching a crisis

In which its residual ignorance,
shortsightedness And circumstance-
biased viewpoints May dominate,

Thus carrying humanity

Beyond the “point of no return” —

Enveloping his exclusively Sun-
regenerated

Planetary home

In chain-reactive pollutionings And
utter disorder.

As a comprehensive and anticipa-
tory design scientist I am aware that
the reciprocating engines Of all our
automobiles

Are only about

Fifteen percent efficient,

While our gas turbines

Are about thirty,

And our jet engines

About sixty percent efficient,

And fuel cells eighty percent
In delivering effective work power
From the energies they consume.

The overall average of mechanical ef-
ficiency

Of world-around humanity's power-
to-work

As presently designed and tooled-up
Is only about four percent,

While experienced engineers and
scientists concede That the world's
industrial network

Could easily be redesigned to oper-
ate at better Than an overall fifteen
percent efficiency.

Ergo, I have long been intuitively
aware

And am now scientifically confident
That a physically permitted design
revolution

Is indeed feasible

Which can increase fourfold

The present design tool-up,

Of the planet Earth's technology,

Thus raising it to a meager

Sixteen percent

Overall efficiency,

Which can do so very much more

With progressively ever less

Of kilowatts, minutes, grams and pollution

Of the physical resources of our Spaceship Earth —

To be invested in

Each function accomplished

As to be able to raise

The overall percentage of humanity

Enjoying a satisfactorily adequate standard of living

To a one hundred percent “haves,”

And do so

Without having any human

Prosper at the expense of another

And do all the foregoing
Not only for all the humans now
aboard

But also for all those
Later to come aboard
Our Spaceship Earth,
Which witnessed a condition
Only two thirds of a century ago
When less than one percent
Of its human passengers
Enjoyed an in any way comparable
standard of living.

I am also acutely aware
That only a very small percentage of
humanity

Has enough comprehensive experience

And cerebrated reconsideration of those experiences To know that all the foregoing is true.

And if you do not know

All of the foregoing to be true

You do not know enough

To be able to

Comprehend the synergetic significance

Of the integrated truth,

As well as feel intuitively

The irresistible compulsion

To act effectively

In the teleologic solution
Of all those problems,
And thereafter to reduce them
By design science
To realized technological practice
And industrial adoption
At the earliest moment
Whereby mankind may be
Streamlined into unself-conscious
adoption
Of ever more effective
New ways of behaving,
Thus also unconsciously to abandon
The inadequate customs.
I also realize intuitively

That the elimination
Of the condition of resource inade-
quacy

And thereby the elimination of hu-
man want

May probably eliminate war

— Or *quick death* —

Which is always consequent to the
overlong protraction

Of the slow and more anguished
poverty's

Slow dying

As brought about by lethal ignorance

In respect to the design revolution
potentials

As society takes its only known re-
course

In political actions,

Which can but throw the “Ins” out

Or “pull the top down,”

Unwitting that the design revolution

Could effectively elevate

Not only all those now on bottom

But also those now already prosper-
ing, Bringing all humans alike

To higher levels of advanced living
Than have as yet been realized By any
humans,

Without taking away

Or diminishing the advantages of
any.

For the norm of all yesteryears

Was failure

As unwillingly conceded

By a sometimes

Vainly boastful

But most often abjectly prayerful

Poverty- and disease-bewildered
people

Living out only one third

Of their potential years

In utter ignorance

Of the invisibly bounteous life-support system Hidden in the superficial landscape,

And consisting only

Of instrumentally gleanable information, Abstract and weightless generalized principles, Unique electromagnetic frequencies

And exclusively mathematical realizabilities; While the norm of today and tomorrow, If any is possible, Must be total success

For all of humanity

As inherent in

The integratable potentials

Of the comprehensive family Of
omni-interaccommodative, And om-
niorderly

Generalized principles

Discovered by scientists

To be in a priori governance

Of universal evolution's aggregate

Of nonsimultaneous

And only partially overlapping Trans-
formative events.

And the norm of sustainable success

Of all humanity

Will be realized

By the computer-confirmable infor-
mation That humanity can afford

To gratify handsomely
Whatever of its needs
And growth requirements
Can be satisfied
By what can be produced
Out of the as yet untapped resources
Employed in yesterday's
Now obsolete and scrapped Techno-
logical devices.

For we now know scientifically
That wealth consists exclusively
Of physical energy
Which cannot be depleted
Plus intelligence's *know-how*
Which can only increase

As the ever metaphysically improved
uses

Of the family

Of unique physical behaviors

Of energetic Universe

Are ever more promptly

Reinvested to omniregenerative ad-
vantages

Of all humanity's ecological involve-
ments

Within an omniconsiderate

Universal evolution integrity.

But as of this old-to-new era's

Threshold crossing moment,

Ignorance of the design revolution
potentials is pervasive,

And its vacuum persuades

The most powerful political thought
Of the largest organized groups of so-
ciety

—Among the sixty percent of human-
ity

Now aboard Earth

Who are as yet “have nots” —

To assume that

Since there seemingly is nowhere
nearly enough

Of vital resources

For all to be successful,

And in cunent fact
Only enough to support a minority,
The only fair condition for society Is
one of comprehensive deprivation.
And a camaraderie of poverty
Which ever and again
Must assuage its emotional depres-
sion
By vindictively leveling
All attempts of any individual hu-
mans
To advance standards
As mistakenly constituting new up-
shoots
Of the socially abhorred

Survival only
Of the fittest selfishness.
We are also aware
That other vast numbers of the “have
nots”
Who are almost entirely,
Unorganized politically,
Have for so many millennia
Suffered intensely
Both physically and metaphysically
Throughout their short-termed lives,
That there has been
No suggestion in their experience
That life was meant to be
Anything other than a tortuous trial.

Ergo, they rationalize
That the only explanation
Of such a negative experience
That could be hopefully contem-
plated
Is that life on Earth constitutes
Only a period of qualification
For an eternal life
Hereafter and elsewhere,
And the greater the hardship en-
dured In the temporary or temporal
life The pleasanter the life hereafter.
And to all such life-hereafterers Any
attempt to ameliorate and improve

Their short life on Earth Assumedly
threatens To dissipate and preclude
The eternal ecstasy Of their life here-
after.

I am also aware that

An increasing number of human be-
ings — More especially the young peo-
ple of the world — Who have witnessed
the success

Of my earlier prognostications, in-
ventions And developmental initia-
tives In doing more with less

To inaugurate the design revolution
Are asking me

At an increasing frequency And in
increasing numbers

To share with them the experimental
knowledge Which I have gained

And the philosophically harvested
Design strategies I employ.

They seem especially interested
In my environment control devices
Which employ only the high priority
Sea and sky sciences and technolo-
gies Of advanced industrialization.

But most of all they are interested In
synergetics —

Which is the name I have given To
the omnirational, comprehensive Co-
ordinate system of Universe Which it
has been my privilege To have discov-
ered.

Synergetics makes nuclear physics
A conceptual facility Comprehensible
By any physically normal child.

It also seems clear

That an increasing number of young,
Or young-minded people Are begin-
ning

To share my awareness That total
holocaust

Is now being ignorantly induced By
the world's preoccupation with Exclu-
sively political palliatives Which are
inherently shortsighted And applica-
ble only

To the emergency-dramatized local
aspects Of the greater and unrecog-
nized Evolutionary problems With
which human life

Aboard our planet is beset.

For evolution is apparently intent
That life in Universe

Must survive.

Biological life

Is syntropic

Because it sorts and selects Unique
chemical elements From out of their
randomly received Time and locality
of reception As celestial imports;

Or from out of their random oc-
currence As terrestrial resources —
fresh or waste— Anywhere around our
Earth's biosphere, And reassociates
those elements In orderly molecular
structures Or as orderly organs Of
ever-increasing magnitude. Thus
effectively reversing The entropic

behaviors Of purely physical phenomena Which give off energy In ever more random, Expansive and disorderly ways.

For human life contains the weightless Omnipowerful, omniknowing Metaphysical intellect Which alone can comprehend Sort out, select, Integrate, co-ordinate and cohere.

Little humans

Preoccupied with the immediate needs Of their physical regeneration Have locked

Their zoom-lens focusing mechanism
On the close-ups only Leaving it
exclusively to their intuition

To remind them

Once and again in a surprised while
Of the vast long-distance focusing Of
evolutionary events.

And because evolution is apparently
intent

Upon accomplishing humanity's total
economic success, Whenever society
delays overlong

In adopting, producing, distributing
and using

In peaceful spontaneity,

The evolutionary essential
Discoveries and inventions
Of the technological innovations,
Evolution then forces humanity to
adopt and develop

All the progressively advancing tech-
nologies

As emergency commitments

Under the negative aegis of group
fear of military defeat And its conse-
quent defensive action taking.

In these emergencies humanity re-
organizes

The physical environment

In naturally permitted ways

Which turn energy as matter
Into a myriad of wheel-mounted
levers
And shunt energy
As radiation-induced flows
To impinge upon those levers, Thereby
to do the gamut of tasks Conceived by
the human mind To be most produc-
tively efficient
And requisite to the immediate sur-
vival emergencies Thereby inducing
humanity's Inadvertent acquisition
Of the subsequently and peacefully
employable Mass-production capabil-
ity,

Which could have been acquired
At fractions of the cost in lives and
goods,

Had they been undertaken peace-
fully

At the time that they were introduced
By the intuitive inventors, scientists,
artists.

Though it was readily discernible
long before the war It was only pub-
licly acknowledged after the war That
the copper mined, refined and shaped
into wire In the emergency

Did not unrefine itself

And return as ore into the mountain

After the war was over—
But remained in the dynamo winding
And in the high-voltage transmission
lines, To keep on delivering
Electrically converted water power
To distant places
To help humanity do its work,
To refrigerate the foods that used to
perish
Before reaching the world's mouths
To regenerate life.
Man had simply rearranged the
scenery
To support more humans For more
days of their lives. Despite its being

Only negatively entered
In the ignorantly applied
Agricultural accounting system
As a vast natural debt To cover the
colossal

Industrial expenditures of war, Naught
had been spent but thoughtful hours.
Humanity's productive and distribu-
tive Life-supporting capability —
wealth — Had been irreversibly am-
plified

In view of all the foregoing
It is equally evident
That whatever we can contribute
As individuals

Which might lead to humanity's

Choosing to abandon with sufficient
alacrity Its futile preoccupation with
politics —

And the latter's inevitable recourse
only to war And the latter's negatively
accounted "spending" — Is dependent
upon

Our continuing physical health and
agility, Metaphysical clarity and
Spontaneous initiative.

For if we can maintain

Both physical and metaphysical
health

We might be able to join with others
In helping to tip the scales

In favor of world society's becom-
ing preoccupied With the design-
revolution priority

And its inherently required Educational-
process revolution.

It was thus that intuition
Suggested the sloop intuition.

As the most favorable tool
For self-effectiveness conditioning
Within our individual ken.

For ships, sailors and the sea Have
been my greatest Teachers and con-
ditioners.

The Ancient Greeks initiated problem solving By recourse to cosmology and cosmogony, By proceeding from the whole to the part Lest they miss

The exquisite relevance Of each little part or event.

Thus did the Ionian Greeks intuitively Commence mathematical pattern mensuration Of their world, by geometry,

Within which comprehensive, synergistic advantage They discovered and demonstrated that

The known sum —

One hundred and eighty angular degrees — Of all the angles of any triangle, Plus the known values

Of three of the triangle's six parts Provided the mathematical capability

To discover the other originally unknown values

Thus also synergetically did Democritus, Starting with the totally known complex Of visible Universe behaviors, Come to conceive schematically Of the logically necessary existence Of primary yet invisible components Of the physical Universe Which he named “atoms,”

More than two millennia in advance
Of nonsynergetically plodding sci-
ence's

Physical verification
Of the microcosmic stardom role
Played by those atoms.

If all humanity attains planetary suc-
cess, Central to that attainment will
be The magnificently regenerative
power Of the Greek's intuitive
Synergetic spontaneity of thought.

2 Brain and Mind

Dr. Harvey Cushing –1869 to 1939 –

Was so great a neurosurgeon

That his professional colleagues first
called themselves

The Harvey Cushing Society

But later adopted the more formal
name

Of American Association of Neuro-
surgeons

And at the same time instituted the
Harvey Cushing Oration

As the principal address of their annual congress.

And though I am neither a neurosurgeon

Nor a professional of any discipline

An aberration of fate brought me the honor of delivering

“The 1967 Harvey Cushing Oration”

To two thousand of their members

At their annual meeting in Chicago.

I never prepare lectures so I thought out loud to them About humanity, its world

And its function in universal evolution,

And as I thought and spoke I realized o'erwhelmingly That if humanity is going to survive

It will be only because it commits itself

Unselfishly, courageously and exclusively

To its most longingly creative inclinations,

Visionary conceptions

And intuitively formulated objectifications;

For the mind's intellections —

In contradistinction to the brain's automatics —

Apparently constitute humanity's
Last and highest order of survival re-
course.

Therefore I felt I must devote the oc-
casion

To distinguishing between mind and
brain —

For that unique difference

Also differentiates most incisively

Between human beings

And all the other living creatures.

For instance, it was mind alone that
discerned

That physical experiment disclosed
and confirmed

That local physical systems
Are always exporting energy
In one manner or another, such as by
friction,

And it was mind alone that deter-
mined to identify semantically

The exporting of energy
By inventing the abstract name *en-
tropy*.

And mind went on to discern
That physical experiences disclosed
and confirmed

That all living tissue
During cell multiplication
Must import more energy

Than it exports,
Else it could neither grow
Nor even sustain healthy balance.
And mind also witnessed
That crystalline structures
Also can import energy
But not as much as they export;
And mind identified
Energy importing by the name *syn-*
tropy.

Because of the tidal fluctuations
of syntropy-entropy Local environ-
ments are forever altering them-
selves. Living phenomena, being
both entropic and antientropic, Are,

as Professor Waddington points out,
Forever altering the environment
At a faster rate than the nonbiologi-
cals, And the ever-more-completely
altered environment Is, in turn, con-
tinually altering all the creatures.
Waddington identified this external
modification Of living morphology as
epigenetics – In contradistinction to
the corporeal morphology Of all living
organisms' integral growth Whose
angle and frequently designing

Is governed by the internal dna-rna
genetic codes.

As the irreversible succession of self-regenerative human events — Experiences, intuitions, experiments, discoveries and productions — Successively increases both the comprehensions and capability options The commonwealth of intercommunicated comprehensions Produces an ever-evolving, subconsciously changing common sense. Where syntropy is gaining over entropy, life prevails;

Where entropy is gaining over syntropy, death prevails.

Their exponentially regenerative, birth-death interplay

Is describable in information theory

As “self-accelerating feedback,”

And in nuclear physics it is manifest
as “chain reaction”

And in an even more comprehensive
way

It is manifest pulsatingly, resonantly
and propagatively, As the irreversible
regeneration of universal evolution.

For the obviously inanimate, Non-
biological, physical phenomena Are
all, always, giving off energies In ever
more diffuse, expansive And disor-

derly ways, Which impose complex intertransactions Upon all the intertransforming systems. This was only half anticipated In a generalized way

By the late eighteenth-century scientists' Academically hailed

Great "Second Law of Thermodynamics," Which discovered and recognized only the energy-exporting phase called entropy.

Entropy's behavior may be modernized to state

That every separately experienceable

And generalizably conceivable system in Universe

Is continually exporting energies

While also always importing energies

At a concurrently accelerating and decelerating

Variety of local system rates,

Which also means

That all systems are continually transforming

Internally as well as externally,

And because the periodicity of importing and exporting

Are both nonsimultaneous and unequal,

All the systems are tidally pulsative
At a variety of frequencies.

In the same way that systems
Have “centers of gravity” (cg)
And “neutral axes of gyration”
Identified by engineers as “I,”

They also have

“Centers of omniequilibrium symmetry,”

At which their kinetic transformings
never pause, But relative to which kinetic
action centers

They oscillatingly transform.

And the frequencies and geometries
Of those intemally-externally co-
ordinated pulsative trendings Are
always uniquely asymmetric

As related to the local systems' sym-
metrically co-ordinate Abstract "cen-
ters of equilibrrious symmetry" (ces).

Because the unsynchronizable,
asymmetric excesses

Are inherently exported

The internal-external events

Propagate both inward- and outward-
bound waves.

These unique wave-system propaga-
tions

Only infrequently coincide

With the unique symmetry patten-
ings of others,

The orderly patterning energy re-
leases of any one system

Only superficially appear to be
disorderly—

Being unsynchronized immediately
with other systems,

Though each system is internally or-
derly

And each is uniquely symmetrical
dynamically.

This relatively minor yet true disorder, external to local systems, is spoken of by the confused observer as “diffuse.”

Having different-sized teeth, and rates of revolution, two such gears cannot mesh, but associate only tangentially. Consequently, their axial centers must be farther apart than are those of meshable gears.

Omnidirectionally pulsative systems
are, in effect, spherical gears.

Their inwardly and outwardly pulsating and rotating “teeth”

Consist of multifrequenced circumferential and radial waves

Of fifty-six great-circle subdivisions of spherical unity, Often nonmeshing with other local systems.

The universally infrequent meshing of wavelengths and frequencies Produces an omnicondition

In which the new omnidirectional system's center must, as each is created,

Continually occupy omnidirectionally greater domains of disorder.

The sum total consequence of entropy is

An omniexpanding physical Universe

And an only (apparently increasing) disorderliness.

This does not mean absolute disorder;

It means the momentarily superficial appearance

Of less order than symmetry.

And the disorder is only relative

To the majority of individual cases,

For each system

And its particular entropic exportings

Is orderly within itself,

And the detection of disorder is
mistakenly assumed As the result of
exclusively myopic And too short-
termed observing.

I am convinced therefore

That there is a great deal of differ-
ence Between absolute disorder, i.e.,
chaos, And the only one-sidedly con-
sidered, Relative asymmetry, whose
pulsative balancing At a later time
with other systems was not awaited
By the too hasty and biased observer.

On the contrary, I am convinced

By comprehensively considered ex-
perience

That a total integrity of order prevails
And am inspired to explore that order
In hope of discovering humanity's
function In the evolutionary scenario
Of omniseif-regenerative Universe.

To date, we have gained vast inventories

Of trial-and-error experience

From all of which information we
have developed

A family of generalized scientific
principles

Which are weightless pattern concepts.

Being weightless they are metaphysical.

From the metaphysics

We have in turn designed

Rearrangements of the physical behavior constituents

Of our omnikinetic environment scenery.

We have rearranged the scenery

In the pattern of world-around occurring power-driven tool networks
All of which teleologic process

Has produced an ever-increasing survival advantage for humanity.

The human advantage is both physical and metaphysical,

As ever-increasing proportions of all Earthians

Become involved in the processes
Of massive production and distribution

Of both the necessities and desirables

Which implement humanity's regenerative evolution requirements.

And the degrees of increasing advantage

Are expressible in precise scientific terms

Of the number of centimeters, grams
and seconds of work

Humanity is able to accomplish
Out of each hour of investment
Of each and all of its individuals'
Potential lifetime hours,
Energies, materials and know-how.
But we also discover that humanity
Does not yet realize its potentially
imminent success, Despite the pub-
lished statistics of death-deferring
Doubling and even tripling of life
spans Of a billion and a half humans
Rendered wealthy by industry Within
only the last seventy years Of the

numbers of human hours That must
be individually invested To produce
the essentials and desirables. And
humanity's enlightenment is delayed
Because the Earth planet is so large,
And man is so infinitely tiny

And so myopically preoccupied with
personally avoiding The erroneously
assumed inevitability of poverty for
the many, Which has slavishly and
fearfully conditioned his reflexes.

Those not as yet included

In the high-living advantage, ever-
multiplyingly produced

By power-driven tool networks,

Do not comprehend the swiftly accelerating rate

At which comprehensively increasing human advantage

Will include them and their children,

As well as the children of the already advantaged—

For they find themselves in a cultural environment

Whose customs, logic and law

Were designed uniquely to cope only
with the lethal struggling Of the prein-
dustrial, frequently failing agrarian
era, Which struggle is no longer es-
sential to their omnisuccessful poten-
tial —

Intuiting which, children find them-
selves brimming

With unanswered questions regard-
ing the significance of life.

Inspired by the beauty and appeal
Of their earnest questioning
And in continuance of our attempt
To differentiate the domains and
functionings

Of brain and mind,
We eagerly explore
For experiential evidence
That human minds and brains
May be essentials
In the total design integrity
Of eternally self-regenerative
Scenario Universe.

From physics we learn that every
fundamental behavior of Universe
Always and only coexists with a
nonmirror-imaged complementary.
The nonsimultaneity and dissimilar-
ity

Of the complementary interpattern-
ing pulsations

Integrate to produce

The complex of events

We sensorially identify as reality.

Without the pulsative asymmetries
and asynchronous lags

The complementations would cancel
out one another

And centralize equilibriously,

And there would be no sensoriality,

Ergo, no self-awareness, no life

For we have also learned from physics

That all the positive and negative
weights

Of the fundamental components of
matter

Balance out exactly as zero.

Life may well be a dream,

A comedy and tragedy

Of errors of conceptioning

Inherent in the dualistic

Imaginary assumption

Of a self differentiated

From all the complex otherness Of
reasonably conceivable Universe For
it must be remembered

That no human has ever seen di-
rectly Outside himself.

What we call seeing

Is the interpretive imagining in the
brain Of the significance and meaning
Of the nervous system reports

Of an assumed outsidersness of self,
All of which organic design concep-
tion May be that of a great intellect

Which is inventing Universe pro-
gressively Evolving mathematically
elegant

Integral equations

For each conceivable challenge In-
cluding the invention

You and me.

But you and I cannot escape

And are given extraordinary faculties
Which we are supposed to use.

So here we go again

From right where we are Now.

At least our speculative excursion

Was relative to our attempt to differentiate
Between brain and mind,

For the written record of two millenniums
Discloses human minds forever rediscovering
The great dream concept

While the brains of the dog and cat
Sleeping at my feet

Have never given evidence

Of being concerned with such thoughts.

Either the brain tells them to go hunting
Because their bellies are hungry

Or they bark in reflex to a strange
noise Or they wag their tails in re-
sponse To brain-recalled propitious
circumstances.

Returning to our hard and soft Expe-
riential realities,

We seek to discover whether there
exists A major phase of universal be-
havior Which complements but does
not mirror The omniexpansive, in-
creasing asymmetry And progressive
entropy diffusion of physical systems,
And matches the latter

With an increasingly orderly and symmetrical Omnicontracting and compacting syntropic phase. We know that the light by which astronomers are able to observe stars through optical telescopes is the “disorderly entropic output” of radiation emanating from the ever-transforming and continually moving star systems.

Thus, all the information of astronomers until recent decades has indicated increasing disorder and expansion which would seemingly threaten a progression of Universe toward ultimate chaos or utter disorder

Were it not for Einstein's observation that the experimentally demonstrated linear speeds of all forms of radiation unleashed in a vacuum were identical,

indicating a top speed

of physical Universe expansiveness.

This gave hope

But it did not explain

How Humpty Dumpty reassembled himself.

In recent years the astronomers have been aided by radar— And with the electronic telescope — they are potentially capable Of bouncing signals off invisible celestial black bodies Which may be angled to echo back to Earth, Which could identify the relative time fix positions.

But they haven't as yet with any certainty Bounced their radar signals off another planet In a star system other than the Sun's.

In looking for some region or body
in Universe Where energy events are
not only collecting But are doing so in
increasing orderliness, We discover
the observational availability Of our
own noncandescent Spaceship Earth.

Man is continually overlooking Earth
In his astronomical searching

Because of his fundamental propen-
sity

For not thinking realistically of the
Earth

As an astronomical body.

By making a globe

To demonstrate the scientific fact

That our Earth is a sphere
He concedes theoretically
That his Earth is not an infinite plane,
But he as yet feels and talks
Of “the four comers of the Earth,”
Of “the wide, wide world,”
And identifies “realistic, practical”
thinking
As “getting down to Earth.”
He uses the words *up* and down,
Which refer exclusively to a planar
concept of the world and Universe;
For all the perpendiculars to an infi-
nite plane
Must be parallel to one another,

Ergo, extend only upwards and downwards.

“Up to the sky,” “down to Earth.”

Humans see

Illusionarily receding railroad tracks
apparently converging

Before reaching the horizon,

And therefore assume

That all the parallel lines leading
“upwardly,”

Also logically must converge in a
point called *Heaven*

And converge in the other direction

In a spot called *Hell*.

This is a powerful illusion still rampant in Earthians' sensorial reflexing.

Even though many humans no longer promulgate

The conception of an otherworldly Heaven and Hell, They retain the illusionary orientation of Up and Down.

I have asked hundreds of audiences around the world

For a show of hands by those

Who do not use the words "up" and "down."

In none of all my audiences have hands appeared.

This means that all the human beings

In all of my audiences

Use the words “up” and “down,”

And believe they’re being logical

In so doing.

And they query,

“What may we say cogently

In lieu of *up* and *down*?”

The answer was found by aviators.

As they flew around the world.

They did not feel themselves

To be “upside down.”

As flyers they selected the right words.

Flyers “Come *in* for a landing.”

Flyers “Go *out* in the sky.”

Flyers “Fly *around* the world.”

And the astronauts

Go in toward various celestial bodies

And accelerate outwardly from them

And *into* the spatial nothingness

Out of which space they steer themselves

To come *in* to another

Of tire always orbiting celestial bodies, Around any of which they may locally orbit In great or lesser circles.

All of us go outward, inward and *around*

Any object, or system of reference,
Such as planets, stars, houses, things,
and atoms.

Atomic events transpire

Inward, outward and *around* their re-
spective nuclei. We direct an astro-
naut *into* the Moon:

We will soon direct him info Mars.

Out is common to all bodies

And is outward in all directions

From any one of them.

“Out” is omnidirectional,

“In” is unidirectional.

“In” is unique.

In is always specifically oriented. *In* is individual.

The word “invention”

Uses the prefix “in”

To identify this specifically.

It means a “coming in,”

A coming into our thought of a unique conception,

Which we *in* turn

Realize *in* a special physical case demonstration

Thus in-troducing

The in-vention to society.

No scientist would suggest that any part of the Universe

Is identifiable as “up”
Nor any other locale as “down.”
Yet individual scientists themselves
As yet reflex spontaneously
In an “up” and “down,” conditioned-
reflex miasma.

Their senses say reflexively,
“I see the Sun is going down,”
Despite that scientists
And almost everyone else have
known theoretically

For five hundred years that the Sun
is not going down at dusk And rising
at dawn.

What is important in this connection

Is that the way in which humans re-
flex spontaneously

For that is the way in which

They usually behave in critical mo-
ments, And it is often “common
sense” to reflex

In perversely ignorant ways

That produce social disasters

By denying knowledge

And ignorantly yielding to common
sense.

We are therefore interested in how
man

Can liberate himself

From all the up and down kind of re-
flexing.

I suggest to audiences that they say,
“I’m going ‘outstairs’ and ‘instairs.’”
At first that sounds strange to them;

They all laugh about it

But if they try saying *in* and *out*

For a few days in fun,

They find themselves beginning to
realize

That they are indeed going inward
and outward In respect to the center of
Earth, Which is our Spaceship Earth.

And for the first time

They begin to feel *real* “reality.”

Blocked by until now *The Heavens Above* And Down to *Earth* fixations,

Humanity has failed to realize commonsensically That our own Spaceship Earth Is an independent celestial object, Albeit a swiftly moving one, Compared to whose motion rates Hurrying hurricanes rate as frozen pudding.

Disciplining ourselves to use *in* and *out* Requires frequently thoughtful self-correction And gradually our knowledge-informed thought Begins to recognize realistically That we are indeed riding In the skin of a planet,

An eight-thousand-mile diameter
Spherical space vehicle Zooming
around the Sun At sixty thousand
miles per hour Spinning its equator

At a thousand miles per hour As it
Sun orbits.

As man first turned the television
camera

Toward Earth from the Moon

In demonstration of our Earthians'

General reflexing in self-misinformative
ways, My greatly admired friend Wal-
ter Cronkite At the microphone said,
"There she is, Floating there!"

Floating in what?

And later the President of the United States
Congratulated the astronauts
On going safely “up to the Moon
And back down again to the Earth.”
Studying the experientially acquired
data We begin to discover
That energies emanating
From celestial regions
Remote from Planet Earth
Are indeed converging and accumu-
lating
In planet Earth’s biosphere
As a spherical collection of energies,
Both as radiation and as matter.

Recent estimates of geo- and astro-physicists Show that many tons of stardust Arrive daily and remain on Earth.

Some estimates go as high

As one hundred thousand tons daily—

Probably acquired during Earth's orbital passaging Through the rubble of comet tails By virtue of such stardust And asteroid fall-ins,

Earth is actually increasing its weight

But so are the Moon and other planets, Wherefore gravitational imbalance Of the planets is avoided. All the stars give off energies And much of the radiation from stars Other than the Sun Impinge on our Earth.

This cosmic radiation seems to impinge In the same disorderly manner As does the stardust.

Stardust itself is the intraverted Concentrate of cosmic radiation. Every chemical phenomenon Can be identified

Either by its mass characteristics,
Such as weight per volume, Or by
its radiation-frequency bands. Both
the frequencies and the matter Are
behavioral states of the same phe-
nomenon. This underlies Einstein's
fundamental thinking, That is, of
energy associative as matter (star-
dust); Or of energy disassociative as
radiation.

And of their eternally regenerative
Terminal intertransformabilities.

We have our particular Radiant en-
ergy star—the Sun, Which is our prime
energy supply source.

The Sun is our nearest celestial fuel ship. It is flying formation with us Through the Galactic System

At an Earth-five incineration-proofing distance Of ninety-two million miles

As our energy concentrating Spherical space vehicle Earth Circles around our ten-billionfold greater Amassed energy mothership Sun.

While orbiting together With our planetary companions Of the spherical spaceship fleet, We aboard Earth are receiving Just the right amount

of energy To keep biological life re-
generated on board Despite our man-
ifold ignorance And its concomitant
wastage and pollution.

We haven't found life on board Any
other planetary space vehicles.

So our ship and its passengers May
indeed have a unique function In this
particular star group.

Our Sun squadron of planetary
spaceships Speeds within our Galac-
tic System — At thousands of times

Our Earth's speed around the Sun.

Our enormous spiral nebula consti-
tutes

The grand fleet of local Universe space vehicles – Which fleet we speak about In English as the Milky Way.

While all this celestial fleet maneuvering transpires, Operating at cosmic flank-speeds,

I often have Earth passengers say to me, “I don’t see how you can stand such traveling!” They are referring, of course, Only to the terrestrially myopic fact That I sleep In about two hundred different beds During two

hundred different nights of the year
Somewhere around our planet And
dwell for another hundred nights In
the general facilities of world airlines.

The remaining sixty-five nights of
the year Find me sleeping in one of
three beds: One on the East Coast,
One on the West Coast, And the other
in the middle Of the U. S. of North
America.

Such one hundred thousand miles per year Terrestrial travel is trivial When compared to an astronaut's One million miles per week, Or the Moon's six billion miles per year Sun-orbiting corkscrew travel.

If our space vehicle Earth Were nearer to the Sun, We would be incinerated By our energy-supplying mothership.

To compound the advantage of vast distance As protection against Sun's incinerating us We have the Van Allen belts; of which we learned Only in the last few years.

These belts are the outermost Of
the biosphere's spherical mantles.
Within these Van Allens we have The
ionic veil surrounding our spaceship.

The Van Allen belts intercept the ra-
diation

Which would kill a naked man po-
sitioned outward of those belts. The
Van Allen belts

Diffuse the radiation, by refraction,
to below lethal level.

From thence inward, the ionosphere,
The stratosphere and atmosphere
Progressively refract the radiation,

Separating its original lethal radiation concentration into a variety of life-sustaining increments.

Enough Sun light gets through the atmosphere, however, once in a while to inflict the fatal sunburning of naked humans dwelling at the crystalline and hydrosphere levels.

The Sun's radiant energy
Is the prime regenerating source
For all biological life on our planet.
Even while sunburning their skins
Humans and all other mammals
Are unable to take in enough radiant energy

Through their skins

To keep themselves alive.

To circumvent mammals attempting
futilely so to do

Nature has invented

The green vegetation on the dry
lands,

And the algae in the waters around
the Earth's surface.

The vegetation and the algae

Impound the Sun's radiation by pho-
tosynthesis

Converting the radiation

Into orderly molecules,

Which provide celestial life's prime
energy intake.

The vegetation and algae
Provide metabolic sustenance
Of all manner of creatures,
Some of which can in turn
Nourish humans.

Urged by subconsciously initiated
desire,

Or genetically programmed
To experience thirst, appetite and
breathing,

Biological species are motivated
To "feed" in the solid, liquid and
gaseous

Chemical constituents necessary
To produce the ongoing biological
molecules

Whose energies are convertible into
action and growth.

As the prime energy impounder,
The vegetation on the land has to
have roots

In order to get enough water to cool
itself

So that it will not be dehydrated

While it photosynthesizes the radia-
tion energy of the Sun

Into the beautiful molecular struc-
tures

That provide the metabolic energy
exchange functions

Of terrestrial life support.

The algae floating in the sea Are au-
tomatically water-cooled.

Remembering that we are searching
for an understanding

Of humanity's functioning in Uni-
verse

And that we had thought it logical to
find first

A moving locus in Universe where
syntropy dominates,

We intuit excitedly that

The photosynthesis process

Of orderly molecule production
Indeed constitutes elegant manifest
That our planet Earth may be
One such moving locus in Universe
Where energy is accumulating syn-
tropically
Being conserved
In ever more compact and orderly
patterns,
As biological, crystalline,
Liquid and gaseous substances —
As a complementary process to the
entropic disorder
Multiplyingly manifest
By the omnientropic star centers

Of Universe.

Our First Manifest that our planet
Earth

Is just such a syntropic locus

Is the constant terrestrial acquisition
Of energy around Earth's spherical
surface

Provided by the stardust and cosmic
radiation,

The latter of which, including the
Sun's,

Is *not* reflectively redistributed

Back outward to Universe,

As would a reflective mirrored ball

Reject the radiation.

Instead, Earth is measurably im-
pounding the radiation

By progressive angular refractions,

Which separate

The originally lethal radiation dosages

Into nonlethal fractions

And shunt those radiations

From perpendicular to circumferen-
tial travel

Within the biosphere's concentric
mantles.

This refraction of radiation

Manifests mathematically orderly
angular shunting

Of the Sun's radiation into separately discrete frequencies As it is witnessed, for instance, in a rainbow, Or in the twilight sky's red, orange, yellow, green, Blue and violet horizontal stratifications.

This frequency modulating
Biosphere refractionating relay
Constitutes Manifest Number Two
Of our sought-for syntropic
Orderly energy concentrating
In a mobile locus of Universe.

Manifest Number Three

That our Earth is just such a traveling
locus

Of syntropic energy concentration
Is the demonstrable fact already
noted

That all the biologicals are continu-
ally multiplying

Their beautiful cellular, molecular
and atomic structurings

Which planetary metabolic conser-
vation

Constitutes a comprehensive pattern
integrity

Of orderly energy concentration.

Manifest Number Four that our
planet Earth

Is indeed the first known such syn-
tropic center of Universe Is the pro-
cessing formation

Of the Earth's chemically regenera-
tive topsoils.

And the Fifth Manifest is the inwardly
sunken

And progressively pressure buried
Coal and petroleum deposits

As high energy concentrate fossil fu-
els.

Having set out to discover

Whether humans had a function in
Universe

And having only found humans

As passengers aboard planet Earth,
We sought first to discover
Whether the Earth planet itself had
a function in Universe.
Saying to ourselves
That if the Earth's function could be
found
Then we might go on to find what
constituent functions
Of Earth planet's universal function-
ing
Man might, uniquely, be performing.
We have thus far found a five-stage
hierarchy of manifests
Clearly confirmatory

Of planet Earth's functioning
As the only thus far known traveling
focus

Of syntropic concentration
Of eternally regenerative Universe's
physical energies.

This confirms our assumption
That we had first to find such a syn-
tropic traveling locus

Within the total complementary
scheme

Of universal regeneration.

A Sixth Manifest of Earth's

Unique celestial scheme functioning

Is discoverable as the impoundment

Of star energy radiation

In both the Earth's atmosphere

And in its hydrosphere,

Which provides the weather and
ocean currents

And which maintains the critical
temperatures

Within which the biological prolifer-
ation of metabolic formulations And
feedback chemical process exchang-
ings must occur.

For an instance, the heating of the
hydrosphere

Involves the fact that water takes on heat and loses it At the slowest rate of all known substances.

The water temperatures of the Earth Vary between such close limits

That the average temperatures throughout the years

Have varied less than one degree Fahrenheit

Over all the years in which temperatures

Have been recorded.

Within these exquisitely stable limits

The metabolic regeneration of humans is sustained

As an ultimate focus of the metabolic interchange

And transformations of the total biological ecology complementation.

So delicate are the thermal balances involved

That healthy humans, for instance,
At all times manifest a temperature
Of 98.6 degrees Fahrenheit

No matter what their age,
Their geographical location,
Or their clothing may be.

Manifest Number Seven

Is that the progressive geological burying

Of the hydrocarbon energy concentrates

Ever more deeply

And at increasing pressures

Within the Earth's crust, or hydrosphere,

Transforms the biological residues
Into rigid, liquid or gaseous fossil fuels.

With this stored energy

Humans were advantaged

To power their myriad levers

Of industrial tooling

To permit humanity

To hook-up directly

With the inexhaustible energy
Of eternally regenerative Universe.
Thus graduating his metabolic de-
pendencies
From the frequently failing
Agricultural energy impoundments
To direct access to never-failing ce-
lestial sources.

All our Manifests

Combine to demonstrate that planet
Earth Is indeed one such energy col-
lecting, Concentrating, sorting and
conserving, Mobile and reliably in-
terorbiting

Orderly energy locus of Universe

For which we were seeking

As an only Sun reflectively invisible
complementary To the optically obvi-
ous energy distributing

Radiant stars.

Thus it is evidenced

That Earth's energy concentrating
Will culminate millions of years
hence

In Earth itself becoming an entropi-
cally radiant star In its turn exporting
energy

For the biological life support of hu-
manity Long since migrated to other
planets

Of other stars.

This is celestial confirmation
Of Boltzmann's law, Which states
in modernized effect That within a
closed system

There are oscillations and evolutions
Between high and low energy
Concentrations and diffusions.

New lows concentrate energy and
become highs

By exhausting yesterday's highs
As yesterday's exhausted highs
Become today's lows.

Boltzmann made his finding
While checking Avogadro's discovery

That under identical
Conditions of energy —
As heat or pressure —
All gases will disclose
The same number of molecules
Per given volume.
Boltzmann's law
Has been found to hold true
Outside the gaseous microcosm
Within which he found it.
It explains for instance
Not only the weather—
But also the *high* and *low* energy con-
centration dynamics
Of our biosphere.

And now we find it explaining Earth's
function

In the macrocosmic scheme of Uni-
verse.

We now come to man's unique func-
tion

Aboard the energy-storing planet
Earth

As distinctly differentiated out
From the first seven manifests
Of syntropic concentration
At this moving locus of Universe.

Man's mind-over-mattering
Is distinguishable as syntropic Man-
ifest Number Eight.

Our discovery and confirmation
Of man's having a unique and essen-
tial

Role in Universe

Will depend upon our developing a
clear understanding Not only of the
difference

Between brain and mind functioning
But also of their respectively unique
characteristics.

Starting a new line of attack we first
note That until the present moment
in history Humanity has not differen-
tiated lucidly Between the meanings
of the words *Brain* and *mind*:

They are often used synonymously
The pragmatist tends to discard
The word *mind* as embracing
What seems to him “untenable mys-
ticism”;

While the realist feels
That the word *brain*
Is adequate to all his needs.
Though I have discussed
My differentiating of
Brain and mind
With leading neuroscientists
And have received the tentative
Approbation of many for my hypoth-
esis,

And have exposed the concepts
To hundreds of audiences
Including audiences of teachers
And prominent journalists,
I have had no serious rejections.
When in the spontaneity of a mo-
ment
I chose the neurosurgeons
As the particular audience
Before whom to differentiate be-
tween brain and mind.
I did so
Because experience suggested them
to be
The most competent judges

Of the merit of my theretofore un-
published hypothesis And method of
its evolvment.

Having first resolved that
Only the known data
Either of inadvertent experience
Or deliberate experiment
Constitute the foundations
Of scientific exploration and discov-
ery

We will now go on to consider all of
such data

That I know to be pertinent
To the potential differentiation Of
brain and mind.

For the last three decades
Physiologists and neurologists
Have been probing the human brain
With electrodes, oscillographs, Po-
tentiometers, et al.

They have combined their instru-
mental findings

With behavioral observations

Of first, second and third parties.

The brain probers have identified

Several types of energy emanations

Both as amperage

And as wave-frequency oscillations

In unique magnitude sequences.

With vast numbers

Of permanent bed cases
In veterans' hospitals,
Many of those permanent invalids
Have willingly and interestedly sub-
mitted
To wearing
Of the sensationless
Head-mounted electrodes
Of the brain-probing scientists,
Whether they are awake or asleep.
While they sleep
The recording oscillographs
Scribe their wavy lines
Of magnitudes and frequencies.
These taped records are numbered.

When the patients awake
They are asked to describe their
dreams,
If any.

From time to time
The oscillographed wave patterning
Is found to be repeating An earlier
recording.

The scientists have found
That unique patterns of waves Char-
acterize specific dreams Which are
being re-experienced!

Sum totally to date
The scientists have learned
That the human brain

Is a vast communication system
Able to record and retrieve informa-
tion At varying rates of lag.

The brain is a special case
Concept-communicating system
Very much like a television set.

It's not just a telegraph wire,
Not just a telephone,
It is sensorially conceptual as well.

It deals with our optical receipts
As well as with our hearing,

Our smelling
And our touching.

In effect we have a telesense station
Wherein we receive the live news

And make it into a video-taped documentary.

In our brain studio we have made a myriad of such videoed recordings

Of the once five news,

All of which we hold in swiftly retrievable storage.

You are the TV studio's Production director— Surrounded by many repeater Cathode-ray tube sets — You say, “What is going on here?” As you view —hear, smell, feel —the news “Can I recognize this scenario?”

“Have I seen it before — Or anything like it?” Your phone-headed assistants search the files And plug in any relevant documentaries.

In any television station studio The director intuitively sorts and selects Resource sequences

From out of the myriad of Relevant scenarios live or replayed; Now putting the subject at long range, In full-environmental perspective And now at close range Scrutinizing some detail. He has other cameramen With their lenses aimed At static photographs, Others feeding angles

Of a host of yesterday's Documentary footage. He also has available Imaginarily invented footage As well as yesterday's experience clues Which may be appropriately considered At various stages for mixing in with the news.

Out of all this comparative viewing
The director then selects what he conceives of

As an appropriate action scenario
Of action to be taken now
In view of both the news challenges
And the documentary reminiscences.

Because the brain's TV prime re-
source

Consists of images,

We may call the total brain activity

Image-ination.

My youth began a half century before
TV.

During that half century

Those who wished to discredit

Another man's thinking, words or ac-
tions

Often said,

“Pay no attention to him;

He is full of imagination.”

This was tantamount to saying,

“He is a liar.”

TV society is not making that mistake
any more.

All we have ever seen
Is and always will be
In the scopes of our brain’s TV sta-
tion.

All that humanity has ever seen
And will ever see
Is his own image-ination;
Some of it is faithfully reported new,
Some of it is invented fiction or make
believe;

Some of it is doggedly retained “want
to believe.”

The physiologists and neurologists
Probing the brain
Say it is easier to explain
All the data they have
Concerning the general phenomena
Operative at the top of the spine
If they assume two prime variables
always to be operative.

They give one of them the name
“mind,”

The other they call “brain.”

The neurologists and physiologists
say

It is easier to explain all the data they
have

If they assume

The *mind* as well as the *brain* to be co-operative, Than it is to explain all the data

If they assume only brain to be operative.

And why is that?

It is because it is found that there are conversations Going on over this communication system —

Using its information retrieving and storing system — Whose conversational contents

Are in no way explicable

As being produced by feedback of the system itself.

Since neurologists and physiologists

Find it desirable

To assume the two phenomena,

The brain and the mind,

I became intent, if possible, to differentiate scientifically Between brain and mind.

I've developed my own

Experimental strategy of differentiation

Which was published in the 1965 spring edition Of Phi Beta Kappa's quarterly magazine, *The American Scholar*.

I have had generally favorable response to it,

I have also the favorable response

Of the two thousand neurosurgeons

When I delivered their Harvey Cushing Oration.

The physicists and mathematical physicists call me An "experimental mathematician." Because I reject axioms and I Explore mathematics experientially.

To present my scientific differentia-
tion

Of brain and mind

I proceed as follows —

First I say:

“I take a piece of rope and tense it.”

As I purposely tense it

I inadvertently make it tauter.

But I was not tensing the rope

For the purpose of making it tauter,

I was trying only to *elongate* the rope.

Its girth is inadvertently contracting
and

The rope is also inadvertently getting
harder.

In contracting and getting harder

The rope is going into radial compression In a plane at ninety degrees to the axis of My consciously purposeful tensing

And—in an inadvertently complementary manner—

Next I *purposely* produce compression.

To do so I take tempered-steel rods:

Each rod is three feet long

And one eighth of an inch in diameter.

If I take one rod by itself

Between the fingers of my right and
left hands

And press the ends toward one an-
other,

The rod will bend flexively.

Using uniform diameter rods

We find experientially

That two parallel rods cannot stand
closer to one another Than in tan-
gency of their circles'

Of respective cross-sectionalling.

A third parallel rod cannot stand
closer

To the other two than by nestling into
the valley

Between the other two's tangent circles,

With each of the three rods

Now in parallel tangency

With both of the other two.

The centers of their three circular cross-sections

Form an equiangular triangle.

Hexagons consist of six equiangular triangles.

Hexagons have six circumferential points

And a center point —seven in all —

All equidistant from one another.

Six parallel unidiameter rods

May now be stood in parallel tangency

To form an additionally complete

Hexagonal perimeter ring

Around the first seven,

Making a total of nineteen rods With each of the interior rods Surrounded tangentially by six others. Now eighteen more equidiameter rods Standing in parallel tangency Will form an additionally complete Hexagonal perimeter ring around The first nineteen rods,

All of which nineteen will also be nuclear, That is, be completely surrounded

By six others in closest tangential triangulation.

We may add more parallel tangent hexagonal rings, Each ring increasing the number by six more rods Than those of the previous outermost ring.

The outermost ring rods will always Be tangentially closest packed With only three other rods —

That is, they will be triangularly stabilized,

But not nuclear,

While all the internal rods will be nuclear, Having six tangentially parallel rods around each. However, only the rod at the center of them all Is the symmetrical nucleus of the whole aggregate. It is not irrelevant to note

That the rod-like Earthward trajectories

Of closely falling inter-mass-attracted raindrops Passing through freezing temperature

Nucleate in hexagonal snow-flake arrays Under just such close-packing laws.

The Greek architects found experimentally That when a stone column's height Exceeds eighteen diameters of its girth It tends to fail by buckling.

The length to diameter ratio Of compressional columns Is called its *slenderness* ratio. Steel columns are more stable Than stone columns.

Steel columns are structurally usable

With slenderness ratios as high as thirty-to-one.

But such columns are called long columns.

A short column is one whose slenderness ratio is far below that of the Greek column. Short columns tend to fail by crushing rather than by buckling.

A twelve-to-one slenderness ratio provides a short column.

For our experiment in *purposeful compression* we select a column thirty-six inches high with a minimum girth diameter of three inches. To produce this twelve-to-one short column we will take 547 of our uniformly dimensioned rods of one eighth of an inch diameter by thirty-six inches long.

Each rod by itself has

A slenderness ratio

Of two-hundred-and-eighty-eight-to-one, Which is a very highly buck-leable column As we have already discovered By compressing it axially, I.e., bending one end toward the other.

These 547 willow-slender rods

Will close-pack symmetrically

Into a tangential hexagonal short-column set

Of thirteen concentric rings around the nuclear rod.

Standing the hexagonal bundle ver-tically on a table

I bind them tightly together
With a steel wire
In an hexagonal honeycomb pattern
Similar to that of a wire rope section.
The maximum diameter of this
bunch

Will now be three and three eighths
inches.

I next put hexagonal steel caps
Neatly fitted over the opposite ends
Of the wire-wrapped
Steel-rod bunch.

The whole bundle
Is now integrated
As *a* single column

Three feet long

And three and three eighths inches
in diameter.

I put this stout short column's ends

Between the upper and lower jaws

Of an hydraulic press

And thus load the composited rod
column

In vertical compression

In the axis of the rods.

We know by our earlier trial

That each end-loaded rod can bend;

So end-loading them in a bunch

Results in each rod tending to bend in its middle But being closest-packed together

They cannot bend inwardly toward one another, I.e., toward the column's center rod,

They can bend only outwardly away from one another.

Because the binding wire around the rods can stretch, The binding wire wrapped around the rods yields To the severe hydraulic loading force While the bunched ends are held together By the hexagonal steel caps.

This results in the whole column

Becoming cigar-shaped as seen in vertical profile.

If loaded sufficiently, The bundle approaches sphericity.

This experiment indicates

That our purposeful loading of the column in compression Inadvertently results

In its girth increasing in diameter, Which brings about *tension* In the horizontally-bound wire— Which is to say, that while I was consciously applying Only a compressive force upon

the column's ends, An inadvertent
tension occurs in a plane At ninety
degrees to the axis Of purposeful
compression.

By two visibly different experiments,
One with rope and one with steel rods
— I have demonstrated experimen-
tally That tension and compression
Always and only coexist.

One can be at “high tide” of visibility,
And the other coincidentally
At low-tide visibility.

These always and only coexisting
variables,

(Where one is at high tide

While the other is at low tide)
Are typical complementaries
Which are not minor-images
Of one another but must always
Complexedly balance one another in
physical equations. Both demonstrate
ninety-degree inadvertent resultants.
This behavior is known as the Poisson
Effect.

Universe is the aggregate
Of all of humanity's
Consciously apprehended
And communicated experiences,
Which aggregate

Of only partially overlapping events
Is sum-totally a lot of yesterdays Plus
an awareness of now.

Yesterdays and now

Are neither simultaneous

Nor minor-imaged;

But through them run themes As
overlappingly woven threads, Which
though multiplied individualized
Sum-totally comprise a scenario.

No single frame either explains

Nor foretells the whole continuity—

The picture of the caterpillar Does
not foretell the butterfly,

Nor does one picture of a butterfly
Show that a butterfly flies.

I cannot think simultaneously
About all the special-case events
which I have experienced, But I can
think of one special set
Of closely associated events
At any one now.

Each one of these thinkable sets
Are what I call a *system*.

A system is a subdivision of Universe.
A system subdivides Universe
Into all of the Universe events
Which are irrelevant to the consid-
ered set

Because: (a) they are outside the system, Too macrocosmic and too infrequent Either to fit into Or to alter

The considered set.

Or irrelevant because (b) occurring

Too microcosmically remote

Within the system

And of too-high frequency

And of too-short duration

To be tunable with

Or to alter significantly

The considered think-set.

After dismissing momentarily

Both the macro and micro inelevancies

There remain

The few clearly relevant sets of associated events Which constitute the system.

We find that all the systems which subdivide Universe Into insiderness and outsiderness, Are concave on the inside And convex on the outside.

We next observe that

The concave and the convex

Always and only coexist.

A rubber glove on my left hand

Has an external part which is convex

And an inside which is concave.

If I strip the rubber glove off my left hand, It now fits my right hand.

What had been the concave

Becomes the convex

And the convex becomes the concave.

So we find these always and only coexisting Complementaries are behaviorally interchangeable— The tension could be the compression And the compression could become the tension. Because in one case the girth Went into tension And in the other it Went into compression.

Please do not think

That we have forgotten

That we are concerned here

With *scientific*, i.e., experimentally based, search For a means of differentiating neatly Between brain and mind.

Experimental demonstration

Of a plurality of special-case instances

Of always and only co-occurring phenomena

Are prerequisite to generalizing

The brain-mind differentiation.

I will give another example

Of always and only co-occurring phenomena.

Physicists today observe
That the proton and neutron
Always and only co-occur.

While they are not “mirror” images
of one another

And have different weights,

They are transformable

One into the other,

And are thus complexedly complementary, As are isosceles and scalene triangles.

None of the angles and edges of either need be the same

To produce triangles of equal area.

And the sums of the three angles of each

Will always be one hundred and eighty degrees.

The mathematical balancing or complementation

Of the proton and neutron are analogously balanced, Each one having two small energy teammates.

The proton has its electron and its antineutrino, And the neutron has its positron and its neutrino.

And each of these little three-member teams

Constitute what the physicist calls *half-spin* or a *half-quantum*. They complement one another

And altogether comprise one unit of quantum.

We have now discovered experientially

An always and only coexisting tension and compression;

An always and only coexisting concave and convex;

And an always and only coexisting proton and neutron.

We next consider the *Theory of Functions*

Which embraces all of these terms.

X and Y are the always and only co-occurring

Covariables of the theory of functions

We can have X stand abstractly for *tension*

Or for *convex* or for proton

And we can then have Y stand abstractly

For *compression*, *concave* or *neutron*, respectively, In each of our foregoing *always and only co-occurring* Experiential observations of interessential relationships.

We can go further still:

We have the word “relativity.”

We cannot have relativity

Without at least two phenomena to be differentially related.

There is also the word *complementarity*.

We cannot have one phenomenon complemented

By less than one other phenomenon.

The words *complementarity* and *relativity*

Do not identify identical physical phenomena.

We need to discover

Whether there exists a generalized
concept

Which embraces both phenomena,
And we find that the ponderable
physical energy Universe That is,
physical universe,

In contradistinction to the Universe's
Weightless, metaphysical aspects,
Does embrace both *complementarity*
and *relativity*.

B5

I started our brain-mind differentia-
tion By saying, "I take a piece of rope."
I've done this before many audiences,
And no audience has ever said, "You

don't have a piece of rope." But the fact is I *didn't* have a piece of rope. Nor has anybody ever said, "Is it nylon, manila or cotton?" Or, "What is its diameter?"

My statement was a "first-degree scientific generalization." In literature the word *generalization* means Covering too much territory Too thinly to be convincing.

However, we have in science a term "generalization," Which does not have the literary connotation.

A generalization in science refers to A principle discovered by experiment To be operative in every special case.

If we find any exception,

We no longer have a scientific generalization.

Scientific generalizations are extraordinarily meaningful, As for instance was the discovery

Of the principle of leverage,

Which probably came about as follows: Occasionally humans who have penetrated Wilderness forests

Encounter trees fallen slantwise
Across their line-of-sight path
In their chosen direction of travel.

It is obviously quicker

To climb over the fallen tree

Than to try to walk around it.

They find it logical

To walk along the top of the fallen
tree

When it leads in the direction of preferred travel
Or toward the next opening in the forest.

As they walk along the horizontal trunk
They feel the tree to be progressively sinking.
As they move farther it tips earthward
At a faster rate.

They retreat —

Back along the tree trunk.

Experimenting, they find the tree

On which they are walking

Is lying across another tree.

And then they observe

That the end of the tree behind them,

Opposite to the direction

In which they were walking,

Is itself superimposed

By a third and very mighty tree.

Looking the situation over they find
That as they walk outward — journey-
ward —

Along the first tree

That its slow but accelerating de-
scent

Coincides with the other end's

Lifting the trunk of the massive tree.

Never having heard of a lever

Or fulcrum,

They say, “That big tree, which is be-
ing lifted

Is much too big for me to lift.”

They go over to the massive tree And
attempt to lift it directly With their
arm, back and leg muscles. It doesn't
budge.

Shaking their heads in surprise,
They once more try walking along On
the first tree.

Again the massive tree rises easily.

And Neanderthal man probably
thought

As it rose

That he had found a magic *tree-lifting*
tree.

And he probably dragged it home
Where the tribe worshipped it Until
suddenly his wife said, “Any tree will
do that lifting.” And sure enough,

Not only would any tree do
But so too would any steel bar,
Or glass reinforced plastic bar, Or any
small-toothed gear, Or a large-toothed
gear.

This man discovered
A true scientific generalization
Which always holds true Under any
circumstances.

The lever works equally well
Anywhere in Universe.

It can be made of many materials, It
can be of any size.

Its behavior follows incisively pre-
dictable Mathematical laws.

It was a first-degree generalization
When I said, “I take a piece of rope,”
And in describing my purposeful
tensing of it.

There was nothing I said
Regarding the piece of rope
That in any way contradicted
Any experience that anybody
In any audience has ever had
With any piece of rope.

It is a second-degree generalization

To find an additional generalized principle

Operating within the generalized piece of rope;

Such as the always and only

Coexisting tension and compression.

It is also a second-degree generalization

To find the concave and convex within generalized systems.

It's a third-degree generalization

Or a generalization of a group of generalizations,

To develop the Theory of Functions

Wherein the X and Y could stand

For any one second-degree coexistence generalizations.

It is a fourth-degree generalization

To develop the word “relativity.”

And it’s a fifth-degree generalization

To employ the word “Universe”

To embrace both the relativity and complementarity.

The degrees are then progressive omnibus stages

Of generalizations of generalizations.

The generalized principles Are all interaccommodative. None contradicts another; Nor do they contradict Any combination Of other scientific generalizations. They have complete integrity. One is associable with the other.

The a priori integrity Of scientific generalizations Is manifest in all the phases of Universe As we explore it progressively.

Man does not create, Man cannot create. Creation is a priori, Creation is the gamut Of generalized principles Which scientists can and do discover. And inventors can employ In special-case uses.

Man can invent, Which means “bring in,” The special-case use Of generalized principles And of combinations of them. But man cannot design Or invent

A generalized anything.

We play tension and compression with a little dog. He uses compression of his teeth

As we pull on the stick and tense it,
And the dog uses

The convex and concave surfaces of
his teeth

And his protons and neutrons Are in
beautiful co-ordination Without his
even knowing it. There is no expe-
rience with dogs That suggests that
they could ever Develop the Theory of
Functions.

Some living creatures' brains De-
velop conditioned reflexes To special-
case type events, Which produce
behaviors resembling a first-degree
Sense of generalization.

But there seems to be no indication
That they ever evolve

A generalization of a generaliza-
tion, And they certainly do not get to
Fourth- and fifth-degree generaliza-
tions.

We find that brains deal

Always and only with special cases.

We remember the special-case
name—Tim Smith— Which we may
not need to recall For thirty-five years,

Yet it occupies its own special Physi-
cal brain's “after-image” locale— Pos-
sibly its own neuron.

We find the brain always dealing with special cases

And the mind dealing with generalizations.

The generalizations have no weight;

Only special cases have weight

Or any other physical characteristic.

All scientific generalizations

Are pure metaphysics.

All metaphysics are weightless

And physically unlimited.

A triangle is a generalized principle

And a triangle persists conceptually

As a triangle,

Independently of size,

Color, weight, taste, texture or time.
Searching for a function of man in
Universe

We found first
A phase of Universe
Which needed counterbalancing.
This was the entropic, expansive;
Increasingly disorderly, radiantly ex-
plosive Universe.

In answer we found Earth to be a
sphere

Wherein Universe was collecting
Sorting, concentrating, and storing
energies

In mathematically orderly ways

Such as by refraction, crystal growth,
Photosynthesis or molecular forma-
tions.

Then we found that all the biologicals
Were antientropic.

I found myself publishing in '49,

As did Norbert Wiener in another
book at the same time, Unwitting of
one another's coincidental

Perceptionings and simultaneous
disclosures

That all biological life is antientropic

And that the human mind

Is the most powerfully effective

Antientropy

Thus far evidenced.
It was only a few years ago
That it seemed logical
To cease speaking of the phenomena
involved
As antientropy,
Entropy being disintegratively nega-
tive;
Antientropy was, in effect, a double
negative
Used to express a positive.
So to render the concept positive
And to identify its kinship
To synergy,
I started speaking of it as *syntropy*

As the positive complementary
Of the negative entropy.
Now I surmise
That the speculative thought
Of the human mind —
In contradistinction
To the physical experience recalls
Of the physical brain —
Is physically nondemonstrable,
Ergo, metaphysical,
But its teleological activity,
Which subjectively evolves general-
izations

From multiplicities of special-case experiences (And thereafter employs the generalizations

Objectively in other special-case physical formulations) Can be detected

Through man's intuitive recognition Of the weightless pattern integrity per se, Ever weightlessly, abstractly present in the original Discovering and inventing events.

Scientific generalizations

Have no inherent beginning or ending.

In discovering them

Mind is discovering a phase of Universe

That is eternal.

The physical human and its physical brain Unmonitored by mind

Are not only less effectively syntropic

Than other biological species;

They are often consciously

Far more entropic

Than any other species

And are only subconsciously syntropic.

Human's average birth weight of seven pounds is multiplied sometimes as much as fiftyfold by syntropic chemical combining of other protoplasmic cells

Taken in as food;

With gases and liquids

Taken in by breathing and drinking.

But humanity's syntropic cell multiplication

is outperformed greatly by trees, whales, elephants and other living organisms.

Remembering that antientropy, or syntropy means, on the one hand,

Reversing the physical trending

Toward greater disorder

And, on the other hand, means Con-
verting the relative disorder To in-
creasingly orderly physical arrange-
ments.

We found that the human's bio-
logical role is minor, But that his
metaphysically-sorting mind-role

Is the paramount syntropy,

For it reviews and sets in fundamen-
tal order

The randomly, ergo disorderly,

Physical event experiences of the
universal environment;

And the magnitude of physical rearranging
In progressively more orderly patterns

Metaphysically conceived by the human mind
Is overwhelmingly greater
Than that produced by the
Physiological organisms
Of any other biological species.

One mind can design orderly machines,

Such as the steamship *Queen Mary*,
Or in a continental highway system
In physical magnitude which dwarfs
Any biological undertaking,

Even that of coral-reef building By
minuscule coral creatures.

It must be remembered

That syntropy also means

To collect, concentrate, and store.

When I speak to an audience

As recounted before,

Saying, “Let us take a piece of rope . . .

To demonstrate the generalized rope
concept—

I am drawing on

A multiplicity of special-case rope
experiences As a brain-stored re-
source of that audience, Probably
amounting to over a hundred expe-

periences each: With different kinds of pieces of rope Ergo —I am drawing upon a memory resource Of more than one hundred thousand experiences With as many different pieces of rope, When I speak to an audience of one thousand.

So my first-degree generalization Reduces our experience processing One hundred thousandfold.

Our second-degree generalization

Reduces the experiences multi-billionfold, And each further degree of generalization Multiplies the number of special experiences From which the generalization is extracted.

The third-degree generalization, Consisting of the theory of functions, Embraced all the always-and-only co-occurring phenomena Of a plurality of second-degree generalizations.

When we get to the fifth-degree generalization, Universe,

We have increased our numbers-of-experiences base

To all the experiences

Ever known to and remembered by
humanity, Including all the experi-
ences

With all the atoms and their nuclear
components.

Thus, the human mind

Has collected, combined and refined

All experiences of all humanity,

In all-remembered time,

Into one single concept,

Universe,

Which is, *ipso facto*, The ultimate gen-
eralization.

Clearly it is seen

That man's metaphysical mind
Demonstrates the most effective

Syntropic capability evidenced in
Universe Excepting that of the uni-
versal mind's Cosmic syntropy

As manifest in the *eternal design com-
plex*, Comprehensively and synerget-
ically interaccommodative As eter-
nally regenerative Universe, Which
cosmic syntropy combines

All the metaphysical integrities As
well as all the physical patterns.

Human mind's metaphysical syn-
tropy potential Caps all the syntropic
sequences

Operative in our Spaceship Earth's
Comprehensive syntropic system,
Which, as we remember, started its
analysis

Hoping to be able

To identify humanity's function in
Universe

And thereby to gain insights

Into the respective functions Of the
mind and brain.

We started looking for

The syntropic complementation

Of the entropic energy expenditures

Of all the stars

And found our own Spaceship Earth

To be the most immediate demon-
stration

Of the energy aggregating

Of star radiation and stardust,

And we observed

The progressive impoundments by
the atmosphere And oceans, of energy
as heat, Refracted into circumferen-
tial

Weather and ocean currents,

Which energy impoundments pro-
duced the exact Temperatures, pres-
sures, and chemical wherewithal For
developing the vegetational photo-
synthesis Of land and sea.

And we went on to find that
The effect of all of this is
To reduce the randomly received en-
ergies
Into superbly orderly
Molecular and cellular structurings
And to multiply that highly concen-
trated
And chemically locked-in
Energy — as hydrocarbons
Which were and are continually
Being buried deeper and deeper
Within Earth's agglomerate surface,
Where the pressures and heat
At a kilometer's depth

Begin to convert the hydrocarbon fossils into petroleum As an even more compacted energy conserve.

And beyond these physiological syntropies We find the mind of man Discovering the generalized principles Operative weightlessly and eternally Everywhere and everywhen In Universe, Knowledge of which principles Permits humans to employ The vast extraterrestrial energies To do evermore rigorously scientific, Evermore efficient rearranging

Of the random terrestrial environment;

Thereby to regenerate and sustain
Evermore years of evermore human-
ity's lives. Humans will learn how
to concentrate Evermore minuscule
packages of energy To impel human
travelers — So that when the time
comes, Millions of years hence, For
the Earth-concentrated energies To
become an energy reradiating star,
The humans will have migrated Safely
elsewhere in Universe

To perpetuate its supreme syntropic
functioning In Scenario Universe As
the ultimate sorting, Rearranging,
compacting

And logic-employing local monitor
Of the syntropic phases of regenera-
tive Universe.

Einstein,

As metaphysical, weightless, human
intellect, Took the measure of the
weighable physical And wrote

The most economically formulated
equation Mathematically possible,

For it put on one side of the equation

The physical Universe, which is to be
equated, Represented as “E”—

Because all that is physical is energetic — And on the other side of the equation Einstein placed the two terms

Minimally necessary to disclose a relationship.

For these two terms he employed

“M” (For energy associated as matter) and

“ c^2 ” (For energy disassociative as radiation), Expressed as c^2 because

c is the speed of light

In any one linear direction;

But light goes omnisciently in a spherical wave Whose surface increases as the second power Of the linear speed of radiation.

I

Ergo: Einstein's equation

Is $E = Mc^2$.

And in it the velocity of c^2

Is the constant and known term

And the amount of energy

Compacted in any given mass

Can be determined

If the given E to be analyzed

Is measured.

Einstein's equation

Was intuitively formulated

From the experimentally Harvested data of others, But proved to be correct When the subsequent fission occurred.

Here we have the metaphysical intellect Taking the measure of

And mastering the physical.

We have no experimental data That in any way suggests That this process is reversible And that energy can or will Take the measure of

And write the equation of intellect
Or the equation of the metaphys-
ical. This is an example of one Of the
great generalized principles Opera-
tive in Scenario Universe, Which is
the principle

Or irreversibility

Of intellectual processes.

For the syntropic metaphysical Is
not a mirror-imaged reversal Of the
entropic physical's Disorderly expan-
siveness.

The fact that man, Using only his
physical brain And not his mind, Can
be the most

Entropically destructive organism
Does not contradict
The irreversibility principle
Unique to maximally syntropic
mind.

Humanity's imaginative invention
of Hell Discloses its subconscious
awareness Of the ultimate entropy.

Thus we find the metaphysical
Apprehending and embracing,
Comprehending, cohering and con-
serving

The integrity of Scenario Universe's
Never exactly identical recyclings.

The physical tries to destroy

And dissipate itself.

The metaphysical law masters and
conserves The evolutionary integrity.

Though humans are bom equipped

To participate

In the supreme function of Universe.

This does not guarantee

That they will do so.

Humans are bom utterly helpless,

And must through trial and error,

By physical experiments,

Discover what the controlling family

Of generalized principles may be,

Which principles must be employed
by humans To fulfill their Universe
function, But in order to discover the
latter

They first must discover the over-
whelmingly superior efficacy

Of the mind, as compared to muscle.

And humans also must discover That
the physical,

Which they tend to prize as seem-
ingly vital To their regenerative con-
tinuance, Is utterly subordinate

To the omni-integrity of metaphysi-
cal laws, Which are discoverable Only
by mind.

Only if man learns in time
To accredit the weightless thinking
Over the physical values,
In a realistic, economic and philo-
sophic accounting Of all his affairs,
Will the particular team of humans
Now aboard planet Earth Survive to
perform their function — When na-
ture has an *essential*

And intercomplementary function to
be fulfilled And the chances of devel-
opment Of that functioning capability
Are poor.

Nature makes many potential “starts.”
As for instance

All the vegetation which impounds
the Sun's energy Must be regenerated
and multiplied.

But it cannot have its progeny Within
its immediate vicinity, As the tree's
shadow Would prevent its young
From impounding the Sun's radiant
energy.

Wherefore all the trees
Launch their seeds
Into the air or upon the waters
To drift to chance landings,
Where the seeds may be favorably
nourished
And grow.

The chances of such auspicious landing

Are so unfavorable

That nature must send

Billions times billions of seeds away

From the parent vegetation,

Which, though potential of complete success,

May never germinate and prosper.

The airs and waters

Of the planet Earth

Are filled with the aimlessly migrating seeds.

Because the chances of humanity's

Self-discovery of the supremacy of
the metaphysical

And the corruptibility of the physical,
While coming from an utterly help-
less start,

Are very poor,

The probability is

That for each of the billions of stars

In the billions of nebulae

There are several planets

Where energies are being

Most effectively conserved—

Which means

By the metaphysical mind.

Ergo: there are probably myriads Of successful,

Consciously operated planets Despite greater myriads of failures.

One physicist remarked recently, “I am tiring of the nonsense legend Which finds one end of Universe closed, By a required beginning event And the other end open to infinity.” The concept of primordial — Meaning before the days of order— Which imply an a priori, Absolute disorder, chaos, *a beginning* (“The primordial ooze-gooze explosion”) Is now scientifically invalidated, *passd*.

The physicist finds That the proton
and neutron Not only always and only
co-occur, And are interchangeably
transformable, But also could not oc-
cur independently Anymore than a
triangle could occur With only two
points.

We cannot have disorder

Because Universe is not monologi-
cal;

It is *pluralistic* and *complementary*,

And we are founded on

The orderly base

Of the proton-neutron tripartite
teams

Of six unique energy integrity vectors.

Men at the time of World War I

Were dealing in radio waves

That were a mile long.

Gradually they found shorter waves

And found ways of sending,

Transmitting and receiving

At ever shorter and shorter wavelengths
And at higher and higher frequencies.

A quarter of a century later,

When we came into World War II

The electronics scientists

Were working at wavelengths Of
about two meters.

After World War II they were working
With what we call microwaves,
Operating at fractions of meters
And at fractions of centimeters or
millimeters
Of wavelengths.

The higher the frequency
The shorter the wavelength—
And the more tendency
To interference
With the waves of other phenomena.
Also: the higher the frequency,
The lower the energy required

To power the propagation Of the message-carrying Electromagnetic waves.

Therefore, these short, high frequencies Could only be sent

Relatively short distances.

They interfere with the walls, hills or trees. The long waves are not interfered with By such local obstacles.

Those who employ

Very high-frequency short waves Do not have to have an operator's license. Their short waves are so interrupted By local events

That the walkie-talkies, for instance,
Cannot carry far enough

To interfere with other stations such
as

The commercial or government traf-
fic, Because they do not interfere

With longer waves of the commercial
bands.

It is also a characteristic of these
waves And of all radiation

That when the wave propagation

Is beamingly aimed

Perpendicularly outward from Earth's surface They experience little or no interferences, Once outside our atmosphere, strato-, and ionospheres, Other than by collision with meteorites And other celestially traveling objects.

There seems to be no impedance
And no inherent limitation to the distance

Which such electromagnetic wave signals can go

Once outside the Earth mantles.

As far as we know,

The waves can go on forever in Universe—

Unless they hit some object,
And when they hit an object they lose
some energy

Then bounce away
And keep on going
In a new direction.

Now let us turn our thoughts
To the neurologists who we left prob-
ing the brain with electrodes.

I find that the neurologists do not feel
it to be shocking

When I suggest to them
That it could be demonstrated phys-
iologically

Within the next two decades

That what man in the past has been
calling telepathy

May in fact be ultra, ultra-high fre-
quency,

Electromagnetic-wave propagation.

Almost everyone has had

The strange sensation of telepathy

Occurring as various kinds of aware-
ness,

Anticipations or sensing

Of the imminent presence of other
persons.

I myself had a very extraordinary ex-
perience

With our first child,

Who died just before her fourth
birthday.

Born at the time of World War I,
She first contracted flu,
Then spinal meningitis,
And, finally, infantile paralysis,
Being paralyzed and unable to move,
As do other children,
But with her brain unimpaired.
She manifested the normal child's
innate drive

To apprehend then comprehend
All that her eyes could see,
Her nose smell,
And her ears hear.

She had to obtain
The tactile information
By other means
Than with her own hands;
So the tensive-compressive,
Soft, hard, light, heavy,
Rough, smooth, wet, dry,
Hot, cold, cool and warm character-
istics
Of the constituents of her environ-
ment
She had to sense vicariously.
And in so doing,
She demonstrated the extraordinary
Compensating faculties

Innate in all humanity,
Which are, however,
Brought into use
Only under very special conditions.
She was fantastically sensitive
To the cerebrations of all humans in
her vicinity.

She was most frequently attended
By my wife, myself
And two trained nurses.
Often she had two of us with her.
Time and again when we were
About to say something to one an-
other

Which was not the kind of concept
That would be known to a child of
her age, She would say what we were
about to say Before we had time to say
it.

This happened so many times

As to convince us that our formulated
communications Were obviously be-
ing transmitted through her.

This experience persuaded me that
telepathy Might well be very short-
range, Very high-frequency

Electromagnetic-wave propagation.

Assuming this to be so

We arrive at some new vistas of thought.

When we *broadcast* energies They are very greatly dissipated.

Radiant energies can be concentrated, however, By reflective beaming and lensing, As was candlelight in a lighthouse.

Reflectors and lenses concentrated them.

Reflectively beamed seaward, They were sometimes Visible for ten miles.

After World War I the only unused

Electromagnetic-wave-band frequencies available were by international conventions preassigned to the then developing,

but not as yet inaugurated prime television-developing countries.

These available bands

were in the very short-wave

and high-frequency area,

where interferences were so frequent and great

that beyond-the-horizon broadcasting

was physically impossible.

Unfamiliar as yet with the beaming
technique

And its more economic potentials,

It was the accepted professional

Engineering dictum

That if we were going to have

Worthwhile, desirable, and popularly
sustained —

And therefore commercially ex-
ploitable —

Post World War II TV programs,

We would not be able to afford

Having top-rank artists

And high-cost programs

Moving to every little local center

To be locally broadcast.

Therefore we would have to have

All expensive TV programs

Developed at central places

And distributed by cable

To secondary broadcasting stations.

During World War II

The discovery of the

Shorter and shorter waves and the
capability

To receive and transmit them

Brought about after the war

The facile use of short waves,

Which waves were found to be short
enough

To be easily reflected.
If the wave is a mile
In length, we have to have
A reflector over a mile in size.
As with optical light reflection,
We have to contain the wavelength
In order to beam it.
Wherefore after World War II
When television was instituted
We had masts at horizon-to-horizon
points,
Well above the interference patterns
Of trees, mountains and buildings.
Instead of sending the radiation in
all directions

We concentrated it in one direction,
Which greatly conserved it.
And energy boosted the signals
At each horizon relaying transceiver,
Reconcentrated them,
And sent them onto the next horizon
point.

In this manner the TV programs
Are now transmitted around the
world's local national domains By
satellite-relay transceiver.

Recognizing that it is possible
To conserve energies by reflection,
As well as to reach
Great distance by beaming,

We can point out that it is also possible

That our human eyes are just such

Very high-frequency electromagnetic waves

Propagating and receiving reflector relays,

As with the original propagation Occurring in the brain And the transceiving Relayed by our eyes.

I have had extraordinary experiences With audience after audience Around the world.

I find that eyes tell me so much That
I am able to go into a room Wherein
some verdict has been adopted, And I
find that

I know what the verdict is Before any-
one has spoken Audible words.

And I am confident

That I first “saw” the message

In the people’s eyes

And not in their facial expressions,
Which were mixed and arbitrarily
fixed The speed of light, Ergo, of the
sight functioning, Which is approxi-
mately

Seven hundred million miles per
hour, Is such an enormous velocity
That we mistakenly sense it Only as
“instantaneous.”

When I was young

A camera required a minute’s expo-
sure. By improving film chemistry
And lens refinements

As we entered World War II,

A thousandth-of-a-second exposure
Had become adequate

For premium photographic equip-
ment.

Now *adequate* exposure

With some scientific equipment

Has been lessened
To one millionth of a second
For producing a superb photograph.
In other words, the rate
At which we can “get the picture,”
And the rate at which we can trans-
mit it
Is approximately instantaneous.
It may be true
That our eyes are electromagnetic-
wave transceiving relays.
If so, it is possible
That seemingly instant exchanges
between humans

May become scientifically accomplished through telepathy,

And people may soon be able

To know one another's thoughts,

Which will mean

That people will be prone

To do good thinking

And also to co-ordinate

With one another

As never before.

In this connection it is recalled that when

Artzybasheff made a picture of me

For the cover of *Time* magazine,

He pictured my head as a geodesic sphere.

The shape of my head is

Of course not that of an exact sphere.
Everything about my features Except
my eyes

Was purely mechanistic, And were
caricatured as mechanical devices.
Though I sometimes read of myself As
being almost inhumanly mechanistic

I myself think of the whole physical
Universe As governed so exquisitely
by generalized laws As to have to con-
clude

The whole of physical Universe Is
technologically governed, But I find
life to be weightless And only meta-
physical

And I know that I am inspired En-
tirely by life

And its needs and potentials. So I do
not tend to think Such characteriza-
tions by an illustrator To be accurate.

Yet this *Time* cover picture seems to
me To be the best portrait of me That
I recall having seen.

I never met Artzybasheff He is now
dead.

But he sent word to me

Before his death, Relating his special
satisfaction With this particular por-
trait of me.

He also sent word

That the only features that mattered
to him Were the human's eyes.

Before he painted my portrait

Time-Life photographers

Took many pictures, But only of my
eyes. Artzybasheff did my portrait
Entirely from those eye photographs,
And all the foregoing

Discussion of the transceiving, Beam-
relaying functioning of the eyes May
explain why

It became the optimum likeness of me Despite tire mechanistic caricaturing.

Now let us employ

All the foregoing discussion of wave phenomena And speculate as to its significance— And remembering that, lacking interference, Electromagnetic waves Apparently can travel on

At their seven-hundred-million-miles-per-hour rate For what may be limitless periods of time.

Let us assume a cloudless night
Somewhere around the spherical sur-
face Aboard our space vehicle Earth,
And a human looking out at the stars
And inspired by the celestial splendor
To be thinking profoundly.

It is quite plausible

That his skyward focused eyes

May beam his thoughts, Quite un-
beknownst to him, Out through the
shallow atmosphere Into the approx-
imately interference-free Macrocos-
mos.

And there is no reason why

The eye-beamed thoughts

Might not someday
Bounce off some other celestial body,
As humans have already
Bounced radio signals off the Moon
And back to Earth
By carefully angled beaming.
And as at present,
To avoid the circumferential
Obstacles of our planet,
Electromagnetic-wave-carried pro-
grams
Of TV and voice
Are being relay-bounced
Around Earth by the
Communication satellites,

Holding their flight positions

Outside the atmosphere.

And the thoughts of our specially assumed human

Who is inadvertently beaming

His thoughts into the cosmos

Sends them on a path

Which results in their

Being uninterfered-with for millenia.

When finally they do interfere with

And bounce off a celestial body,

They are accidentally aimed back to where

Earth will be several millennia after
their original dispatch.

At that moment of rereaching Earth
planet

An individual on board Earth
Is looking out at the night heavens
And inadvertently tunes in the millennia-
ago

Telepathy-dispatched thoughts
Through his transceiver beam-
relaying eyes,

And the thought message is moni-
tored into his brain, Whereby the in-
advertently receiving human
Thinks he is thinking

A novel and interesting thought —
And all of the foregoing
Seems to indicate the possibility
That the family
Of generalized principles
Being eternally valid independently
Of special-case idiosyncrasies
(Ergo, of the language of its thinker)
Might be bouncing around in Uni-
verse

To be tuned in
Here and there from time to time
On various planets
By various humans
Of various planetary crews.

And it may be thus
That knowledge becomes tune-in-
able
By humans on planets or wherever
they may be.
This telepathic tuneability may oc-
cur
As the humans complete
Enough experiences
And do enough generalized thinking
about them
To be able intuitively
To comprehend the significance
Of the thoughts which they are
Inadvertently receiving.

Certain it is on my own part
That I have made several mathemat-
ical discoveries Of fundamentally un-
expected and unpublished nature. As
I realized my discovery
I always have had
The same strange sensation
That this newly realized conception,
Previously unknown to terrestrial
humans,
Had been known
To the human mind
Sometime vastly long ago.
Since whatever life may be,

It has no weight, As has been discovered
By weighing individuals At the
moment of their dying,

It is also possible,

That whatever our abstract

Metaphysical beings may be

Their complex weightless organic
pattern integrity Might also be trans-
mittable

By electromagnetic waves,

Whereby humans may already have
been, Or Earthians may sometime be-
come Beamed consciously and pur-
posefully To elsewhere in Universe

Traveling at seven hundred million miles per hour, Rather than at the ponderously slow rate Of twenty thousand miles per hour to which Our present Earthian rocketing is confined.

And wherever they came from, The thoughts arranged in this book Are discoveries Of its author

Since he first came in 1913 To think That nature did not have Separate departments of Mathematics, physics, Chemistry, biology, History and languages, Which would require Department head meetings To decide what

to do Whenever a boy threw A stone
in the water, With the complex of con-
sequences Crossing all departmental
lines. Ergo, I came to think that na-
ture Has only one department — And
I set to discover its Obviously Omni-
rational

Comprehensively co-ordinate sys-
tem, And thankfully found it.

3 Love

Is omni-inclusive, Progressively exquisite,
Understanding and tender And com-
passionately attuned To other than
self.

Macrocosmically speaking Experience
teaches Both the fading away Of re-
mote yesterdays And the unseeability
Of far forward events. *Microcosmicdly*

speaking Science has proven The absolutely exact Also to be Humanly unreachable, For all acts of measuring Alter that which is measured.

Conceptual totality Is inherently prohibited. But exactitude can be bettered And measurement refined By progressively reducing Residual errors, Thereby disclosing The directions of truths Ever progressing Toward the eternally exact Utter perfection, Complete understanding, Abso-

lute wisdom, Unattainable by humans
But affirming God Omnipervasive,
Omniregenerative, All incorruptible
As infinitely inclusive Exquisite love.

While humans may never Know God
directly They may have and do Pal-
pitatingly hover Now towards, now
away. And some in totality Come
closer to God.

And whole ages of peoples In various
places Leave average records

Garden,

*Shah Abbas Inn Isfahan September 6,
1970*

Of relative proximities Attained to-
ward perfection.

Persia — positioned

At demographical center Of all Earth-
ian peoples — Has been traversed by
many Into and beyond The vanishing
past

And will be traversed by many Into
and beyond

The foreseeable future.

And at this most crisscrossed

Crossroads of history The record is
left

Of the relative proximity Averagingly
attained To that which is God.

The Persians' record
Is tender and poignant Sheltering,
embracing, An omnipoetical Proxim-
ity to God.

4 The Lord's Prayer

I feel intuitively that what is now identified as the Lord's Prayer was digested through ages from many philosophies in many lands. Also I feel intuitively that in relaying the Lord's Prayer from country to country, from language to language, from one historical period to another that many at first small, then later large alterations of meaning may well have occurred. It seems unlikely to me

that the prayer's original conceivers and formulators would have included a bargaining proposal such as asking forgiveness of our trespasses or debts because we agree to forgive others. It also seems illogical to remind God of anything or to ask special dispensation for self, or to suggest that God doesn't understand various problems, or that God needs earthly salesmen for his cause. Before going to sleep, even for short naps, I always re-explore and rethink my

way through the Lord's Prayer. And as I thought it through tonight, August thirteenth, 1966, I decided to inscribe it on paper.

Oh god, our father—

our furtherer

our evolutionary integrity unfold
who art in heaven — who art in he-
even

who is in everyone hallowed (halo-
ed) be thy name

(be thine identity)

halo-ed—

the circumferential radiance

the omnidirectional aura of our
awareness of being ever in the pres-
ence of that which is greater, more
exquisite

and more enduring
than self—

haloed be thine identification

which is to say

the omnidirectional

vision and total awareness

is a manifest of your identity which
name or identity is most economically
stated as: truth is your identity —

by truth we mean the ever more
inclusive and incisive

comprehension which never reaches
but always approaches closer to

perfection of understanding and our
awareness is ever a challenge by truth
—

truth is embraced by and permeates
the omnidirectionally witnessible
integrity of omni-intertransforming
events which ever transpire—radiationally
which means, entropically in the
physical; and contractively — gravitationally—
which means, syntropically in the

metaphysical both of which — are characterized by either the physical expansions toward ever-increasing disorder, of the entropic physical;

or the metaphysical contractions toward ever-increasing order of the syntropic metaphysical; and these pulsating contractions-expansions altogether propagate the wave and counterwave oscillations of the electromagnetic spectrum's complex integration — of the omnienviron-

ment's evolutionary reality and its concomitant thought regeneration which altogether constitute what we mean by the total *being*.

Hallowed or haloed "be thy name," which means your identification to us, Your kingdom come — your mastery of both the physical and metaphysical universe emerges as the total reality your will be done — your will of orderly consideration and mastery of the disorderly be done on our specialized case planet and in our specialized case beings and in our special-case consciousness and in

our special-case intellectual integrities and in our special-case teleologic integrities as it is in your generalized case he-even (heaven).

We welcome each day our daily evolution and we forgive, post give, and give all those who seemingly trespass against us for we have learned retrospectively and repeatedly that the seeming trespasses are in fact the feedback of our own negatives, realistic recognition of which may eliminate those negatives.

For yours, dear god — oh truthful thought is our experience proven manifest of your complete knowledge, your complete understanding, your complete love and compassion, your complete forgiveness — subjective and objective, your complete inspiration and vision giving, and your complete evolutionary volition, capability, will, power, initiative timing and realization — for yours is the glory— because you *are* the integrity forever

and forever

amen.

5 The Lord's Prayer – Second Version

This is the way I thought through the lord's prayer on June 30, 1971, at the American Academy in Rome.

B.F.

Oh god

Our father

Who art in he even

Omniexperience Is your identity.

You have given us O'erwhelmingly
manifestation Of your complete knowl-
edge, Your complete comprehension,
Your complete wisdom, Your com-
plete concern, Your complete compe-
tence, Your complete effectiveness,

Your complete love and compassion,
Your complete forgiveness, giveness,
and postgiveness, Your complete
inspiration giving, Your complete
evolutionary sagacity,

Your complete power, will, initiative,
And absolute timing of all realization.
Yours, dear god,

Is the only and the complete glory!

You are the universal integrity

The eternal integrity is you.

We thank you with all our hearts,
Souls and mind— Amen.

Appendix

1 Resources

The Buckminster Fuller Institute

www.bfi.org

Founded in 1983. The Buckminster Fuller Institute serves a global network of design science innovators working at the leading edge of the design revolution Fuller inspired—including the Buckminster Fuller Challenge, an annual \$ 100.000 prize to support the development and im-

plementation of solutions to humanity's most pressing problems. 181 N.11th St. Suite 402/Brooklyn, NY 11211/718 290-9280

The R. Buckminster Fuller Archive

www-sul.stanford.edu/depts/spc/fuller/index.html

Called in 1976 by archivists from the Smithsonian Institute, “the most extensive personal archive in existence,” the collection contains over 1.300 linear feet of papers and manuscripts, 2.000 hours of video and audio recordings, and thousands of models and other artifacts.

Dept, of Special Collections/The
Stanford University Libraries/Stan-
ford, CA 94305

The Estate of R. Buckminster Fuller

<http://www.buckminsterfuller.net>

Fostering the preservation, publica-
tion, and dissemination of Buckmin-
ster Fuller's legacy.

P.O. Box 3248/Santa Barbara. CA
93130/Fax: 805 456-2912

The Earth Policy Institute

www.earthpolicy.org

The Earth Policy Institute, dedicated to building a sustainable future as well as providing a plan of how to get from here to there, publishes the remarkable book *Plan B 3.0: Mobilizing to Save Civilization* by founder and President Lester R. Brown (free online access).

1350 Connecticut Ave. NW. Suite
403/Washington, DC 20036/Fax: 202
496-9325

The ONE Campaign

www.one.org

The *campaign to make poverty history* is over 2.4 million people committed to raising public awareness about the issues of global poverty, hunger, disease, and efforts to fight such problems in the world's poorest countries.

Rocky Mountain Institute

www.rmi.org

An independent, entrepreneurial, nonprofit organization fostering the efficient and restorative use of resources to make the world secure, just, prosperous, and lifesustaining, co-founded by scientist Amory Lovins, and featuring publications

such as their groundbreaking *Winning the Oil Endgame: Innovation for Profits, Jobs, and Security* (free online access).

2317 Snowmass Creek Road/Snowmass, CO 81654/970 927-3851

The We Campaign

www.wecansolveit.org

A project of The Alliance for Climate Protection—a nonprofit, nonpartisan effort founded by Nobel laureate and former Vice President Al Gore

that aims to halt global warming through educating people in the U.S. and around the world that the climate crisis is both urgent and solvable.

From the bottom of my heart, I wish to thank all the devoted and inspired individuals who assisted me in preparing these new editions of Buckminster Fuller's books:

I could not have undertaken this project without the unswerving support of my beloved wife, Cheryl. She was my partner, primary advisor, and tireless editor in reviewing the new

materials I wrote. She always encouraged me to seize this moment to bring focus to the grave challenges—and opportunities—facing our planet.

It was a great pleasure to work again with Dr. Janet Brown. She joined me in the multimonth process of re-reading the books for the series, updating facts and figures, and finally in being an expert editor. And as in any project I undertake at this point in my life, John Ferry is at my side—as he has been for over 25 years. He backed me up with finding photos, selecting images, assembling mate-

rials, researching background facts, and resolving any other loose ends, not to mention the management of our numerous other projects.

I want to also thank Roberto Trujillo, head of Stanford University's Department of Special Collections, for his support of my research at the R. Buckminster Fuller Archive. I especially want to thank Mattie Taormina, the Head of Public Services and Manuscripts Processing Librarian, who facilitated my research and expedited my needs for scans of images from the Archive. Living nearby,

it was an unexpected treat to be able to spend some days in their beautiful reading room to joyfully commune with Bucky through his own working papers.

I particularly would like to express my appreciation for Lars Müller. Lars and I have been enjoying talking about this project for almost ten years, ever since he designed the two beautiful volumes of *Your Private Sky: The Art of Design Science*. Lars is a great artist of book design, and his encouragement all along the way inspired me to pursue the vision of presenting

these books to a new generation in a fashion fitting to their remarkable prescience. I want to also acknowledge his fine team at Lars Müller Publishers in Switzerland: Michael Furrer, Katharina Kulke, and Lea Pfister, supplemented by Jonathan Fox in Spain. I cannot imagine a more competent team to undertake such a task.

And finally I want to express my gratitude to my dear “Fuller” family: my sister, Alexandra Fuller May, a passionate champion of design revolution, who urged us to go for a design

that would reach a vital new audience. My mother, Allegra Fuller Snyder, who cheered me on in this project, and gave of her aesthetic wisdom and deep sensitivity for Bucky's way of being. My father, the late Robert Snyder, who joined the fold and gave so much to this work as a pioneering documentarian of Bucky. My aunt Alexandra Fuller, who died five years before Allegra was born. And dear dear Bucky and Anne, who gave so much for us.

J.S.

List of Figures

List of Tables

Index

Accounting.

See Economic accounting

Anticipatory design science, 22

Anti-entropy, 101–102 *See also* Entropy

Areas. *See* Topology

Astronauts: all humans as, 56

Atomic energy, 129.

See also Energy Automation: of human biological processes, 54; and loss of jobs, 124

Automobiles: ownership of, 134

Bank wealth, 89

Behavioral sciences: in educational process, 26

Brain: as coordinating switchboard, 25; difference between mind and, 101; imitated by computer, 118

British Empire and the great pirates, 37–38

Categoryitis, 31

Children: as comprehensivists, 25–26 Circle. *See* Great circle Comprehension: defined, 77 Comprehensivity of Great Pirates, 34–35; Great Pirates abandoning their, 50–51; man forced to reestablish, 53

Computers: provide new impersonal problem solutions, 45; as superspecialist, 53; strategy combined with general systems theory and synergetics, 93–94; as imitation of human brain, 118; beginning of, 122; resolving ideological

dogmas, 138

Craftsmen: early specialized, 29; tools of, 122; in the industrial economy, 123

Cross-breeding: of world man, 131

Cybernetics: defined, 95

Darwin, Charles: theory of animate evolution, 47

Da Vinci, Leonardo, 35–36

Democracy, 92–93

Design: capability of early world men, 28–29; of spaceship Earth's internal support systems, 59–60; of universal evolution, 111–112; revolution in, 134

Design science: anticipatory, governing yesterday's naval mastery, 22

Divide and conquer: grand strategy of, 39

$E = MC^2$, 69, 96. *See also* Energy

Economic accounting: by great pirates, 94–95; synergy in, 103; need for realistic, 112

Educational task: to allow physical and metaphysical success, 130

Einstein, Albert: formula $E = MC^2$, 45, 69, 96; definition of physical universe, 70; reassess universe, 97

Electromagnetic spectrum: great pirates' first use of, 43–44; effecting human evolution, 110 Energy: impounding of sun's radiant, 58, 59, 93;

generalized law of, 73; savings as fossil fuels, 94, 129; in synergetics, 95; finite, 96; harnessing of, 129; atomic exploitation of, 129

Entropy: energy systems eventually run down, 46; assumed universe subject to, 96; wealth as antientropy, 101

Environment: early society inability to cope with, 26; evolution synergetically produced, 103–104; changes in physical, 110

Euler, Leonhard, 81

Evolution: success of human dependent on mastering metaphysical, 46; design and patterns in, 49, 54, 111–112; man's feeling about, 53–54; inexorable, 55; our present position in, 65–66; effected by electromagnetic spectrum, 110; comprehending phases of, 127

Experiences: to extract generalized principles, 62; is finite, 70

Exploitation: of atomic energy, 129; of fossil fuels, 129. *See also* Energy

Extinction, 48

Failures: humanity's, 24–25 Fellowships, 125

Forecasting, 22

Fossil fuel: energy savings account, 94, 128; expending of, 129. *See also* Energy

Generalized principles: minds discovering, 21; extracted from human experience, 61–62; first was leverage, 63; surviving with, 118; inventively employed only through mind, 127

General systems theory: as tool of high intellectual advantage, 67, 70–71; combined with computer strategy and synergetics, 95

Geodesic lines, 76

GI Bill, 115

Gold: demand system inadequate, 88–98; used by Great Pirates for trading, 90

Grand strategy: divide and conquer, 39; organizing our, 65.

See also Strategy

Great circle: defined, 76

Great Pirates: as sea mastering people, 34; feared bright people, 35; use of logistics by, 37; and British Empire, 37–38; use of local strong man as king by, 39; tutoring of bright specialists by, 40; in world competition, 41, 43; becoming extinct, 44, 50; rules of accounting still used, 45

Gross national product: estimate for 1970, 108–109

Growth: physical and metaphysical, 61

“Have-nots” struggle with “haves” produces war, 87

“Haves”: struggle with “have-nots” produces war, 87

Heisenberg, Werner: principle of indeterminism, 72

Human beings, as astronauts, 56; will be free, 111; employing real wealth, 124; characteristics in Mexico, 132. *See also* Man

Humanity: exists in poverty, 23–24; on Earth's surface, 27; extinction of, 49; place in evolution of, 66; function of, in universe, 83–84; and standard of living of, 102–103

Ideologies: political, 48; resolving dangerous dogmas of, 138

Indeterminism: Heisenberg's principle of, 72

India: population problems in, 113
Industrialization: demonstration of world, 104

Industry: tooling of, 22, 116, 122, 133; production increased by world wars, 116; craftsmen in the economy, 123. *See also* Tools

Information: multiplies wealth, 104–105 Initiative, 45

Intellect: as humans' supreme faculty, 60–61; frees man of special case superstition, 63; use of as man's function in universe, 99

International Monetary Fund: 1967 deliberations of, 88

Invention, 134

Inventory: of variables in problem solving, 67–68

Jobs: loss of in automation, 124

King: as great pirate's local strong man, 39, 40

Law of conservation of energy: defined, 98. *See also* Energy

Learning: always increases, 99; man's past, 131; industrial retooling revolution, 133

Lesser circle: defined, 76

Leverage: first generalized principle, 63. *See also* Generalized principles

Life: as synergetic, 79–80; hypothetical development of support systems in, 107–108

Lincoln, Abraham, 45–46

Lines, 81. *See also* Topology

Machine: spaceship Earth as, 59–60

Macrocosm: as universe outside the system, 70

Malthus, Thomas, 47

Man: utterly helpless as newborn, 61;

as adaptable organism, 118–119.

See also Human beings

Mass production: and mass consumption, 123

Mathematics: improved by advent of zero, 36. *See also* Topology

Metals: not destroyed in war, 117
Metaphysical: initiative confused between religion and politics, 45; masters the physical, 46; experiences not included in physical universe, 68; defies “closed systems” analysis, 69; in synergetics, 95; need for, in educational task, 130

Mexico: human characteristics in, 132
Michelangelo, 35–36

Microcosm: universe inside the system, 70

Mind: comprehends general principles, 24, 127, 128; difference between brain and, 101; fellowships of, 125

Money: as bank wealth, 89.

See also Wealth

Moon gravity: as income wealth, 94
More-with-less: and generalized principles of, 63

Myth: of wealth as money, 114;
of population explosion, 136
Natural laws: and Great Pirates, 34.

See also Generalized principles
Navies: and Great Pirates, 38
Negatives: yesterday's, realized, 24
North America: early crossbreeding men in, 131

Photosynthesis: impounds sun's energy, 59

Pirates. *See* Great Pirates

Planck, Max, 97

Planners: more comprehensive than other professions, 67

Points. *See* Topology

Politicians: local, asked to make world work, 51.

See also Ideologies

Pollution: as survival problem, 85

“Poluto”: as new name for planet, 85

Population: problems in India, 113;

explosion in as myth, 136 Poverty:

humanity existing in, 23–24 Princi-

ples. *See* Generalized principles Prob-

lem solving: by yesterday’s

contrivings, 21

Resources: of Earth unevenly distributed, 29; no longer integratable, 52; unique materials made “on order,” 106

Revolution: design and invention, 134

Safety factor: in man’s evolution, 111–112

Schools: beginning of, 41.

See also Specialization; Strategy
Second law of thermodynamics, 46
Senses: Great Pirates relying on, 43
Ships: logistics for production and maintenance, 37. *See also* Vessels

Slavery: of specialist expert, 41; human, 107

Sovereignties: claim on humans in, 37–38; categoryitis in, 31

Spaceship Earth: present condition of, 121

Specialist: computer as super, 53
Specialization: society operates on theory of, 25; early leaders who developed, 26, 30, 33; intellectual beginning of schools, 41–42; specialist as slave, 41; over causing extinction, 48, 49; scientific, applied toward weaponry, 52–53

Speed of light: discovery of, 97
Spending: regarding energy is obsolete, 98

Spoken word: as first industrial tool, 122

Strategy: secret and anticipatory, of Great Pirates, 35; comprehensive of naval war colleges, 37

Structures: industrial tool enclosing, 116–117

Students: comprehend elimination of war, 134

Sun: radiation as income wealth, 58, 94. *See also* Energy

Survival: physical and metaphysical, 61; potentials increased by intellect, 63

Sword: powerful men of, 26.
See also Great Pirates

Synergetics. *See* Synergy

Synergy: defined, 78, 95; defines universal evolution, 79; combined with computer strategy and general systems theory, 95; wealth develops interest through, 102; in economic accounting, 103; in humanity escaping from local identity, 106

System: universe as biggest, 68;
thought is, 72; first subdivision of
universe, 71, 83;

variables in evolution, 83

Technologies: as substitute after war,
117

Telford, Thomas: as Great Pirates'
specialist, 37

Thinking: long-distance future of,
22; in terms of whole, 67; as a system,
72; dismissal of irrelevancy in, 76–77;
tackling problems with, 83; humans
free to, 126.

See also Intellect; Mind

Time: as relative, 135

Tools: industrial, 116; externalizations of integral functions, 117; craft and industrial extinctions, 122; spoken word, 122

Topology: mathematics of comprehension, 77; discovered by Euler, 81; patterns of lines, points and areas, 80–81. *See also* Geodesic lines; Great circle; Lesser circle

Underlying order in randomness, 74–75
Universe: as biggest system, 68, 96; physical defined by scientists, 68–69, 70, 72, 97; subdivision, 71; generalized law of energy conservation in, 73; defined by synergy, 79; humanity's function in, 83, 112

Van Allen belts, 58

Variables: inventorying of and problem solving in, 67

Vectorial geometry: mathematics of comprehension, 75–80

Vessels: use of, in venturing, 28

War: beginning of the great class, 47–48, 87; as age-old lethal formula of ignorant men, 52; as taking priority over real problems, 87; students comprehend elimination of, 134

Water: desalinization of, as problem solution, 85–86. Pollution

Wealth: generated by integrating resources, 29; as a safety factor, 61; defined, 88, 93; irreversible in evolutionary processes, 91; society's real, 91, 94, 124; income is sun radiation and moon gravity, 94; as anti-entropy,

101; can only increase, 101,105; common, of humanity, 105; of the U.S., 108; of know-how produced by GI Bill. 115

Weaponry: scientific specialization applied toward, 52

Wholes: thinking in terms of, 67; systems in synergy, 78. *See also* Systems

World: and first seafarers, 28; sea ventures thought in terms of, 30; asking local politicians to make it work, 51; defined, 104, 119; veterans returning from World War II, 115; increase industrial production in, 115–116; cross-breeding in, 131-132

Todo list

1: Breakdown wip into a file
per chapter 1