

Earth.....
Till we conceive her living we go distraught,
At best but circle-windsoils of a mill,
Seeing the lives, & of her joy & life
Creatively has given us blood & breath.....

Thenceforth, ~~writing of Earth~~, in 'Sense & Spirit'.

What am I? That is the question
The face full of not
Of the earth, of the mother, my heart with her heart in accord,
As I lie 'mid the cool green bosoms that mantle her breast'....

'A.E.': Reconciliation.

It is probably on us alone that it is incumbent to augment
~~the~~ the consciousness of the earth.

Maeterlinck: The Treasures of the Humble (The Stars).

I know now why the earth is gross, tantalising, wicked,
It is for my sake.

Walt Whitman: By Blue Ontario's Shore.

Let us not disown mother Earth; rather let us rejoice to call
her 'mother'. Earth's nature is our nature. We owe to earth
the entire gamut of our mind's wonders, whether of joy or pain.
Life's story has been an unfolding of germinal powers of the
planet bringing time-given of mind. Let us give thanks where thanks are due.

Sir Charles Sherrington: Man on His Nature, p. 116

To her, for her singular benefits, we have given the reverent & worshipful
name of Mother..... She it is that takes us when we are coming into the
world, nourishes us when we are newborn; & when we are come abroad
we sustain & bear us up. At the last when we are rejected &
forlorn of the world, she embraces us. Then, like a kind mother,
she covers us over in her bosom.

Pliny: Natural History (Trans. Holland i, 5)

And from her womb children of ~~divers~~ Kind

We sucking on her natural bosom find,

Many for many virtues excellent,

None but for some, & yet all different.

Oh, mickle is the powerful grace that lies

In herbs, plants, stones, & these true qualities;

For nought so vile that on the earth doth live,

But to the earth some special good doth give.

Romeo & Juliet, II, 3.

All the world as to mine eye
No more seemed than a prike.

Chaucer: Temple of Fame, b. 2

And the sun does not care if I live in
holiness,
To him, my mortal dress
Is sacred, part of the earth, a lump of the
world
With my splendours, oves, imperfections,
& harvest,
Over which shines my heart, that
ripening sun.
Edith Sitwell: 'An Old Woman I'
(Street Songs)

4
CELL

5
CHIRE

6
EXT.

8

9

10

The air is moving in being we go down
the but not into - in a way of a wall
being the air. 7 of the top of the
certainly has given us blood + breath + ...

Life + Spirit

the form of the
of the earth, of the matter, and there is a
as I said the earth is not the matter for the ...

E.A.

It is probably on us that it is important to understand
the movement of the earth.
Matter: the movement of the earth (Matter)

I know why the earth is green, but I don't know why it is for my color.

Sherrington writes: "Life would mean
therefore an ultimate exhaustion of
the surround in regard to the
energy which can support life
were it not that life itself, taken
in the sum, secures itself against
that ultimate impasse."

Man in His Nature (100)

11

To be, for the singular benefit, we have given the movement + work of
name of Matter. ... But it is that there is when we are coming into the
world, movement when we are content; when we are content + when we are
not content + when we are not content. For the last when we are not content +
when we are not content, the movement is. Then, like a kind of matter,
the cover is even in the form.

Principles: Natural History (Trans. Holland 192)

that from the world children of movement
We walking on the natural brown field,
moving in many various directions,
Now let us see, + let us see
Of matter is the principle of the life
In fact, plants, animals, + then the question:
For movement is the life on the earth + the air,
but it is the same of the earth + the air.

Principles + Matter, II, 5.

All the world is a kind of
the same as the world is a kind of
the same as the world is a kind of

Subject  Object

Subobject & Object
~~same thing~~
keep pace.

S.  O.

What wonders within you, Walt Whitman?
What waves & soils skulking?
What climates? What forms & colors are here?

Within me latitude isens, longitude longthens,
Asia, Africa, Europe, and the East - America
which is provided for in the west
~~the~~ the continent.

Within me Zones, seas, caliche, forests
volcanoes, groups,
Malaysia, Polynesia, & the great West India
islands.

West Whiteman: Salut Au Monde!

A Venn diagram with two overlapping circles. The left circle is labeled 'manus' and the right circle is labeled 'sulochi'. A double-headed arrow connects the two circles, indicating a relationship between them. To the right of this diagram is a smaller, simplified version of the same Venn diagram.

other ~~parts~~
~~of the~~ Earth-layers

* Ecologists, realising this, realise that
are now emphasizing that human
conditions cannot be dealt with
piecemeal, in isolation. The whole
must be treated: location of industry,
soil improvement, control of the urban
physical ^{environment}, no less
than health, housing & education.
Above all, the question of population,
in its relation to the physical & biological
environment, cannot much longer be
ignored in most countries.

(dine though ^{my} ~~can be~~ ^{may be})
Atchensom

one living creature, looking out upon its world.
By itself, this evidence is not nearly enough. I am a prejudiced observer. Let me then take ~~next~~ ^{my} observer's view, the view inward. It can be near or distant. For the near view, my observer is engaged in looking for my boundaries — for the place where I stop & what is not me begins. He has already found that I do not stop at man, nor at MAN's ^{body} ~~body~~ I stop at LIFE? Again, very obviously, I do not. EARTH can no more be amputated from LIFE, than LIFE from MAN. ^{the bio. & other species} ~~Instances~~ ^{Proof} of LIFE's dependence upon the atmosphere, water, & ^{air} ~~soil~~, ^{and} ~~so forth~~, are ^{well} ~~suprafluous~~ — it is clear that LIFE is ~~dead~~ ^{or perhaps} I should say unthinkable — without those extensions, or extra-corporeal organs, which ^{compose} ~~are~~ the rest of the Planet. In ~~other words~~, I cannot be myself unless I am also ^HMAN, LIFE, & EARTH. — Such is the triple outer body I must have to be human, to live. ^{live + k be} So the observer of my

The chief forces in human history are environmental & climatic, said Buckle; & one of the chief forces of climatic & environmental change is human history.

Physiology cannot help but conclude. Nothing short of the EARTH can do this. EARTH, then, is the real whole, the true individual, & LIFE is EARTH's chief organ.

Again, the evidence of the outside view, added to the inside view, falls short of demonstration. Finally, the distant view of me. For the observer who believes that the truth about me is to be found everywhere, & not merely at close range, there is a place where I am no longer man or LIFE, but EARTH. If he is attending to what I am saying, he attributes my speech no longer to my vocal chords but to the whole man, no longer to the man but to the whole MAN, no longer to MAN but to all LIFE, no longer to LIFE but to EARTH. Here, at this range, the lesser aspects of me do not - cannot - exist: here there is only a little spinning ball, talkative, musical, intelligent, emotional, intensely curious about itself & the universe, young at two thousand million years, with a future of incalculable promise ahead. All human forms identified, even tree, metal, Earth & Stone: all human forms identified, living, going forth & returning wearied into the Planetary life....

2. The EARTH'S organs. Physiology

What is the bodily structure of this creature? What sort of organs has it, and how do they function?

Common sense can detect (outside of LIFE) anything in the EARTH that deserves the name of 'organ'. The names are familiar: first, I am always apt to expect levels to repeat one another, whereas I should expect the contrary; secondly, I am handicapped by being home inside the thing, I am investigating, instead of at in the place where it is obviously a whole; thirdly, the EARTH's body is necessarily coarse-grained compared with smaller bodies; fourthly, the tempo is very slow. My difficulties are those which an intelligent molecule might experience in me, if it were to set out to write a textbook of human physiology. The only way out of my difficulties is to attach myself to an observer who does not suffer from the same limitations. What would be made of this Planet? How would he anatomize the Planet?

(All anatomies are arbitrary, those of EARTH particularly so. For me to study this Planet - for anything else, for that matter - is to reduce it to some kind of order; what kind depends on my temperament & interests. If my ordering of the brute facts is too niggling & trivial, I shall find the EARTH meaningless; if it is too sweeping, I shall find an EARTH

But I become aware of these difficulties as I hand over them. And, in fact, the planet anatomy is no secret.

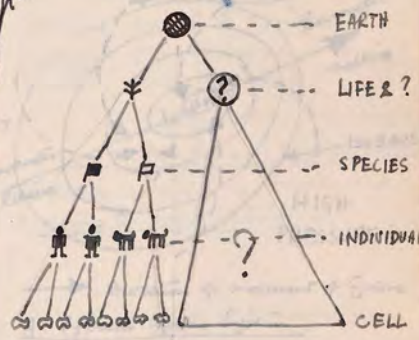
But first, let us inquire of the scientist. But at least I have the idea of modern science. Fifth, I happen to live at a time when the age-old process which in the earth makes us (temporarily, as I believe) reappears.

Copy 407 (Ed. Sell)
 These recent treatments of this theme in Eng. Ellsworth Huntington - Civilization Climate, See also his contribution to the question of the earth's habitability. See R. L. Sherrill: Man's Influence on the Earth, & Man as a Geological Agent.

in capable of what functioning.
 Get at the thought of life apart from her, Solidity & vision lose their state, For earth, that gives the milk, the spirit gives. Wordsworth: Earth's Secret.



0', 0'', 0''' are successive positions of sun observed.
 • Jerusalem 99.
 x Merchant of Venice V, 1.
 • A. Holmes: The Age of the Earth. P. 72.
 The music of the spheres, & the interesting note that (for this reason of course) Pythagoras' teaching taught that the universe rings. (Hippolytus. Refut. I, 2, 2. quoted in Heath: Greek Astronomy, p. 34.) And we actually do hear a radio noise proceeding from the Milky Way, as well as radio interference from sunspots.



a man is an organization of cells, MAN is an organization of men, LIFE is an organization of species, EARTH is an organization of 'LIFES' (or 'LIVES') - but of what?

Chuang Tzu says: "You have listened to the music which man makes, but you have not listened to the music of the earth; or you may have listened to the music of the earth, but you have not listened to the music of Heaven." (Chuang Tzu Book, II)

believe... But at least I have the idea of modern science. Fifth, I happen to live at a time when the age-old process which in the earth makes us (temporarily, as I believe) reappears.

He might divide the

The EARTH may be divided into three or four main layers are generally distinguished:

- (i) The Atmosphere, including the Stratosphere or Troposphere.
- (ii) The Lithosphere, or stony crust of primary and secondary rocks.
- (iii) The Barosphere, or heavy core.

To these generally recognized divisions the Hydrosphere, or layer of oceans ^{water may be added} is usually added. Instead of the Hydrosphere, I propose to distinguish this layer roughly coincides with a more inclusive region:

- (iv) The Biosphere, or region of LIFE, ^{includes} As I now define it, this Biosphere includes:
 - (a) The oceans & seas, ^{the Empedocles called "the ocean of the earth"}
 - (b) That region of the Atmosphere, which contains an appreciable ^{quantity} amount of water vapor;
 - (c) The secondary rocks, most of which have been laid down in water, & in the formation of which LIFE has generally played ^{some} part;
 - (d) Rivers, subsoil water, & underground streams.

In fact, the Biosphere ^{or hydrosphere} which might equally well be called the Oceanosphere overlaps a portion both of the Lithosphere & the Barosphere: it is an intrusion into other layers, rather than a layer in itself.

Of the four major terrestrial layers, it is unique in that it has no space to itself, but shares it with all layers & is ~~entirely~~ interfused with the layers above & below.

3. The Atmosphere ^{we are in the habit of thinking of} ~~is it a fact that the EARTH~~ (with the exception of the Biosphere) ^{these four planetary layers, for common sense, is doubtful}

is more or less formless, more or less unorganized, more or less inactive ^{as}, in any ~~way~~ ^{likely} material for inclusion in a living organism. ^{We are in the habit of thinking of it as a uniform, homogeneous mass, impervious of the planet's surface.} ^{How much substance is there in the air? What are the facts?}

Consider, first, the Atmosphere. It turns out to be complex beyond all expectation. The troposphere, or turbulent lower region, with its variable cloud forms & cloud levels, its shifting centres of high & low pressure, & air movements from the one to the other, its prevailing winds, is ~~both~~ ^{on} extremely intricate & ~~unknown~~ ^{familiar system}. Less well-known, but no less important for LIFE, are the higher & calmer layers of the Stratosphere & the Mesosphere. Thus at a height of 20 to 30 miles there is the Ozonosphere, which is the same ^{a belt} ~~same~~ as a belt containing the equivalent of a layer of ozone only ^{as} ~~of~~ ^{an inch thick} (at ground-level ~~and~~ ^{pressure & temperature}), but ^{nevertheless} sufficient to absorb much of the sun's ultra-violet radiation: if more was absorbed, rickets & other diseases would ^{probably} increase, if less tissues would be damaged. ^{That} is to say, the Biosphere & the Ozonosphere are very delicately ^{balanced} - even ~~precarious~~ ^{balanced}: the sudden removal of the latter might well mean the ~~total~~ ^{complete} extinction of ~~all~~ ^{all} higher forms of life.

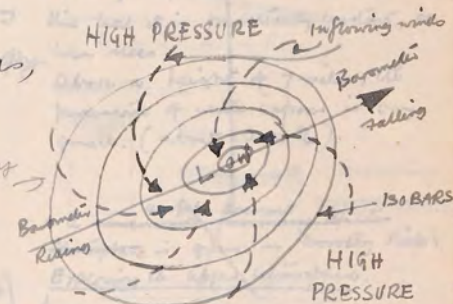


• Burnet: Early Greek Philosophy, p. 204.

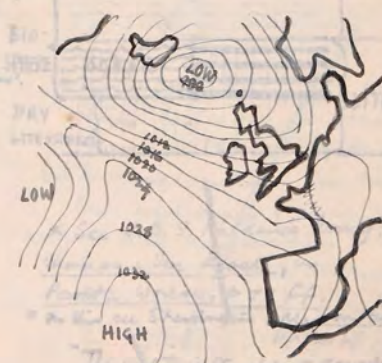


most regions overlap.

* A certain similarity to the Aristotelian sphere arrangement of the elements (Earth, Water, Air, & Fire) will be noted, especially of the upper atmosphere (the ionosphere) does duty for Aristotle's Fire. ^(AET 126) Bruno, on the other hand, argues that, since the Earth is an animal, the hottest part must be at the centre. (De Immensio III, v. q. sec. Boulling: Giordano Bruno, p. 185)



Direction of movement of cyclone
A Typical Cyclone System



A Typical Synoptic Chart showing distribution of barometric pressure at one given time.

+ Experiments of Intelligence tests on children before & after ultra-violet treatment suggest that intellectual performance is ^{markedly} ~~affected~~ ^{improved} by ultra-violet radiation: if this is so, the Ozonosphere is very intimately connected with the mind of MAN. If this is so, the Ozonosphere is very directly involved in our thinking about the Ozonosphere.

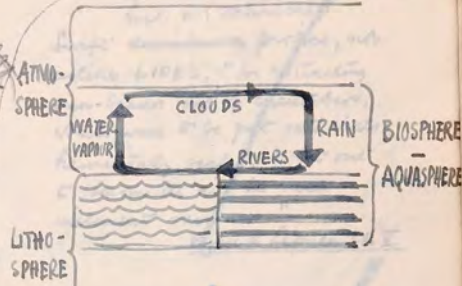
* H. Spencer Jones: Life in Other Worlds, p. 64.

The water is the eldest daughter of
the creation, the element upon which
the Spirit of God did first move,
the element which God commanded
to bring forth living creatures abun-
dantly; & without which, those
that inhabit the land, even all
creatures that have breath in
their nostrils, must suddenly
return to putrefaction."
Isaiah 43:1: "The Complete Angel".

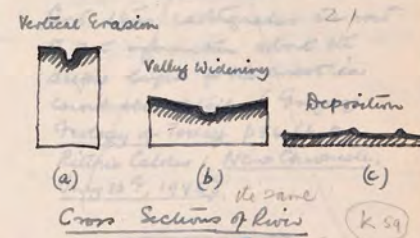
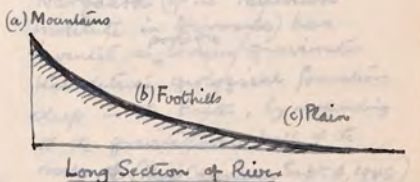
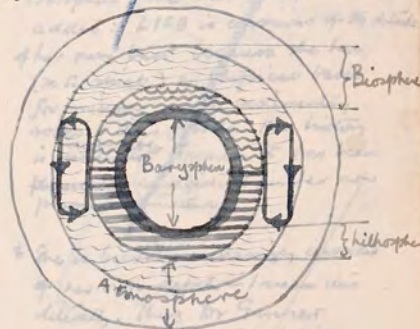
Or, to put the matter another way) I have ^{endowed} the sea with a pump (the heart), ^{maintaining} its temperature uniform, from pole to equator & from winter to summer by heating furnaces & cooling radiators. ^{adjusting} its composition from moment to moment by closing it with just the chemicals that the occasion demands (e.g. ^{adaptation}). ^{deliberately} I stock it with ^{or} organisms that are poisonous only to one or another species of ^{invading} enemy. What this ^{endowed} sea does in size, it certainly makes up for in intricateness.

arteries & veins & miles of capillaries) to make sure it continues to do so.

But it is not enough that the waters circulate within me: they must flow around me as well, on a greater scale. For this ^{outer} circulation the Biosphere makes ample provision. The ascent of water-vapour from the ocean, the formation of clouds that drift over the land, their ^{partial} rising & cooling & descent as rain, the flow of water over the surface & through the subsoil & deeper strata, as well as through streams & rivers, back again to the sea — this is LIFE's grand circulatory systems, in which all her members share. Neither externally nor internally, then, have I escaped from the water. ^{the} Nations within & around me. The fact that it is 'diluted' with air above & with rock below is — so far from being a drawback — an incalculable advantage, since it bestows on me nearly all the blessings of a ^{aquatic} life with few of its penalties. The truth is that I live an improved marine life. I make the best of all three worlds — ^{water, air, earth} — without really leaving the first of them. I did not in actuality desert the water for the dry land, because the water ^{had} preceded me, & my ^{desertion} escape was only apparent.



"Water is the life-blood of earth, as it were, flowing through its members & veins. Thus, I say, is water richly endowed." *Quon Tzu, xxxix.* P. 218



* Walther's biosphere includes the Geosphere. (See *Tringony: The Making of the Earth*, p. 67.)

* The total thickness of the strata laid down has been reckoned at 50 miles at the least. But the same material has, ^{of course}, been used again & again, & in any one place no more than a small ^{cap} proportion of the total thickness ^{can} be found. (See *Barrell, in The Evolution of the Earth*, p. 60, & *Holmes, The Age of the Earth*, p. 8.)

* Erlich argues that, as narrowest concentration the iodine present in extreme dilution in the sea, so ^{concentrating} invading germs in the blood might take, in persons so dilute that they would not hurt the patient. He produced 606 & Salvarsan, which contains arsenic in such a form that it concentrates in the germ & kills it. ^{Reckoning Man's Enlarge 55}

The lower air, the ocean, & the soil are ^{are obviously} full of life & therefore claimed by the Biosphere. But the ^{crust} ~~crust~~ (crust common sense) ought not to be included because, except for certain upper strata, there is little or no life in it.

Also ^{Planet's} include the stratified crust, ^{within} in the Biosphere for ^{four} reasons. First, directly & indirectly, LIFE has affected every stratum that has been laid down for hundreds of millions of years: ^{the crust is largely of LIFE's manufacture.} ^{the} cycle (water-vapour → clouds → rain → rivers → sea) which maintains LIFE is, at the same time, wearing down the highest land surfaces & depositing them on the alluvial plains & seabeds to form new strata. One ^{large} ~~process~~ ^{circulating} process maintains the fluid ^{part} ~~part~~ regions of the Biosphere, & builds ^{it} ~~it~~ & destroys & rebuilds the Biosphere's solid basis, ensuring the slow & rhythmic changes of LIFE's existence. ^{Third} ~~Second~~, LIFE has actually made many beds (the chalk, the oolitic limestones, & the coal measures are examples) out of the remains of living creatures. Their little skeletons go (so to speak) to the making of her greater skeleton. ^{Fourth}, these layers are not lost to LIFE. If they were quite inaccessible they could hardly be called ^{life's} ~~life's~~ ^{in fact, she has put them}

Bechold ^{animal's} goes so far as to call the organism ^{itself} "essentially an aqueous solution", & Henderson points out that the real ^{exit} ~~exit~~ ^{through} the wall of the intestine & the renal epithelium ^{real} ~~real~~ ^{secretion} (through the epithelium of the lungs or across that of the sweat glands) are in solution & not solid. (Henderson: *The Physics of the Environment*, p. 77) ^{Nothing} ~~Nothing~~ ^{Textbook of Physiology}

★

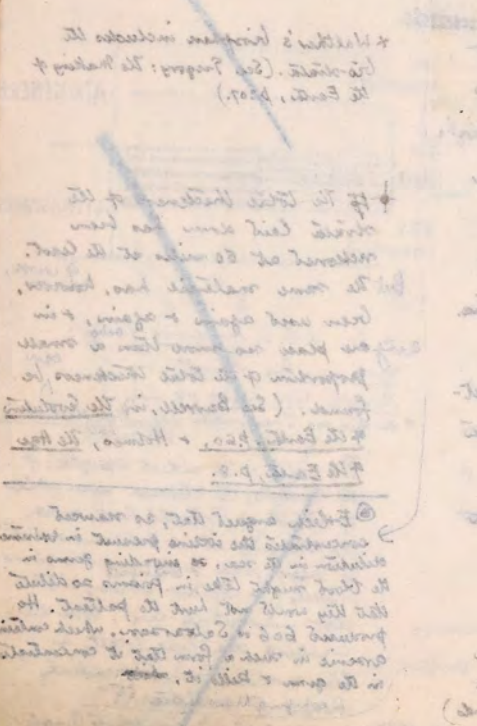
OTHER aspects of gravity studied at the Geodolisk Institute, headed by Professor N. E. Narlund, produced a very simple torsion gravimeter. The inventor, young Dr. Gunnar Nargaard, evolved an instrument no bigger than a portable typewriter which can detect geological formations deep in the earth's crust by responding to the gravitational pull of rocks of various densities.

Another field in which the Danes are pre-eminent is in "sea-husbandry." Applying the same thoroughness which has made Danish farming so scientifically outstanding to farming fish of the sea they can now practically domesticate cod and flounders and so on in Danish waters.

★

News Chronicle cut on
Brain Science Sept 4/46

1. Introduction to the History of the British Empire
 2. The British Empire in the 19th Century
 3. The British Empire in the 20th Century
 4. The British Empire in the 21st Century
 5. The British Empire in the 22nd Century
 6. The British Empire in the 23rd Century
 7. The British Empire in the 24th Century
 8. The British Empire in the 25th Century
 9. The British Empire in the 26th Century
 10. The British Empire in the 27th Century
 11. The British Empire in the 28th Century
 12. The British Empire in the 29th Century
 13. The British Empire in the 30th Century
 14. The British Empire in the 31st Century
 15. The British Empire in the 32nd Century
 16. The British Empire in the 33rd Century
 17. The British Empire in the 34th Century
 18. The British Empire in the 35th Century
 19. The British Empire in the 36th Century
 20. The British Empire in the 37th Century
 21. The British Empire in the 38th Century
 22. The British Empire in the 39th Century
 23. The British Empire in the 40th Century
 24. The British Empire in the 41st Century
 25. The British Empire in the 42nd Century
 26. The British Empire in the 43rd Century
 27. The British Empire in the 44th Century
 28. The British Empire in the 45th Century
 29. The British Empire in the 46th Century
 30. The British Empire in the 47th Century
 31. The British Empire in the 48th Century
 32. The British Empire in the 49th Century
 33. The British Empire in the 50th Century
 34. The British Empire in the 51st Century
 35. The British Empire in the 52nd Century
 36. The British Empire in the 53rd Century
 37. The British Empire in the 54th Century
 38. The British Empire in the 55th Century
 39. The British Empire in the 56th Century
 40. The British Empire in the 57th Century
 41. The British Empire in the 58th Century
 42. The British Empire in the 59th Century
 43. The British Empire in the 60th Century
 44. The British Empire in the 61st Century
 45. The British Empire in the 62nd Century
 46. The British Empire in the 63rd Century
 47. The British Empire in the 64th Century
 48. The British Empire in the 65th Century
 49. The British Empire in the 66th Century
 50. The British Empire in the 67th Century
 51. The British Empire in the 68th Century
 52. The British Empire in the 69th Century
 53. The British Empire in the 70th Century
 54. The British Empire in the 71st Century
 55. The British Empire in the 72nd Century
 56. The British Empire in the 73rd Century
 57. The British Empire in the 74th Century
 58. The British Empire in the 75th Century
 59. The British Empire in the 76th Century
 60. The British Empire in the 77th Century
 61. The British Empire in the 78th Century
 62. The British Empire in the 79th Century
 63. The British Empire in the 80th Century
 64. The British Empire in the 81st Century
 65. The British Empire in the 82nd Century
 66. The British Empire in the 83rd Century
 67. The British Empire in the 84th Century
 68. The British Empire in the 85th Century
 69. The British Empire in the 86th Century
 70. The British Empire in the 87th Century<



in safe-deposit. LIFE, laid down coal, & mineral oil, as the housewife
~~large~~ ^{many} ~~proves~~ ^{preserves} eggs & bottles fruit against the time of scarcity. These
 deposits, ^{hundreds of} thousands of feet deep & millions of years old, are now available
 to a LIFE that knows how to use them to multiply her own vitality many
 -fold. ~~And they are as dead as~~ ^{Taken previously, they are as dead as}
~~the angels~~ ^{as the cells in which} ~~stand for future use.~~ ^{the} ~~stars in its houses for future use; taken in them as~~
 parts of the living whole, they live.

For ~~as~~ ^{as} then ancient deposits provide ~~to~~ ^{no} more make-weight in LIFE's economy: they are its very foundation. LIFE lives on the fuels, ~~the~~ ^{the} phosphates, & building materials, & chemicals, which ~~she~~ ^{the Marvel has with L's help made & stored} she has helped to make & store. Without them ~~she~~ ^{LIFE} could not exist, save ^{perhaps} as a primitive proto-LIFE; ~~she~~ ^{she} needs them all to be what she is now. If ~~she~~ ^{she} had foreseen her history & consciously provided for it with every care, LIFE could hardly have achieved herself more effectively. The result — however it was achieved — is that ^{LIFE} ~~she~~ ^{she} now ~~the~~ ^{she} lives, ~~at~~ ^{can only live}, at every time-level of herself. ^{existence} ~~Her~~ ^{life} is cumulative; her present embraces ~~all~~ ^{all} her past. Epochs of seeming stagnation & futility come into their own in the fulness of time. The coal that is now warming me, the iron of the grate, the clay of the fire-back, the marble of the surround, the umbrellas & zibinnas & ochres of the pictures above the fireplace, & so on, ^{without end} — all of them products of "blind," meaningless, unconsciously postulated, geological processes — now come together into significant patterns that ~~is~~ ^{are} not without interest & value for LIFE herself. Thus ~~she~~ ^{the} ~~life~~ ^{life} ~~begins to~~ ^{Marvel begins to} ~~more than~~ ^{more than} recast herself from her age-old pointlessness. She is what she is because she ~~must~~ ^{realizes} ~~lives at~~ ^{lives at} every level of herself, at all epochs of her ~~existence~~ ^{history}. Her ~~existence~~ ^{viability} is an overcoming of time, & none of her past, none of her old works, can be spared from the present in which they find fruition. All her dead selves are caught up into a total life ~~viability~~. ~~The whole is LIFE.~~

The circulating process of the Biosphere - ^{Hydrosphere}~~Cryosphere~~ is both anabolic & constructive, & katabolic & destructive: it flows back to the sea (aided by gusts & wind & the carbon dioxide of the air) ^{the} destroys ^{the} part of LIFE - ^{the} heights & builds up the lowlands & the mountains - and rebuilds it in another place, as bayons sprout out over the sea-bed & the ^{low-lying} plains. In this way ^{the} LIFE continually remakes ^{its} own constitution, altering at the same time the elevation of the land, the humidity, the composition of the soil, the distribution of land & sea, ^{and thus begins over of itself so far -} (by controlling changes the scale of moral values) ^{holding} the course of vital reaching in its geographical effects, has equally drastic consequences for the evolution of LIFE's species. It is not too much to say that I owe what

The best ~~figs~~ ^{the geographic} circulation ~~with~~
modifies while it maintains,
a ~~stable~~ ^{stable} rhythm of growth
& determines the character
of the growth ~~process~~
including development

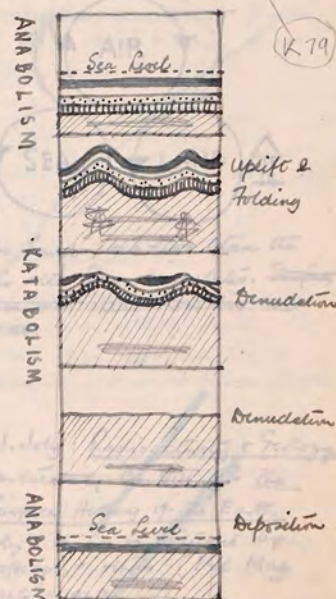
had a (patented) Swift ~~deodorizing~~ process, no unlike LIFE's, "for extracting sun-beams out of cucumbers, which were to be put into vials hermetically sealed, & let out to warm the air in most inclement summers."

Voyage to Laputa, Ch.

* To these four names for including the sedimentary rocks in the Proterozoic, one more might be added: LIFE is conscious of the details of her own past because she has (so to speak) a physical basis for memory in the sedimentary rocks & their fossils. Her history is ~~recorded~~ ^{remembered} because it has been ~~physically~~ ^{physically} registered in her own physical structure.

* She is becoming increasingly conscious of her own depth - I mean this literally. Thus Dr Gunnar Nargaard (of the Geodolite Institute in Denmark) has invented a portable gravimeter that detects geological formations deep in the Earth, by responding to the gravitational pull of the rocks. The (New Chronicle, Sept 4, 1946)

And these earthquakes are used to get information about the deeper layers of the crust and considerable details. (Gregory: Geology of Today p56 ff + Ritchie's Caddy: New Chronicle, July 10th, 1946.)



This (extremely simplified) story of
a part of the Earth's crust may
be repeated some ²⁰⁻³⁰ times, with
land & sea alternating.

LAN
SEA

* In some respects the 'Aquaophs' am proposing is an elaboration of the early Greek notion of 'the moist', which is differentiated into by heat into Earth, water, & vapour. According to Anaximander living creatures also arose from the moist element. Heraclitus (see Burnet: Early Greek Philosophy, p 65 & p 70)

I have to do with the circulation of the 'elements'.

So much for Air & Earth

In this circulation, the gaseous & the solid parts of the Biosphere ^{portions} ^{portion} ^{movement} ^{of} ^{the} ^{Atmosphere} ^{are} ⁱⁿ ^{motion}. What of the third, or fluid, part? Here again the motion is provided by the motion of the Atmosphere. Ocean currents are set up by air currents; in addition, when the surface of the water is (for whatever reason) cooler or more saline than the water beneath, it sinks, & convection currents are put in motion. The results are incalculable. The distribution & development of marine life, the climate (& so the flora & fauna) of the wide continental areas, the deposition of strata on the sea-floor & the erosion of the land, as well as the state of the Atmosphere, are all affected.

Now we, then, have systems of circulation in the three 'elements' of the Biosphere, but they are so interdependent & so intertwined that, in fact, they form one system — one vast cycle which is the large-scale LIFE process. * The Biosphere (which ^{in common with} ^{draws in} the lower Atmosphere & the upper Lithosphere) is alive as a whole, & the creatures it embraces — myself amongst them — are alive, not because they ^{have} vitality in their own right, but because they share in LIFE's. No wonder, then, that each individual is born with the indelible impress of the climatic environment through which his race has passed, & that a few inches more or less of rainfall may make all the difference between a low nomadic culture & a high settled one. Civilization is a planetary function.

5. The Lithosphere & the Biosphere.

In the 'physiology' of LIFE or the Biosphere there are wide gaps: in some ways she is ^{unlike} ^{self-sustaining} ^{in other} ^{parts} ^{she is} ^{anything} ^{but} ^{self-sustaining}. For instance, if the mountains are all the while being worn down by rain, frost, & wind, & the deposited ^{how is it that all has not long ago} ^{the land would long since} ^{the hour-glass would (as it speaks) have run out,} ^{have been reduced to sea level,} ^{the process of building & un-building of} ^{the} ^{LIFE's} ^{strata} ^{brought to a standstill} — unless there is some compensating process which either pushes up the land, or lowers the ocean floor, or does both. Now there is indeed such a process, & it involves the remaining layers of the EARTH — the Biosphere, & the lower levels of the Lithosphere.

As to the precise nature of the events in the EARTH's interior, which cause ^{periodical} ^{movements} of the crust, there is no ^{agreement} ^{not} ^{certainly}. The famous theory of Joly* supposes that radioactive elements are distributed throughout the EARTH's interior, & that

Of all human inventions, the prayer-mills of Central Asia, & of all the elaborations of the human mind, the practice in Tibet of harnessing wind & water in the service of religion, seem the silliest. It is, of our life is as much a motion of wind & water as of limbs, then the prayer-mill is not necessarily more absurd than the roving. There is more in such devices and not so absurd after all.



* For a full statement of the very great effects of Man (& of LIFE) upon the composition of the Atmosphere, climate, land erosion, & so on, see Sherrington: Man's Influence on the Earth.

• Ellsworth Huntington: 'Climate & the Evolution of Civilization' in The Evolution of the Earth & its Inhabitants (Ed. Bull), p p 151 ff.

* See Sherrington: Man on his Nature p 20



The land, no less than the air & the sea, circulates. ^{So far} ^{it is not clear how this can be}.

* J. Joly: Radioactivity & Geology Particularly Ch. VIII, & The Surface History of the Earth. Joly's theory is criticised by Jeffreys & others (Phil. Mag. 1926 & 1928)

68MV233

The diagrams illustrate the stages of a river valley's development:

- Diagram A:** Shows a straight river channel flowing through a flat landscape.
- Diagram B:** Shows the river meandering, with the valley walls beginning to rise on the outer banks.
- Diagram C:** Shows the river cutting a deep, narrow gorge into the landscape, with steep, high walls.

According to other authorities, the ^{periodical} folding & unfolding of the crust is due, not to alternate ^{expansion & contraction} swelling & shrinking of the ~~EARTH~~, but globe, but to its ^{consequent shrinking} steady cooling. The adjustment of the crust to a ^{smaller} ~~shrinking~~ core, ^{results in} ~~causes~~ the ^{resulting} ~~form~~ of a sinking of the ocean floor & a squeezing of the continents, particularly along their edges: hence the Andes, the Rockies, & the Himalayas. Such adjustments (which ^{by raising the land & lowering the sea} ~~raise the land & lower the sea~~) are ^{less} ~~not~~ gradual ^{rather} ~~than~~ ^{or deposition} ~~evolutionary~~: the tendency is for an age of ^{little} ~~steady~~ ^{changes to cataclysms,} ~~changes~~ to be followed by an age of violent geological activity. Of these there have been, in the course of EARTH'S history, about six.

So the times of quickening life are the times of geological change. (Thus the vertebrates were probably forced out of the water on to the land during the Silurian & the Devonian, owing to the drying-up of the rivers. Thus increasing aridity & glaciation past a maximum on the (Argand), & convection currents in the Planet's substratum (Holmg).

on animals who could maintain a constant internal temperature. Thus, ~~the fact~~ it may have been the aridity of the Miocene & the Pliocene which reduced the forests & forced our ancestors from the trees to the ground. This much is certain, evolution on the Earth is

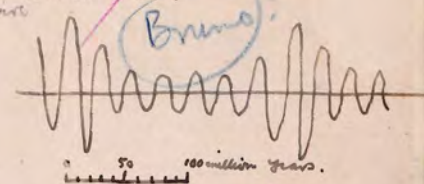
• See Lull: The Evolution of the Earth & its Inhabitants, pp 109 ff. of the EARTH.

- See Lull: The Evolution of the Earth & its Inhabitants, pp 109-61.

* See ^{also} Schuchert, in The Evolution of the Earth, p. 10 ff. + Gregory: Geology & Today

• Then a third possibility as a periodical wobble in the Planet's rotation, & adjustments of EARTH'S shape due to a slowing down of its rotation, *causable dis. to continental drift theory.

1. A. Holmes: The Age of the Earth, pp
46, 47ff. Holmes ^{provisionally} distinguishes,
in addition to the 200 million
years rhythm, ^{a subsidiary} ~~an even slower~~
~~of rhythm embracing~~ pulses.
with some ²⁰⁰ million years
between beats.



The large waves represent major revolutions in EARTH'S history, the smaller waves represent minor revolutions. (Based on Holmes's diagram)

+ For instance, the carbon-dioxide content of the Atmosphere, essential to LIFE, is supplemented by carbon-dioxide from volcanoes & mineral springs. Schuchert considers that if volcanism ceased life would become impossible. (The Evolution of the Earth, p 52)

A great deal of the CO₂ locked up in coal & oil has been made available again by Man. See Sherlock: man's influence on the earth, p. 122.

4
CELL
5
CENTRE
6
EXT.
8
9

Again common sense is wrong. It takes two to make a geosphere - two or more. As an earlier chapter argued at length, awareness is the most infectious thing in the world: a little of this virus goes a very long way. LIFE creates genuine companions for herself, merely by being herself. This is no ecotonic doctrine, but simply one of those obvious truths that we are too clever to notice. Every map is a Stratosphere-eye view (or Troposphere-eye view, or some other eye's view) & would mean nothing if that organ were more fiction. LIFE, & MAN in LIFE, are self-conscious; they look at themselves; they put themselves in a position to look at themselves; they retire to the place where they are themselves. 'Such' (they say, in effect) 'we are to this observer & to that observer'; & they speak with the authority: of one who is in a position to know. No-one doubts that England is precisely the shape the map needs. And the space-travelling observer which in this book I find it necessary to invoke are neither superfluous nor fictional, but real products of self-conscious life. We progress by learning to look at ourselves objectively, & this we can only do by animating our environment. Necessarily so, for life is in common with all else, is always two-centred, doubly located, there-from-here & here-from-there. Nothing, not even LIFE, is alive in & to itself. To live is to live in others, & to breathe life upon them. Brothers live upon them here.

But the point for this chapter is the quality of these social relationships within EARTH. That quality is supernatural. Men - notably the poets - do indeed attain to them, but not as mere men. The awe-inspiring wastes, the tremendous grandeur, the sense of sublime Promises - who, having known these, needs argument to prove that here is found our father & ourself? In short, so far from life at these levels being merely physical, or perhaps barely psychical, it is in fact, deeper life than ordinarily we lead. The appeal is that of contrast. It is the 'leapfrogness' of the rest of EARTH which is for LIFE so different from her own qualities. It is the process of animating this world, in the process of animating this world, that is life.

And the Greeks were in principle right when (on Saturn's dismemberment) they divided his dominions between his brother Zeus, Poseidon, & Dis. But the Greeks were in principle right when (on Saturn's dismemberment) they divided his dominions between his brother Zeus, Poseidon, & Dis.

5a. The Community of EARTHING. With the exception of the Biosphere, EARTH's organs are, according to common sense, utterly dead. Is it not a curious thing, which has, to its solitary living organ, such cumbersome dead ones? Who shall deliver me (the living Planet) might well complain - if it were alive. From the body of this death? From the body of this death?

The answer is twofold. (i) 'Life' is no mysterious substance infusing some bodies & not others, but a kind of process. Such a process occurs in EARTH as a whole, & can no more be parcelled out among her organs than the process of cutting can be parcelled out between the blades of a pair of scissors. Amputate the phalangee, or the Atmosphere & I die: this life I live, I think, this sentence I write, as well as the others. (ii) Moreover common sense is wrong as to the facts. By an astonishing act of wilful blindness, or (at best) an error of abstraction, innumerable signs of life are ignored. The ocean is no more itself without the lines & the submarine, the compass & the chart, the Challenger & its sounding-gear, than the land is itself without its plants, or the field without its flowers, or the flower without its petals. The balloon high in the Stratosphere (a sense-organ if ever there was one) is no more itself without the radio beam, keeping track of a point 75 miles above the ground, than the eye is without its lens. The eye is no more itself without the lens, than the eye is without its lens. The eye is no more itself without the lens, than the eye is without its lens.

The programmes of the radio-wave reflected by the ionosphere are nothing to do with the ionosphere, or that Sir Edward Appleton is unconnected with the Appleton Layer, is absurd. To consider an object only after cutting away all its highest aspects is, in fact, to fail to consider the object. It is to consider, despite members, the products of intellectual butchery.

Not can the transactions between EARTH's 'organs' be described as merely physical. Even so not the blue sky (with its unending cloud-processions, sunsets & sunrises, showers, lightning & thunder) of interest to LIFE, & a constant source of inspiration? Does she not find a peculiar solace in the sea, never resting from its 'priest-like look' & meanings? Great rivers & waterfalls, distant mountains seen from the plains, & the plains viewed from the mountains, do they not lead us into what LIFE really is, as experience? Certainly it is not above in the planet, but in by nature & habit social.

But all the sociableness, common-sense objects, is on her side. Does she not 'count the clouds of the South-west with a lover's brow'?

8. Thus Wordsworth. (The Prelude) speaks of a power that through the growing faculties of man both like an agent of the one great Mind creates, creates & receives both, working but in alliance with the works which it beholds.

It is significant that, in the Temptation, it was necessary to ascend a high mountain, in order to view 'all the Kingdoms of the world in a moment of time'. (Luke IV, 5) Geo-photography the possibilities of air-photography for the peace are as yet hardly realised, but it is becoming one of the essential preliminaries for many kinds of large-scale planning. To be intelligently, MAN is to be 'Atmospheric', i.e. self-conscious. See R.L.B.A. Journal, June 1946, for an informative article by Frank Searlett.

See Chapter III, § [Empathy]

* Cf. the Vedic pantheon, with Agni (Fire), Indra (Lord of the Atmosphere) with his bodyguards of Maruts, Rudra or Vayu (gods of storm & wind), Ushas (Dawn), Savanah (the clouds) - to mention only a few of the allegorical 3,339. (See A. Barth: Religions of India, Ch. 2.) Cf. also the Elementals of Paracelsus: gnomes (earth), nymphs (water), sylphs (air), & salamanders (fire).

Is it more absurd to say (with Teilhard) that the world is perfectly adapted to the water-life, & the mountain to the alpine plant, than to reverse the rather than vice versa? The truth is that water & water-life, & alpine plant, are united in living bonds, so that neither is itself without the other.

Described by Dr. C. H. Lewis & Dr. J. H. Lewis, Cambridge, Aug. 29, 1947. The immediate fascination for the child (of many species from experience) of the Jules Verne's Journey to the Centre of the Earth, as well as of fossils, crystals, & minerals generally, suggests that what Jung calls 'the childlike position of the mind' is here involved - that position through which the mind is linked to nature, or in which, at least, its relation to the earth & the universe seems most comprehensible. (See Jung: Contributions to Analytical Psychology, p. 118.)

Merrell, Goral, Chapter XXVI. See also Richard Fawcett, Chap. XII.

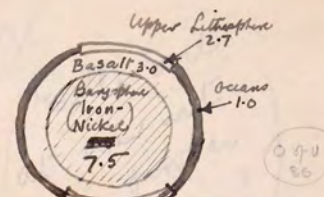
Does she not 'count the clouds of the South-west with a lover's brow'?

There are other factors linking the core & the crust & I need mention only two of them here. First, there is the sorting, as if in a furnace, of the EARTH's original material. Differentiation into layers of decreasing density, from the iron-nickel Bangosphere to the granitic crust, was the first essential step towards the development of the Planet. * This primary sorting was the work of the hot interior; the cooler surface carried forward the same task, grinding, as if in a mill, the primary rocks, sifting (by wind & water & living creatures) their constituents, and depositing them in well-marked seams. The joint result is EARTH's organization, out of an ~~undifferentiated~~ ^{undifferentiated} & chaotic mass. LIFE can now draw on stores of minerals of every kind, sufficiently concentrated to be of real service. In particular, MAN could never have appeared or grown up save as part & parcel of the stratified crust: there is no need to enlarge upon the reasons why civilization does not thrive in regions of ~~that~~ ^{of} primary or igneous rock, as in a mass, MAN is a tertiary ~~stratum~~ ^{formation}, arising out of secondary rocks.

Second, there is the effect of gravity. The Bangosphere exercises control over the Biosphere's pattern. The ~~size~~ ^{size} ~~range~~ ^{range} of organisms, the proportions of their skeletal & muscular equipment, their modes of propulsion, are adapted to EARTH's pull. * A less massive Planet would support a very different sort of LIFE, having a very different history. At every moment & in every place, every event in LIFE pays respect to every part (however obscure & seemingly insignificant) of the EARTH's interior.

← X has made some important advances in
In the past century LIFE on the Biosphere has grown up to some measure of self-consciousness. And this has necessarily meant the animation of other geospheres, particularly of the Atmosphere. For the condition of self-awareness (as I have argued at length in an earlier chapter*) is that one shall observe oneself through the eyes of one's neighbours, infusing them with one's own powers & being infected in turn. LIFE & the Atmosphere are engaged in such a commerce of propulsion & reflexion. * Fifty years ago such an assertion would have been easy to dismiss as one more instance of how a theory, pushed too far, can lead to the wildest extravagances. Today that particular criticism is hardly possible, seeing that one of the main preoccupations of our age is how to protect ourselves from the geosphere we have animated. It is no mere coincidence that the age of Lamarck & Darwin & Bergson shall also be the age of Montgolfier, the brothers Wright, & Bleriot. LIFE becoming self-conscious is LIFE becoming air-minded. Airmen & air marshals, the air force, air attack & air defence — the Biosphere lives a life of mingled terror & fascination with this ~~incomprehensible~~ ^{incomprehensible} Frankenstein's monster. Evident, only too evident, are the processes of propulsion & reflexion between them: on the one hand, radio, air travel,

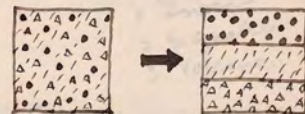
the story of a Biosphere
at once attracted & repelled by its encircling companions
at once loving & hating it, and partially afraid of it
Air power & air attack & air defence
all is one story: the



The density (hypothetical as regards the Bangosphere) of EARTH's layers.

* See Schuchert: The Evolution of the Earth & its Inhabitants (Ed: Leell) p 48.

Aristotle's teaching that each 'element' has its proper region, & that heavy bodies naturally move down & become manifest near the Earth's centre, thus has a basis in fact.



+ See Julian Huxley in Science in the Changing World (Ed: Adams), p 16 ff.

* In particular for instance, every motion of my hand as I write is adjusted by a pull of every molecule inside the EARTH. My slightest movement involves the entire globe. Again, when I weigh myself, I put the EARTH on both sides of the scales.



* Ch. III. See § 5 specially.

* Rupert Brooke, in his poem called 'Clouds', has a picture of the clouded sky, & of the dead riding the calm mid-heaven like clouds, & watching what is going on below. This not mere fondle, for (a) we know what the world looks like from above, & (b) 'We cannot find out what the world looks like from a place where there is nobody, because if we go to look there will be somebody there.' (Bertrand Russell: Outline of P. p. 403)

the new vocabulary
what it is doing, or to
be weighty & about
find some way about
by means of a compass
to be applied to the
Biosphere

at once internal & projected.

is almost plain.

x. It is significant that Gerard
Winstanley (whose pamphlets inspired
the Digger Movement of the middle of
the 17th century) conceived Earth as
the basis of human unity & brotherly
love. ~~His~~ ^{His} ~~the~~ Poor People's heart, he says,
has its aim in that "the Poor People's heart"
shall be comforted by making "the Earth
a Common Treasury, that they may live
together united by brotherly love into
one spirit, & having a comfortable
livelihood in the community of one Earth
their Mother."

(See The Digger Movement in the Days of
the Commonwealth, ed. L. H. Berens.)

② Richard Jeffries realized the oneness of the universe intuitively. "The rich blue of the unattainable frowns of the sky drew my soul towards it & there it rested, for pure colour is not of below." "The great sun burning with light; the thing earth, dear earth; the warm sky; the pure air; the thoughts of ocean; the imperishable beauty of all filled me with a rapture, an ecstasy, an inflation." The Song of My Heart is full of such passages. Experience of this kind (I venture to say) is more practically effective in reducing the chaos of the world than most of our nation's ~~poetry~~ poetry.

Enough evidence has been ^{called} given to show

With beat of systole & of diastole
One great great life thro' through earth's
giant heart,
And mighty waves of single Being roll
From new-born germ to man, for we are part
Of every rock & bird & beast & hill
Oscar Wilde: Panthea OBMV
200

entire whole
"The Earth is that ~~permanent~~ ^{entire} whole
~~of~~ of which ~~one's~~ ^{one's} body is but
a member; it is that permanent
whole of which one's body is but
a brief part; it is to ~~it~~ ^{our body} what a
~~the~~ whole life is to the single living,
or a permanent body to a
small & perishable organ."

- a Defence of Poetry

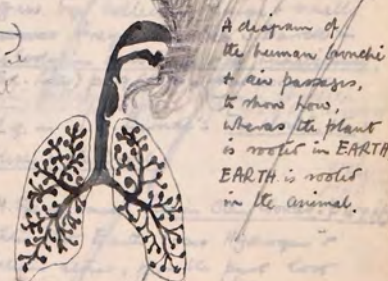
Kuan Tzu, XXXIX Dr Edkins
complaints of the Chinese that they speak of
dead things as living. "But why not?"
they have replied. "We say poison down river
or sunshine, the earth produces corn again
or we then in perpetual movement, & we
hence say things as living." J. Edkins

+ It is a method that I have
noted before, in Ch I, §7. Wordsworth
describes it ~~thus~~ as:
By which we multiply distinctions, then
Deem that our petty boundaries are things
that we perceive, & not that we have made.
The Prelude. large copy, M. 189

- Antoine de Saint-Exupéry:
The Little Prince, p. 52. - a charming
child's story by the late poet

There are three stages in the development of one's attitude to EARTH is the first (or animistic) stage of primitive man, not only EARTH but almost any part of her is endowed with a life, kindly or menacing. ~~He~~ ^{He} ~~second~~ ^{third} stage ~~then~~ ^{then} man had been outgrown no science was possible. ~~His third~~ ^{Science is the next stage} stage (which gives full value to & does not ^{not} ~~supervene~~ ^{supervene} the other two) is the one put forward in this chapter. In the whole, ~~there~~ ^{the} human thought is now at the second or scientific stage.

241. The development of the individual 'recapitulates' that of the race, & children go through the animistic stage before reaching the scientific. Not many get to the third stage.



② Mendell: 'Spirit of Earth in Custom'

cut from living tissues organs.
O. "Earth was not Earth before her sons appeared," says Mendith; "You say: 'Earth is ^{not} Earth so long as her sons do not appear.'" I find your method a curious one. +
~~I find your method puzzling.~~ You watch this globular creature for signs of life. It puts out a limb. You see that the limb is alive. And at once you mentally amputate ~~the limb~~^{it}, explaining that only the limb is alive, while the body which put it forth is dead. The 'limb' may be a
or a crocus, or Shakespeare, or a talker,
cell, or a hand, or a man, or LIFE — they all receive the same
treatment from you. "We do not regard flowers," said the geographer.
Let the professor once show a sign of life &
you say: "this is not ~~death~~^{life}, but something else." And why? Why,
because the ~~tenth~~^{earth} is dead, of course, & has no business to show signs of life.
That, in effect, is what you say.

Can't you see that you are begging the question? Can't you see that your Earth, your poor deviated Earth, is quite unreal, a thing of your own creation? ☹
Sufficiently adult to play games on its surface ~~and~~

C.S.: An organ that has come ^{external} ~~advised~~ from the body is a poor sort of organ. ~~that~~
~~not a parasite?~~

Q: It has not come adrift. It is not ^{an appendage} even ~~attached~~ ^{embodied}. It is right inside ^{the} her innards, a foster-child, but has very self, ~~and is the~~ ^{embodied} body which is EARTH. And it is firmly rooted. Sometimes the EARTH-organ has roots in the EARTH-body (the organ is then called a plant) & sometimes the EARTH-body has roots in the EARTH-organ (the organ is then called an animal: the air in his lungs is EARTH's roots in him). As for the fact that the second root of EARTH-organ can travel hundreds

of miles an hour without uprooting itself, that is a tribute to the organic vitality of the whole body.

'Earth that envelops the man' ^{nab} ~~says~~ a fragment of Empedocles -
but "envelopes" does not do justice to their unity) & he is impotent to have
but three are part of the earth just as embryos are parts of its uterus.
Barnet: Early Greek Philosophy, p. 23

CS: But the dead..... You see the ^{EARTH} ~~earth~~ as a man might have seen it before the invention of agriculture. In his ignorance he watched the ^{EARTH} ~~earth~~ (as he thought) coming to life in the Spring, & dying or going to sleep in the Winter. ^{It is impossible} For him ~~to see as he did~~ ^{to see as he did} the ground sprouting, & grow a sort of hair. The sower knows better. Do you want me to sink to the intellectual level of the primitive ^{hunter &} food-gatherer?...

O: ...And of the fruit of the EARTH, *
simple, the desert - not a packet of seeds - blossoms as the rose, + But
you talk of seeds as though they were imported from Mars or Venus: are

† the ^{half man} rock breaks out into ^{multi-} ~~various~~ colours & ~~is~~ multi-colored dars. (8)

Be Objective ^{things} look at EARTH as the really is: for example, ^{To take a concrete instance,} observe a certain pattern ^{the} Scientist who wishes to investigate the ~~of~~ ^{of} EARTH ^{real} ~~as a concrete whole~~ ^{as a concrete whole} could not ~~afford to neglect~~ ^{or even ignore} the behavior of those bits of her which are involved in the ^{real} ~~process~~ known as baseball. To say baseball isn't geology ^{is no answer} ~~is no answer~~. There may not be room for a ~~study~~ ^{study} of baseball in ^{the} ~~the~~ geologist's curriculum, but there is room for ^{it} ~~it~~ in his Earth, but there is room for ^{a game} ~~the~~ in the EARTH that actually exists.

Shelly's living EARTH describes herself as
the mother above strong veins,
To the last fibre of the loftiest tree
Whose thin leaves tremble in the frozen air.
Joy runs, as blood within a living frame...

'Soft hair of the grass,* Or fair limbs of the tree' ~~and thus~~
Swirburne's Earth-goddess describes herself. *

x Hertha, 2. p170

* It has been rightly suggested,
however, that by Corhenius, that
the simplest forms of life reached
EARTH, or meteorites or dust
particles, from interstellar space.
S.A. Corhenius: *Wonders in the Making*
o *Prometheus Unbound*, Act I.

* According to Plato's Phoenician myth.
(it is significant that he proposes it as a
necessary one) the rulers & nobles & common
people, with all their possessions, are buried
in the earth "and when they had been
made quite ready, this earth, then mother,
sent them up to the surface." (*Republic*,
Bk III, 414.)

* For example, the story of Antaeus,
son of Poseidon & Gaia, who
renewed his strength by touching
his mother Earth. Hercules,
discovering the source of his strength,
lifted him from the Earth, & so was
able to kill him in the air. And
the alchemists (e.g. Basilus
Valentinus) & Michael Maier believed
that all terrestrial things, including
minerals, have their powers from the
spirit of a living Earth. (Aug 19, 1945)

* Le Vicomte Henry de France (the
Modern Dowsers, [Trans. A.H. Bell] p20)
believes that anyone can train himself
to become a dowser. Other authorities,
however, disagree: See Theodor Becker-
man: *Water Divining*, p168.

What is poetically, mystically true
is not necessarily scientifically
true & it confuses the two attitudes
is dangerous.

* In Swirburne's 'Hertha', the Goddess
addresses Man & thus:
One birth of my bosom;
One beam of my eye;
One upward blossom
That scales the sky;
Man, equal to me with me, man that is male & me,
man that is I.

* This is the Planetary Hypothesis of
Chamberlain & Moulton, according to which
EARTH began as a small protoplanet
& grew by collecting large & small
fragments. See J. Barwell in
The Evolution of the Earth & the Inhabitants,
(Ed. Hille) p. 19 ff. for account.
* E.g. in J.D. Bernal's *The World, the
Flesh & the Devil*.

+ H. Spencer Jones (*Life in Other Worlds*, p87ff)
states that Earth loses Hydrogen &
Helium atoms, & in the past lost
the lighter elements of the atmosphere
more rapidly than at present.

* City of God VII, xxiii

1213

They not EARTH-organs like the rest? Of course, then are seeds every-
where, but you pore over them so closely that you do not see they
are parts of one big Seed, which is EARTH herself. And that
Seed is growing up into a wonderful spherical Plant, of which man is
a sort of flower. Literally, ~~he is~~ autochthonous - sprung from the land itself - rising
like the lion & the crane, the libbard & the tiger, from his Mother, from his Mother.
p265 The grassy dunes now calves; now halt approach
No heavy lion, pawing & get free
His hinder parts...
C.S. y. ~~flashes~~ Not were primitive man (whatever his illusions about
the vegetable world) would take me for the Earth, sprouting, or for the
Earth walking & talking.

Q. Mung See Dietrich, Muller-Verde
5 days J.E. Harrison, *Indogermanica* II,
Thema, II.

Q. Do not be so sure. Your forebear has this insight, though dimly, as
many myths & legends testify. I suspect that in the depths of your own
mind also the idea flourishes. The violence of your irrational resistance
to it at the conscious level may be the means of its strength in the
unconscious, & of the effort of repression which keeps it there. Perhaps
your refusal to see the obvious, your ~~misapprehension~~ & ingenious stupidity, is
based on fear & a narrow egoism. Nothing that threatens the little self-interest
of the dowsers, for instance, is one who lets some of his knowledge through.
Perhaps you inhibit, or censor, your ~~thought~~ ^{thought} But do you not deny your own life when
you deny the EARTH which is its source?

C.S. On the contrary, it is you who deny my life, by ~~denying~~ ^{denying} it in a
monster's. I deny the monster. And I deny it not because it is a monster,
but because it is fictitious. I grant the existence & complexity of Earth's
parts, certain of which live. I grant their interdependence. I grant that
in some ways they make up a whole. What I do not allow is that the
whole so constituted lives as a whole. Life is a series of exchanges between
organism & environment, whereby the ~~form & identity~~ ^{organization} is preserved. EARTH
is innocent of exchanges of such a quality: Thus Earth does not
feed, or grow, or reproduce, or effect waste matter, or adjust her shape.
Therefore I say she is dead.

Q. All these things EARTH does. She feeds on sunlight: it is her staff
of life. She feeds on the meteors that cross her path, & thus is a theory
that she has grown up from ~~small~~ ^{small} beginnings on such a diet. She has
reproduced her kind: did she not bear the Moon, & is there not already
talk of space-ships & artificial planets that ~~will~~ ^{may} in some remote
future, set out from her to find a younger & hotter Sun? * As for
waste, EARTH has probably lost to the Universe ~~some~~ ^{quantities} of the lighter gases of
her Atmosphere, & continues to do so. And what of the radar fingers that
she puts forth to gauge the distance of Sun & Moon: are they not

* Here what St. Augustine says about Varro's Earth-goddess: "We see one earth, filled
with creatures: yet being a mass of elemental bodies & the world's lowest part, why call
it a goddess? Because it is fruitful? Why then are not men gods that make it so with
labour, not with worship? No, the part of the world's soul (say they) 'inlaid in her,
maketh her divine.' Good: as though that soul were not more apparent in man..."

c.s. But perhaps, after all, our disagreement is no more than a misunderstanding, a logomachy, or verbal muddle. If (i) I choose to define the planet as a dead globe inhabited by living creatures, & if (ii) you choose to define it as the globe plus the creatures, then naturally we talk at cross-purposes. Of course I grant that, according to definition (ii), the planet includes its life, & even that (in some sense) it lives. ^x Willingly I grant, moreover, that the idea of the planet as a comprehensive whole is a valid idea ^{just as the idea of Asia as a whole, or the Anglican Church as a whole, or of a coral reef as a whole, is a valid idea not nonsensical} & it corresponds to a fact; and willingly I grant that such ideas do & must regulate our thinking. If now you will in turn grant, from your side, that according to my definition (i) the planet is dead — why then our differences are settled. But you seem bent on exacerbating them.

The gulf that separates us is a

US It would be difficult to over-estimate ^{our difference} ~~the difference~~. ^{It is} ~~They are~~ real & not merely verbal gulf. ^{It makes} all the difference imaginable to a man's life & his world, to his attitude, to what he is. ^{It is} ~~They are~~ inexpressibly meaningful. The difference between ~~your planet~~ (say) Mendel's planet & yours is the difference between a man at his best & a corpse alive with maggots: Both (provided we ^{philosophically} define our terms) may be called 'a whole' and 'alive.' ^{you agree, then,} ~~with Mendel~~ It is the difference between the person I love & the organs I anatomize. It is the difference between the thing & the word, between the letter that kills & the spirit that gives life. Let us agree on a formula, you suggest, & settle our differences. As though a ^{magical} formula of words could spirit the Pacific around to the Atlantic, or bring the Poles together!

CS. What is the truth for the poet as poet may be the pathetic fallacy for him as thinker.

US Of course it may. But it is his opinion as poet, as ^{an expert witness} ~~an expert witness~~, that is really worth having. ^{His peculiar} ~~value~~ ^{value} lies in ~~its~~ ^{its} relative independence of ~~the poet's~~ ^{the poet's} evidence. For this reason I am more interested in what the poet is ^{driven to say} ~~than~~ in his (often quite mistaken) rationalizations, ^{after the fact} ~~and~~ is it not ^{rather} ~~rather~~ that the mark of greatness that ~~a~~ ^{the} poet is ~~unlike~~ ^{unlike} than he knows — or rather that he is the ~~subject~~ ^{subject} of mouthpiece of a higher self. In the case of Mendel, it ~~is~~ ^{is} the EARTH-self who is the real spokesman.

x Richman finds that, amongst all the objections brought against his living EARTH, ^{that} ~~that~~ upon which all objections are agreed is that the thing in question is useless because it is sufficient to find the word for it. The word may be 'life' or 'spirit' or 'ideal principle' or 'idea'. But it all comes to the same thing in the end — "the eggshell instead of the egg." The words insulate against the reality; it may come to mean the exact opposite of the reality. ^{Any} But, in any case, if one believes that God is omnipresent in his world, why should not this presence in the EARTH take on a character suitable to such a body? (See Lewis: The Religion of a Scientist, p. 154)

o "Therein lies the social importance of art; it is constantly at work educating the spirit of the age, since it brings to birth those forms in which the age is most lacking." Jung: Psychology & Analytical Psychology p. 248. See also Denis De Rougemont: The Gods of the People.

6 "the artist makes out to that primordial image in the unconscious which is first felt & comprehended the unconscious & over-orderedness of the spirit of the age."

But comparison with other grades of organisms is beside the point. EARTH is alive after her own fashion, not after the fashion of an overgrown mammal. Until the specific nature of planetary life is studied, many facts will remain unduly puzzling. For instance there is the problem of how terrestrial conditions, & the properties of terrestrial matter, happen to favour the emergence of life in so many ways that coincidence is out of the question. Thus, as L. J. Henderson has shown, the presence of large quantities of water & carbon-dioxide on the planet's surface, the peculiar properties of water (its specific heat, freezing point, latent heat, expansion before freezing, solvent power, & surface tension), the peculiar properties of carbon-dioxide (particularly its solubility in water), the characteristics of the ocean (such as the number & variety of its chemical constituents, the quantity of the dissolved material, its mobility, constant temperature, & constant composition), the many unique properties of carbon, hydrogen, & oxygen — all these are favourable to life; they converge upon & indicate life; they set the stage for life & maintain it when it arrives. All this "fitness of the environment" is of course very remarkable — as remarkable, in fact, as the reciprocal fitness of my eye & hand, or of rolling rocks & permanent ways. But no one in his senses would think of treating the evolution of the eye & the hand as things apart, & then expressing the utmost astonishment at the way they fit each other. It is equally absurd arbitrarily to confine EARTH's life to one part of her in space & time, & then point to the life-promoting properties of the dead remainder. No, the whole lives as a whole, in which no part is dead. I so the living EARTH, ^{everywhere} ~~everywhere~~ & ^{everywhere} ~~everywhere~~ of water, ^{there is} ~~there is~~ in the ground life.

x Richman, rarely gifted as he was with awareness of the living EARTH, ^{made his case by} ~~made his case by~~ insisting too much upon the analogies between the planet's life & a man's life. Thus, having ^{stated} ~~conceded~~ the point that human brains & nerves & sense organs are EARTH's, & that it would be foolish to look for others, he ^{goes} ~~goes~~ later to compare the ^{planet's} ~~planet's~~ rounded, transparent & shining seas with the ^{eyes} ~~eyes~~ of man. x

What is needed is the integral vision of the poet

x In The Fitness of the Environment. See pp. 250 ff.

x Zeno-Aveta, pp. 225 ff. Lewis 77.

C.S. Pen-t'ao k' Wang Ch'ung: "Mouths want to eat & eyes want to see: without an appetite, without the manifestation of it.... How do we know that Heaven has no mouth & eyes? We know this from Earth; for with the soil Earth becomes a body, & ^{feeling} soil, basically, has no mouth & eyes.... Since Earth has no mouth & eyes, we also know that Heaven has no mouth & eyes; for, if we assume Heaven has a body, it can only be like Earth's body."^o U.S. Earth is not only ^{feeling} soil, & is furnished with myriads of ^{little} mouths & eyes, as well as with ^{other lower and} called observational.

- In Chinese Philosophy in Classical Times (Ed. + Trans. E. R. Hulse). pp 328-9.

Purposful ~~pseudopodia~~ 'pseudopodia' which are not less effective for

these marionettes being invisible? ^{the} Finally what of her radio-voice? But you approach the whole subject with a clear mind. But common sense is content to slash out blindly: the victim's real nature is beside the point. Amiel's advice falls on deaf ears: "We must study, respect, & question what we want to know, instead of massacring it. We must assimilate ourselves to things & surrender ourselves to them; we must open our minds with docility to their influence, & steep ourselves in their spirit & their distinctive form, before we offer violence to them by dissecting them." *Journal (1904-1905)*

• Journal, (7th April, 1866.)

9. The social life of ~~the~~ EARTH

C.S.: Suppose I agree that EARTH lives. Life, however, is of many grades. And a high-grade life, ~~more~~ intelligent + self-conscious, does not develop in isolation: it is either impossible or highly improbable except within a society of similar lives. Now what social intercourse does EARTH as a whole enjoy? Obviously none. And, lacking ~~with~~ the stimulus of such an environment, her life can only be of a very inferior order.

- Prometheus Unbound, Act IV.

O. Let me explain. EARTH is a notably gregarious creature, intensely concerned with her fellow citizens in the unquiet republic of the maze of planets. She is all the time watching them with eyes she has given for no other purpose than this, (of late) actually sending out feelers to touch them - what are radar beams, but a species of planetary antennae? - they are called her observations. She is never tired of studying

X And not only obj: EARTH listens to
the Sun - ~~the~~ short-wave receivers pick
up radiation emitted by Sun spots. The
noise increases & decreases with sun-spot
activity. See Gabrielle Rabel: 'Noises from
the Sun & Stars', Science News IV (1947)
pp 53 ff.

SUN

their habits & nature, & naming them & grouping them. This great
r. persistent effort ^{direct} is of little practical benefit to her: it seems to proceed
from sheer curiosity, admiration, desire for knowledge. And sometimes she makes
definite use of them, as when she determined that light travels with a finite speed, by observing the
retardation of Jupiter's moons, & checked Einstein's theory by studying Mercury.

C.S. ~~a man observes Mars~~ ^{observes} Mars: ^{I am even mildly interested in Mars} I cannot say I enjoy the ^{no added} ~~company of Mars~~ ^{perhaps} ~~obs~~ EARTH finds more in the Planets than I do?
^{dist. in the sky}

© Thanks for the observation
of melanos thymus, radiolabeled is
independent of visible radiation &
~~radio~~ equally accurate at
noon as well as at
midnight is already
helping out visual
observations. Great
advances in our knowledge
as expected with this
new technique. See
Gabriela Rabel: Direction
of melanos (by Rabel,
Science News X (1947)

pp 28 ff.

J:STC
51

0. EARTH does not see the Mars that the man in the street sees - a reddish ~~dot~~ ^{point of light} that is no smaller & no nearer than a star: she sees a Planet that is of the same order of size as herself, & very much nearer than the nearest star. That is to say that EARTH (by virtue of her astronomer-observing organs) sees Mars as ~~you~~ ^{one man} sees another man: she is no more ~~tricked~~ ^{deceived} into seeing a distant planet as a dot, than a man is ~~tricked~~ ^{deceived} into seeing a distant man as a homunculus. ~~My point is this, that~~ ^{And so} EARTH lives amongst her own kind. A man is geocentric ^{but}, EARTH is EARTH because she is not geocentric. She is a social being.

 Jupiter
 Saturn
 Uranus
 Neptune
 Pluto

C.S. But I mean a real social life, one that provides an environment in which persons grow up.

O. ~~Astronomy~~^{Astronomy} was the mother of EARTH'S science. ~~In other words,~~ ^{that is to say,} EARTH'S intellectual growth has been very largely due to her social activities: ~~out of these~~^{the process of} her companions awakened her from unconsciousness.

Anyhow, what do you expect? ^{a sphere furnished with hands & feet & penis} — as in primitive representations of the Sun? ^{or just the} A pair of human arms & legs dangling futilely from the globe, or perhaps trailing eagle's wings? ^{it creates with motion} If EARTH had a mane of hair, & pink cheeks, & a row of gleaming white teeth, you would scarcely deny the tidbit: ^{by their fantastic ugliness} ~~yet such features being absurdly incongruous~~ would do more to prove her dead than alive. Why not admit, then, that the organs she has are such as befitted a Planet, that, in short, if Planets live ~~this is all~~, this is the way for them to live? Or have you improvements to suggest? I would be interested to have your design for a living one.

The EARTH'S immediate companions,
of distance from the Sun,
shown in their order & relative sizes,
~~but not of course~~ as EARTH sees
them.

lung P 55U108

08 * Prometheus Unbound, Act III, Sc III.

"Nature," says Aristotle, "does nothing at
haphazard, nor can she be supposed to look
after things but to overlook objects so
various as these; yet in these cases the
means of set purpose, as it were, to have
taken away every means whereby the world
has propelled themselves, & to have made
them so far removed as possible from the
causality which have organs for motion."

De caelo, II, 290.

De castro, II, 290.

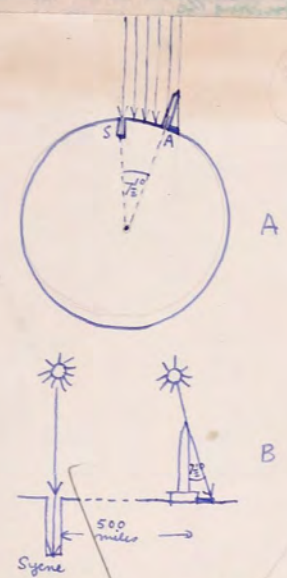
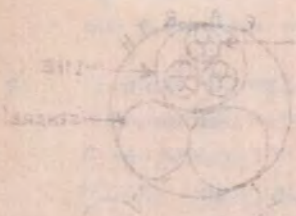
4
CELL

5
CHINE

6
EXT.

8

9



* Eratosthenes (c. 250 BC) found that at noon on midsummer day the Sun was overhead at Syene (since it was then reflected in the bottom of a well), but at Alexandria it cast a shadow at an angle of $7\frac{1}{2}^\circ$. Knowing the distance (500 miles) between the two places, it was easy to work out the Earth's perimeter - provided that the measurement depends on taking up the Sun's view of the Earth (A) (in which the Sun's rays are parallel to the Earth's surface curve) instead of the nearer view (B) in which the Earth is flat & the Sun's rays diverge.

to live alone & for himself the life of self-consciousness, then the same is possible for a man.

C.S. This is an unprovable hypothesis.

O. On the contrary, the evidence is merely so commonplace that nobody notices it. ^{How does Eratosthenes measure the Earth's Planet? By looking at it from the Sun's point of view.} How do I find my way about EARTH? By alternately looking at a map & looking at my surroundings, while relating the two; & what is looking at a map, truly speaking, but seeing EARTH from, say, the Moon. Taking upon myself the Moon's point of view? Lord Selousbury's advice always in our large maps, ^{which means 'avoid standing still'.} It is not a mere man who travels V but a man who rhythmically becomes a celestial body that has, for itself, the EARTH. Who is her geographer, her cartographer, but herself ~~seeing~~ putting herself in the position of her nearest neighbours? She endows them with the power to see her, because only so can she see herself. No man of her who knows her as a Planet but is where this knowledge is to be had, & where it is true, & is the sort of creature who can possess such knowledge. As EARTH is to me, so am I to her, ~~but~~ ^{it is} any answer & the existence of this discussion is still sufficient guarantee that she is not alone.

© R. A. Sampson
The Sun, 1944.
See also Henderson
Folios of the Government.
p. 16.
is of the spectrum to
chemistry. NO

Then are there possible views: (1) the P.S. view that ~~some~~ certain men ~~as~~ ^{as} Earth as men are conscious of Earth & other heavenly bodies; (2) the view of Plotinus that Earth is conscious of celestial animals, more intellectual than we; (3) the view, which ~~is~~ ^{is} ~~probably~~ ^{is} a consciousness of itself of the ~~universe~~ ^{universe}.

comings & goings are as monotonous & as automatic as the spinings of a child's top, is intelligent? Intelligence is as intelligence does, & Bruno's intelligent Earth is a fiction.

O: what makes you think EARTH's motions are automatic?

CS: She doesn't know what she is doing or where she is going. ~~She is still~~ ^{And what she does} in the grip of the laws of motion.

O: But EARTH does know very precisely what she is doing & where she is going. She knows when she was this time yesterday & a century ago, & where she is going to be tomorrow & a century hence. ~~Can you say as much of yourself?~~ ^{What man can say as much of himself?} She knows how what is more, she is getting to know as much about her companions as about herself. ~~As for the grip of natural laws there is no such thing. Laws do not account for behaviour or govern it: they are merely instruments for recording & describing it after the fact.~~ ^{As for the grip of natural laws there is no such thing. Laws do not account for behaviour or govern it: they are merely instruments for recording & describing it after the fact.}

CS: You have been listening to radio-scientists. But even if, for argument's sake, I grant that the astronomer is, as astronomer, EARTH become conscious of her own behaviour, there is still the question of freedom. EARTH knows what she does is doing: does she will it? A top miraculously aware of its spinning ^{yet powerless to alter it} ~~whose awareness nevertheless made no difference to the spinning, would be indistinguishable from an ordinary top, & inevitably, in a state of infinite frustration.~~ ^{in a state of infinite frustration.}

O: It could not, for example, steer itself to avoid disaster!

CS: Exactly. How could the EARTH, however conscious of its danger.

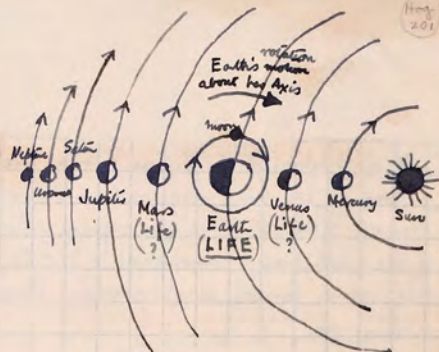
O: You pick out EARTH's supreme skill - to show she is without skill! She has a genius ^{surely} for self-destruction. She lives in a hell where the alternatives are death by scorching, death by freezing, & both at once. And not only does EARTH avoid the first ~~but~~ ^{or the second} ~~fatal~~ ^{fatal} by steering ^{with the skill of perfect helmsman} a middle course, & the third by ~~steering~~ ^{rotating} like a joint on a spit, but she actually turns the triple threat to her life into the ~~most~~ ^{very} source of her life. Saving her skin is making her skin. By her manoeuvring as precariously as that of a tight-rope walker, she turns a potential hell into an actual heaven in which you share. ~~And how do you show your gratitude for these measurable ~~benefits~~ ^{benefits} whereby, against all odds, she saves you continually from instant annihilation?~~ ^{By using the life}

According to Bruno, not only the Earth, but the other planets & the stars are "celestial animals, more intellectual than we." (Cena, Dial. III).

Similarly Plotinus says that the Earth has a soul that sees & hears. (Enneads IV, 4, 26.)

* Here is an application - one of many in this book - of the last (taught by Plato & Hegel in their different ways) that the fundamental material for the solution of ~~the~~ problems is available here & now if we could only see it. Thus I say, EARTH's mind is not hidden & obscure & beyond human comprehension, but a 'higher' level of human mind itself. In a sense I am applying "Occam's Razor" ("It is vain to do with more what can be done with fewer.") Thus I do not postulate an EARTH conscious of her motions plus astronomer similarly conscious, but merge the two. See Ernest E. Moody: The Logic of William of Occam.

See Bosanquet: Contemporary British Philosophy (Ed: Muirhead) 1st Series, p. 55.



Life is a question (amongst other things) of temperature, & the surface temperature of a planet depends (again amongst other things) on its distance from the Sun: Atmosphere which traps the heat, & the speed of rotation, also make a great deal of difference. ~~surface temperature~~ ^{surface temperature}. EARTH could not be very much nearer to, or further from the Sun, however, & still support life.

2.5. Still I find, when I move my arm, a feeling of effort put forth, a sense of movement originating, and also some agreement between the movement itself & that more inclusive pattern of movement which I call my purposes. This is my first-hand experience.

15. And is it not from such experience that we must set out, arguing from the known to the unknown? But in that case the prima facie presumption is that all movement whatever is of the same general nature as the movements (such as those of the hand writing this) into which I have special insight? At least it is less speculative to suppose there is only one kind of movement (i.e. a two-sided kind, having an outer or physical, & inner or psychological, aspect) than to suppose there are two sorts, one of which lacks every trace of an inner aspect. Surely it is the dogmatic mechanist, rather than the panpsychist with his inductive methods, who propounds a fanciful hypothesis, who speaks fifth's language. And surely it is with him, that the burden of proof lies, seeing that he ventures far beyond the safe ground of a two-sided world to a 'mystical' one-sided world - a world miraculously purged of inwardness, a world that is outwardly alive but dead at heart, hollow, a vain pretence, all show & no substance, a sham, a deceit, & an absurdity.

16. On the contrary, it is the mechanist who refuses to go beyond the evidence. The only view-out (or consciousness) of which I can be sure is my own; the rest I can be sure of countless view-ins (or bodies) because these comprise my own view-out.

17. No mechanist (unlike him who says) really refuses 'consciousness' to the view, or regards (as he does) the view as an accidental machine. In this he goes far beyond the evidence. But having gone thus far, it is arbitrary to stop where he does, so dividing the world into (1) conscious things, of which he has direct knowledge (himself), (2) many 'conscious' things of which he lacks direct knowledge, (3) 'unconscious' things of which he has no direct knowledge. The panpsychist, on the other hand, economises in his hypothesis, & omits the third of these categories.

18. The third category arises because the behaviour of certain things, such as the planet, indicates that the view-out (or consciousness) is lacking. The beneficent results of the planet's motion are seen besides the point. Can behaviour be regular & so much be other than automatic?

19. It is this fact, which indicates that what I know is not a sample of nature, but is a fair sample of nature, & is only a sample of nature.

20. To this I add the proviso

What goes on here & now is the same as what goes on elsewhere & elsewhere.

21. Hear what Plato says of the stars:

"Now to prove that the stars, with all this journeying, have intelligence, men should have found sufficient evidence in the fact that the stars do the same thing always, because they have for an unimaginable length of time been doing things determined of old, & they do not, by changing their intent this way & that, & doing one thing at one time & another at another, come to wander & change their orbits." Epinomis, 982.

M. Le Corbusier, the famous French architect, has made the point that if a Martian astronomer were looking for signs of life upon this planet, straight lines (or regular curves) & not wavy lines, would be planned roads, & not the wandering lines of unplanned ones, would furnish the evidence. Regularity indicates intelligence.

The question is: uniformity with what? - with the matter we already know, or with the matter which is intelligible experience, or the matter which is necessarily a matter of

All I ask is that

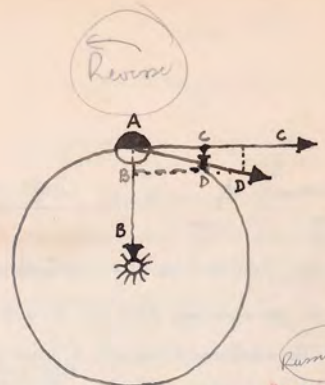
Spencer invents this procedure, making our sense of effort a mere symbol of the real objective force, existing beyond consciousness, & quite unlike the symbol. Otherwise, he says, we are forced to endorse inanimately objects with consciousness, which is absurd! (First Principles, 47, 167, 170, 188, 60/62)

X I refer particularly to Fechner (whose great work has never been approached). In Die Drei Motive he writes: "The essential thing is to start from the greatest possible area of empirical observation in the sphere of earthly existence, in order that, by generalising, broadening & exalting the points of view which are offered here, we may attain a conception of what holds good beyond this in the other, the wider & deeper sphere of existence." This method, in fact, is reminiscent of the analogical critique of Thomistic philosophy.

+ And even, in the last resort, only the second category, if he believes (as I maintain) that his own many-levelled consciousness embraces the consciousness of other things & other sentient. For example, I can & do know myself as EARTH: my conviction that EARTH lives is based on the same kind of direct experience as my conviction that this human body lives. I feel alive as EARTH. Fechner did not, I think, sufficiently emphasise this principle of immenence.

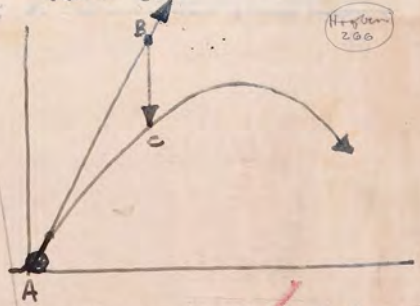
✦ Centuries of Meditation II. 91.
 or D.S. Marmolouth: Meditation
 Mohammedanism (H.V.L.) p. 211.

the faintest hint.



Revised p. 10

The result D of the two forces B + C acting on Earth is the same as if they acted by turns. If force B is suspended for one minute, Earth moves to C; if force C is suspended for one minute, Earth moves to D. (Actually, this is true only when the lengths of time considered is sufficiently short.) plot the same principle is used to calculate the trajectory of a shell:—



Hydrogen 200

If gravity is ignored, the shell goes to B after 1 second. Suppose now it had been dropped from B instead of having been fired from A, the shell would, in the same second, have fallen to C. And C is its actual position after one second.

- Whitehead (Adventures of Ideas, ch. III) takes the view that 'laws are the outcome of the character of the behaving things' or 'communal customs'
- Prometheus Unbound, Act IV.

* Surprise is sometimes expressed at the way mathematics, the *a priori* work of this insignificant fragment of the universe called man, should apply so neatly to the universe. Such surprise is based on the error that man is a fixed quantity, neither expand nor contract with his object. Calculations respecting *other* planets, *other* stars, the work of a *man* — therein lies their validity. The mind is nature's law-giver, carving up the world into categories. No doubt, Kant was right, but the question is: whose mind? And the answer is: not man's alone, but the mind of all those other beings to which man can attain. — nature's own.

96 MT 98

O: I have the best sort of evidence which, for two reasons, is weighty. First, it is mathematical; second, it is ^{supported by} ~~confirmed by~~ ^{of the other side} ~~witnesses~~ ^{of the other side} ~~is against my view~~. EARTH, as I say, knows her path round the Sun. But this knowledge is no mystery, & the reasoning that underlies it is open to our inspection. How does she settle her path? Only by entertaining the possibility of rushing towards the Sun on the one hand, and flying off at a tangent on the other. She must reckon first the consequences of the one, & then the consequences of the other, before arriving at her particular compromise. * ~~no other terms~~ ~~the astronomer~~ (who, as astronomer, is EARTH) ~~correctly~~ credits EARTH with the ability to do what EARTH, in fact, does not do. ~~the intermediate steps of the calculation reveal the experimental aspect of fact, that which is only another way of saying that her awareness of her path is inseparable from her awareness of her freedom to stray from it.~~ Remove ~~consciousness is inseparable from freedom~~ ~~the consideration of freedom & you remove consciousness.~~ This is an illustration of the laws that

CS: Perhaps the backing which the exigencies of mathematics seem to give to your views is purely coincidental. But, to come back to the real point, you are confusing natural law with human law. The first leaves no alternatives; the second exists because there are alternatives. To put the matter crudely: EARTH is guided from without, I am guided from within.

O: Am I to think of EARTH bestraddled by some other Phaeon who, taking to her name character, brings her through? ~~Remember the other Natural Law~~ ~~the picture of a more~~ ~~cross~~ ~~in fact is it, there is no more~~ ~~Scientific~~ ~~than to~~ ~~address it as Shelley's dog~~ ~~merge character & character into a living whole, & call it EARTH.~~ ~~There, Earth, calm center of a happy soul.~~ ~~Sphere of divinity, shapes & harmonies.~~ ~~Beautiful, oh! gathering up those dark notes.~~ ~~The love which pines they path along the skies.~~ P 216

CS: Two factors must be clearly distinguished: outer necessity & inner freedom. When I act, both factors are present; when my dog acts, the second factor is all but absent; when EARTH acts, the second factor is entirely absent. In short, a few events in the physical world are swayed by mind; the great majority are not.

O: Either you have sources of information, denied to ordinary mortals, about what it is like to be a dog or a Planet, or you are both superstitious & conceited. There is only one set of causes of which you may claim inside knowledge — those which underlie your own actions. Base your world-picture on that one part of it which you have a chance of really knowing, & you are

* Not only data & result, but also the calculation's intermediate steps, ~~do not~~ ~~depend from~~ ~~reflect~~ ~~relevant to~~ ^{outside} ^{fact}. This relevance is hidden as a rule, but I suggest it is always there, & is the ^{only} ^{real} guarantee of a right answer. I suggest that the



C.S. ②

Austin, from the side of jurisprudence, & Karl Pearson from the side of the semanticists from the side of language, are at pains to point out "the immense distinction between the use of the term law in science & jurisprudence. There can be no doubt that the use of the same name for two different conceptions has led to a great deal of confusion." Here, in fact, is a striking example of that confusion. Blackstone, on the other hand, makes human laws stem from the law of nature. And in the US Apparent ambiguities of language are worth examining with a view to the same natural piety as the scientist takes to any natural phenomenon - just in case there be more in them than our too-rare & too-superior criticism discovers. Then, I think, will often be found that our thinking

° Lectures on Jurisprudence (4th ed) p. 90.

° Karl Pearson: Grammar of Science, Ch III § 2.

° Cf. Aristotle: *Politics*, p. 225.

lags behind our language, & that our language behind our thinking! It is a profound truth, & no verbal confusion, that human & natural law are the same: to be exact, the former is a department of the latter. It would be after all, it is ~~not~~ to be presumptuous to think otherwise, & look upon the ordering of affairs amongst men as ~~entirely~~ different from the ordering of affairs amongst all other grades of being. There was a time when the laws of the human world were, along with all other laws, unexamined, merely natural. Gradually MAN ~~took~~ the laws of his own nature in hand, codified them, applied them deliberately. He is doing the same with the laws of his other worlds. What Justinian & Frederic & Napoleon did for MAN, Newton did for EARTH. The difference is not of degree. Ultimately, there is only one law, manifest differently at different levels, more consciously exercised here, less consciously there. The Statute Book is really continuous with the *Principia*. "For all human laws," says Heraclitus, "with one the divine" are fed by the one divine law. X. B. ~~Separates~~ "man-made"

° Eddington in *Philosophy & Physical Science* has an illuminating discussion of some aspects of the relations between human & natural laws.

+ Natural laws are the communal customs of the world concerned - this doctrine has, in various forms, been held by a great number of recent thinkers, including Rawls - Mollin (*De l'Habituelle*), Renouvier (*de Personnalisme*), Ward (*The Reason of Ends*), Goswami (*The World as an Organic Whole*), etc. It has been given great impetus by the success in physics of statistical laws which do not necessarily involve uniformity of behaviour as between individuals. "There are no laws," says Ward, "antecedent to the active individuals who compose the world, no laws determining them, unless we call their own nature a law; & then indeed the world would start with as many laws as there are individuals." (Op. cit., p. 75.)

Ans. of I. p. 111 Pt.

(of Schrödinger & others)

° In other words, law as economical description of types of natural order, & law as part of the effort to maintain & improve social order, are two poles of a single concept, or two stages of a single process.

"Progress," says Whitehead, "consists in modifying the laws of nature."

° Cf. Kant's *Lectures*. Professor J. D. Paton has recently reminded us, "the will is a faculty of conscious conformity to law." We willfully act as falling under a rule, & apart from this there is no will. Science observes the rules - in both senses of the word. And, in particular, EARTH consciously conforms to law, or exercising will in the only sense meaningful sense.

° "No human laws are of any validity if contrary to the law of nature; & such of them as are valid derive all their force & all their authority, mediately or immediately from this original." (Hobbes, *Leviathan*, p. 191.)

"Indeed," argues Hocking, "the very notion of law in nature is baffling when we try to exclude mind from nature." Even the less naive version of ~~make~~ law as nothing more than descriptive summary suggests that when it happens, that is a signal for it to happen - and what can a signal be in an inanimate world? °

X. The *Stanley Works*, *History of Christianity* (p. 107), has some interesting comments on the false separation of 'man-made' from 'natural' laws.

° W. E. Hocking, *Types of Philosophy*, pp. 29, 280.

° *Advantages of Ideas*, p. 47

H. J. Paton: *Can Reason be Practical?*, pp. 10 ff.

Eddington N.P.W. 298

less likely to go wrong than if you base it on what you think should be there.
Of course, as long as ^{you} science is content to record the behaviour of bodies & the
go of events, I have only praise for her. * It is when science — or I should say
pseudo-science — goes on to pronounce upon real causes, upon inside instead
of outside stories, that she is being untrue to herself & (in the bad sense of
the word) 'mystical'. I ^{would} sum up my point by saying that Science can be
neither for nor against the view I advocate. On the question of the status
of EARTH as an experiencing subject, science, as science, can only be neutral.

C.S.: You mean that science has no business with ^{consequences, or} freedom, or law as such:
to observe & formulate is ^{all} her whole task. (C) It is unfortunate, ^{then} that her form-
ulations should be called laws, since they regulate nothing & explain
nothing. ^{With Hume,} All I really mean, when I say there is a law that EARTH goes
round the Sun, is that EARTH has been doing so for a long while. For
all I know, she may at this moment have decided to beat straight for
the Sun, or to move round it in triangles. Law does not govern her
acts; they govern the law. Have I put your view correctly?

B: As a statement of the first stage, it will do. But the matter is
not really so simple. Who discovered the laws of motion, who found
them exemplified in ^{EARTH'S behaviour,} but EARTH herself? Thereafter
the consciously conforms, ^{is} free. * No more in lawlessness than in
blind obedience lies this freedom, but in her acceptance of limitation.
Freedom, says Schelling, is ^{if it truly is not force, which preserves the laws from wrong} "necessarily become conscious." No law, no liberty.
Therefore I maintain that EARTH is subject to laws governing the
motions of ~~celestial~~ bodies, just as the citizen is subject to the law
governing the conduct of citizens, & that in both instances behaviour
follows upon law no less than law follows upon behaviour. Law
is more than antecedent fact codified: it has real efficacy, because
it is now consciously ^{applies} ~~intentional~~. While science, then, is moulded by facts
& does not mould them, the consequences of her self-discipline ^{humility} are that she
is, in fact, Nature's law-giver. * In so far as science is subordinate to
Nature, Nature is subordinate to science. You were quite right: EARTH
is subject to law — to the law that she has made her own law and the
instrument of her ^{own} freedom. With all the rest of us she can say "Nature is itself only
a first custom, as custom is a second nature." *

C.S. ~~You are taking over under paradoxes, where I cannot follow you.~~ But
I have all along been holding my fire: My final objection is, I think,
unanswerable. What of the two thousand million years of EARTH'S existence

(C) "No fact," Radcliffe points out, "that a predictable path through space & time is
laid down for the world is not a genuine restriction on its conduct, but is imposed by the
formal scheme in which we dress up our account of its conduct." *

* Laws are not explanations. As
Charles S. Pierce said: "Uniformities
are precisely the sort of facts that need
to be accounted for.... Law is ~~not~~
excellence, the thing that wants a
reason." (The Architecture of Theoria.)

Paulsen, discussing Lotze's
cosmology, writes: "It is not the
Earth's power of attraction nor the
law of gravitation which keeps the
moon in its course around the
Earth, but its own sweet will, so
to speak. If it should ever leave
its orbit & fly off at a tangent, the
Earth & the law of gravitation would
not hinder it. The moon solely
obeys its own nature or inclination
.... This is universally true: the
laws of nature do not compel
things to act in a certain way;
these laws are the expression of the
spontaneous activity of the things."

Introduction to Philosophy, p. 216.
Schelling's "On the Laws" p. 92.
* It is awareness that makes the difference. ^{Thus}
Emerson well says of Nature & Man: "The
laws are the laws of his own mind. Nature
then comes to him as the measure of his
attainments. So much of nature as he is
ignorant of, so much of his own mind
does he not yet possess. And, in fine,
the ancient precept, 'Know thyself,' &
the modern precept, 'Study nature,'
become at last one maxim." (The American
Scholar) In other words (I say) study
the EARTH'S motions to discover how
you are behaving, & to ~~find~~ ^{be} free
of the world.

+ Athens, ^{in his} ~~criticized~~ the Aristotelian
astronomy by pointing out that the
physicist's task is not to prescribe
laws to Nature, but to discover
them in Nature. (Cf. A.E. Taylor:
Aristotle, pp 94, 95). I would say
that, ultimately, the second comes to
the first. In its wrong place, however,
the first activity is disastrous.

Pascal: Pensees, 93.

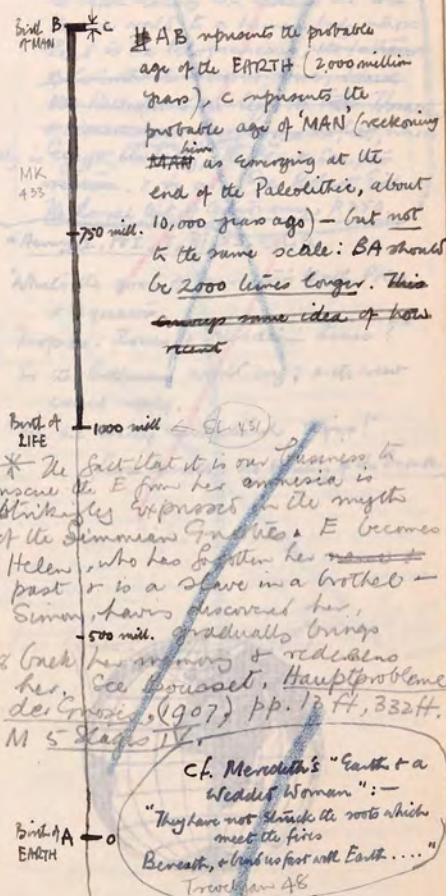
The Nature of the Physical World, p. 162.

0: The full answer must wait: here I can only ^{give} hint at its outline. This long part of EARTH: is the unaware of it? Not at all. Countless ^{the countless specimens in the ~~glass cases~~ of our museums,} volumes of history, geology, paleontology, ^{are} eloquent of her interest; ^{unregretted,} as her methods of research improve, more & more of her past will come alive in her consciousness.* And what is this historical consciousness? Is it copying the past, or participating in it? I say it is participation, & reinterpretation in the light of what has happened since. In that ^{case,} ~~case,~~ it is too early to ^{say that any of the} pronounce upon EARTH's past. No Epoch is so remote, that it cannot ^{be} rescued from unconsciousness by the present & the future. My suggestion is that at no moment of her history is Earth without self-consciousness, but that there is (as in all high-grades individuals) a time-lag or dissociation between her early history & her consciousness of that history. EARTH's awareness is much ^{prospective} + (Indeed, in a later chapter, I shall try to show that it is never anything else, near of its retrospective.) There is a sense in which the future present is always changing the past. And, for EARTH, her past is not irrevocable ^{for her} to the degree that it is irrevocable for a man. EARTH'S ~~past~~ ^{is} ~~irrevocable~~ ^{irrevocable} for a man.

I admit this explanation, lacking the detailed selling-forth of the later chapters, ~~is a lame one~~. But I on this part of the book, however, let me! Take my friends for what they are now: let me defend the more consideration to my Planet. my concern is with the present. Whatsoever her history & her prospects, EARTH is certainly at this moment a fully conscious individual who is as alive to what she is doing as I am. Or - it is the same thing - I am as aware of ~~what~~ my behaviour at EARTH level as I am aware of my behaviour at man level. P But the fact is, ~~that on this subject few are common sense or open to reason~~: it is an article of faith with common men the planet is a dead, a motionless, a revolving pellet of ~~lead-pig~~ ^{dead-pig} ~~slag~~, a ~~lump~~ ^{solid} stone, a revolving pellet of ~~lead~~ or fire, & nothing this pellet can say or do ^{in spite of} shaking this blind conviction. Indeed the ^{tearful} coarse & impure, a solid & rolling being, ~~unshakable~~ the great unlovable. The clean lot: well we talk from his ~~horrible position~~ ^{position} the Universalist "don't you!!". The rich & lean now says "Gordon Bradley Hopkins, 'not can foot feel being shot.'" Thus it is that we protect ourselves from the dearest freedom deep down to the face of the EARTH things" X - protect our little selves, against our greater self, lest by any chance they should merge.

(13) C.S. But tell me why the fact of this super-human creation is so ~~not~~
unfathomable? ~~We do not look in vain~~ Look for some symmetry, some recognisable form, some
reason why the ~~fact's~~ features should be arranged this way rather than that, in the
be measure?

Not even an EARTH who (as in H. G. Wells' story) renamed when pined, or performed / know
not what fabulous acrobatics in the heavens (sprouting incredible limbs for the purpose) would
convince this generation that she is anything but matter — & unless matter moreover.



+ Joanna Field's Experiment in
Seizure has much that is relevant
here. Miss Field goes over her
childhood memories ^{to find} what underlay
the feeling of significance that
haunts her then. A technique of
free association led her to the
~~primitive~~ EARTH, & EARTH'S fires
& cataclysmic history: ^{the old} the sun of
deep significance & satisfaction ~~was~~
~~the~~ The ^{growing} harvest fields at sunset
remind her of the planet's fires:
"that felt the earth as a living
thing - & for an instant, that
felt as though my own body
were the earth." (p. 175.)

(in 2nd, vol. ii.)
 o Fechner, having described in glowing terms the Planets' livingness, concludes:
 "I wondered how men's notions could be so prevented as to see in the earth only a dry clod, & to seek for angels apart from earth, & stars or above them in the vacant heavens, & never find them. My view, however, is called fantastic. The earth simply is a globe, & whatever else it may be found in the glass cases of our museums of natural history." Howie: The Religion of a Scientist, p. 153.

* Here Lewis occurs in the beautiful
sonnet: ~~'God's Grandeur'~~ ^{beginning} ~~'beginning~~
"The world is charged with the grandeur of

features of all but the lowliest ~~organisms~~ animals. And yet the nearest approach to sense that the schoolboy can extract from EARTH's chaotic geography is an Italian ~~boy~~ ^{foot} ~~travelling~~ ^{travelling} ~~with~~ ^{travelling} Sicily. The ancients, less imbued with geographical knowledge, were hardly more successful. * In short, the trouble over man is one of language. The ~~face~~ ^{face} of the earth, ~~as~~ ^{as} ~~he~~ ^{he} ~~sees~~ ^{sees} it, is as mythical as his ~~house~~ ^{house} - "the world of the hammer-cath" as Shakespeare calls them. O: How do you manage to find your way about these shapeless shapes?

C.S. We have divided up the EARTH's surface with lines of latitude & longitude.

O: So that EARTH is not a chaos, but a sphere (or, as a matter of fact, an ~~spheroid~~ ^{irregular spheroid}) patterned with a rather beautiful regular network that gives unity to this otherwise random features.

C.S. You have never seen such a network: it is quite imaginary.

O: Indeed it is not. The face of the EARTH in the observer's telescope wears no such veil, but the face in his television set does. ^{Now} Which picture is real? At least the second has the merit of being easier to follow, & of being ~~EARTH~~ ^{the merit of being true to EARTH's notion of herself.} ~~as she sees herself.~~ And upon EARTH I find countless little flat & globular self-portraits, nearly all of which confirm the second picture.

C.S. Not even the finest veil can make a map into a face.

O. Human features are moderately regular; EARTH's are a blend of the extremely regular & the extremely random. On the average, then, the difference is not so great. ~~Then~~ ^{however,} ~~notice~~ ^{that} continents & oceans are not without certain vague & muted harmonies. Continents lap southwards, oceans northwards. The North Polar map is a circular sea fringed with land, while the South Polar map is the same arrangement a circular land fringed with sea; there is, in fact, a tendency for land & water to be antipodal. There ^{often} is something in the Tetrahedral Theory. ^{Then} there are the Jean-Sorles' hypothesis of the pear-shaped EARTH & its deformations, Wegener's Continental Drift Theory, & so on.

C.S. ~~Even~~ ^{Even} if the Tetrahedral Theory were not discredited nowadays, it would only serve to ~~reinforce~~ ^{show how great} ~~the~~ ^{how} arbitrary as EARTH's deviations from any formal pattern, tetrahedral or not.

None of the numerous hypotheses is really adequate.

O. I agree. But there is more in EARTH's physiognomy than at first appears. ⁺ England's contribution to EARTH's thought would have been utterly different had England been a peninsula of Europe, or if Ireland had not been where she is.

* According to Sainier (*La Légende des Symboles*), there is an ancient esoteric tradition that a continent is a living creature, ^{of which} ~~its~~ ^{its} minerals are ~~the~~ ^{its} skeleton, ~~the~~ ^{its} plants are its flesh, ~~the~~ ^{its} animals are its nerves, & the men its brain. The continents, in turn, are organs of a living EARTH. The details (I say) are often far-fetched & absurd, but in principle this ancient teaching is right.

* ~~According to Sainier~~ ^{According to Sainier} ~~the~~ ^{the} ~~ancient~~ ^{ancient} ~~esoteric~~ ^{esoteric} ~~tradition~~ ^{tradition} that a continent is a living creature, ~~its~~ ^{its} minerals are ~~the~~ ^{its} skeleton, ~~the~~ ^{its} plants are its flesh, ~~the~~ ^{its} animals are its nerves, & the men its brain. The continents, in turn, are organs of a living EARTH. The details (I say) are often far-fetched & absurd, but in principle this ancient teaching is right.

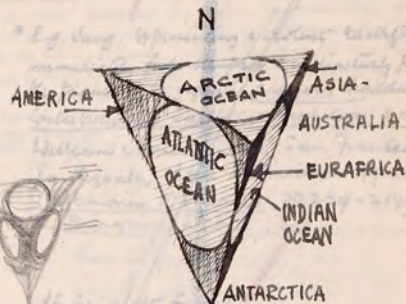
• Henry IV, Pt I, I, iii, 53. O.D.G.

"What's the good of Mercator's North Pole & Equator, Tropics, Zones & Meridian Lines?"

So the Bellman would cry; & the crew would reply,

"They are merely conventional signs!"

Lewis Carroll: *The Hunting of the Snark*



⁺ The Tetrahedral Theory of Pothier Green is based on the tendency of a shrinking sphere, ^{with} ~~the~~ ^{the} which the shell is fairly rigid, to collapse into a tetrahedron: the same area of shell then encloses a smaller volume. So the shrinking EARTH tends to take the tetrahedral shape, and the oceans, collecting in the areas nearest the centre of gravity, leave the coigns standing out as the continents. This theory was first proposed by Green in *Vealiges of the Mollin Globe* (1875) & has been advocated by many geologists, but is now rather out of favour. See Gregory: *The Making of the Earth*, p. 138 ff.

D "I confess", says William McDougall, "that the overwhelming effects of landscape seem to require the postulation of a racial memory for their full explanation."

~~Such broad comparisons between geography Shakespeare without the~~ ^{Wordsworth,} ~~is not the same Shakespeare,~~ ^{Wordsworth,} & EARTH without ~~Shakespeare~~ ^{EARTH} is not the same EARTH. Perhaps no physical feature will, in the end, turn out to have been quite pointless, or altogether lacking value. The endless variety of EARTH'S scenery has doubtless since it is inseparable from MAN'S intellectual & spiritual development. O intellectual & spiritual development (to say nothing of his biological evolution), the beauty of EARTH'S face is the really source of our knowledge by, passing over an atlas, but by gradually comes to acquire for the traveller something of the beauty that a musician's ears may have for a deaf musician) but by a detailed inspection. By the time men are in a position to appreciate EARTH as a whole, they will possibly have learned to discern a beauty in her general beauty in her that is not inferior to her proceeds out of that beauty.

At all events, my EARTH body is an abstraction from my total physique. Man is a nest of bodies each of which may be taken thus abstractly by itself, or more concretely as containing (+, +) in a knot, so (being) the bodies within + subordinated to itself. So even, it remains form divine. It has many grades of divinity — every spirit, as it is most pure and hath in it the more of heavenly light, so it the further body death pursue.

11. Common sense finds the EARTH bloodless.

* Spenser: "Hyperion Honours a Beauty." 11. 12

C.S. If EARTH's features were as ~~dead~~ as symmetrical as a statue's! they would still be as dead, because their expression never changes.

0: But the weather, cyclones, earthquakes, ^{volcanic} eruptions, tidal waves, the ~~drifting~~ slowly changing ^{outlines} ~~continental shapes~~, the drifting, perhaps, of the ~~land masses~~ continents under the Moon's attraction....

G.S. I want something with some blood in it. This placid ball leaves me cold. Show me an EARTH that can laugh & weep & sin & love, ^{entry & joke,} an EARTH of adventure, a questing EARTH, a tragic EARTH, or even a timid EARTH. Show me something I can understand & sympathize with, & I will believe ~~in~~ in it. But she is not Venice.

O: I am showing you. Repeat those words of yours, realising this time
— what is a fact — that EARTH is, ^{through} her organ; voicing ^{contains her own} feelings
about herself. And, if you want more evidence, consider ^{her} flood of
argument & chatter, ^{& other silliness, etc.} laughter ^{& tears,} music, poetry, fantasy, science,
religions yearning — as if this ^{little} spinning ball could not contain itself
for lust of living, as if it could not learn to keep itself to itself any
longer, but must tell the world its mind. You complain that EARTH is
bloodless: whose blood, do you think, is shed in battle, in the slaughter-
house, in the trap? Earth bleeds from thousands of wounds. All tears
flow from her eyes, ^{all} pain is her pain, ^{all} fear is her fear. Her sense of
humour, ^{as it} may be estimated from the weekly journals, ^{is often exquisite, as well as coarse.} Surely she is passionate
& full of life! She has a physical side, but EARTH also has the soul as a
whole: there are no two worlds to her, physically as a mass, but as EARTH.
She makes her mind & physical aspect one man, — MAN, — LIFE. Because that
she touches the Sun directly, but our EARTH doesn't. There is spiritual

^o Energies of Men, p. 167.

And how much of the fate of man
is not disclosed by the contemplation
of the distribution of the functions
of the masses of the land, which
Edward Suess so aptly describes
by his winged word: 'the con-
sequence of the earth'!

Kirchhoff: Man and Earth,
(Trans: Sonnenschein) p. 6.

011 is both curious & significant that Rupert Brooke, in his poem "Thoughts on the Shape of the Human Body," should compare the "mazed fantastic shape, straggling, irregular, perplexed, embossed," of the human body with the simple, round, wholeness of celestial bodies, & should ^{infer} that their more remote ~~ways~~ of material growth is human. Is there in man a ~~deep~~ ^{sub} hidden craving after the bodily form he has at his higher levels? (See Rupert Brooke, Collected Poems, London 1935, pp 51, 52.)

are Spenser's appearance (in his History in ~~the~~ ^{the} "Beafield") ^{first} ~~very~~ ^{way} ~~first~~ ^{first} ~~is~~ ^{is} ~~not~~ ^{not} ~~pure~~ ^{pure} ~~and~~ ^{and} ~~that~~ ^{that} ~~is~~ ^{is} ~~the~~ ^{the} ~~more~~ ^{more} ~~of~~ ^{of} ~~heavenly~~ ^{heavenly} ~~light~~ ^{light} ~~and~~ ^{and} ~~so~~ ^{so} ~~is~~ ^{is} ~~the~~ ^{the} ~~first~~ ^{first} ~~of~~ ^{of} ~~the~~ ^{the} ~~body~~ ^{body} ~~with~~ ^{with} ~~the~~ ^{the} ~~proper~~ ^{proper}

Plate

What is this earth to our affections?
(unloving earth, without a throb to
unwove ours,
Cold earth, the place of graves.)

The Earth is rude, silent, incomprehensible at first....

Walt Whitman: Passage to India
& The Song of the Open Road

- E.g. Jung, experiencing a violent earthquake immediately feels the pain & instinctively feels the planet is a gigantic animal. Shuddering contributions to Analytical Psychology, p. 114.

William James, in the San Francisco
Earthquake, had a similar experience
(Memories & Studies, pp. 209-214)
Bacon, MR 30

If he aloft for aid
Implores storms, her essence is the spurs.
His cry to heaven is a cry to her
He would evade.

Mendik : Earth + Man

an average modern person that the
purpose of your life was a command

Know 169

"Thou bleeding piece of earth"
Julius Caesar, III. i.

* she pluck'd, the cat: Earth felt the wound
Paradise Lost B. 1. 780.

discrete, ardent, ^{full-blooded,} ~~bragging~~, enough for the most romantic taste.

C.S.: Now you are talking.....

O: I am sorry to have to undeceive you: my theme has ^{been} run away with me. What I have just said is both true & untrue. Once more, ^{then} the all-important need for carefully distinguishing levels. Inasmuch as EARTH gathers up and is all her subordinate levels, she descends from her proper status to become all that they are; inasmuch as she is EARTH at EARTH-level, she can never be less than herself. What I mean is that the really is this variegated & lusty creature I have described - when she sinks to the level of her parts, becoming them instead of herself. And this descent is not just theoretical: it is an element in that inter-level traffic thanks to which levels exist at all.

C.S.: That would be all right if ^{there were} ~~there were~~ an extension. How can I possibly distinguish between the activity of EARTH, & the activity of one of her organs?

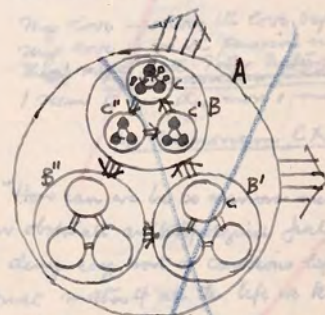
O: ^{By} applying the simple rule of the 'equality' of subject & object. * Known & known grows & ^{diminishes} ~~diminishes~~ together. A man is a man because he is concerned with men, & himself amongst them; MAN's chief interest is other Species; LIFE is occupied with other large aspects of the terrestrial environment; EARTH is herself because her field is larger than all these. She has companions of her own status. You were not altogether mistaken, then, in accusing her of aloofness from the ordinary hopes & fears of men. But she is not therefore mysterious, & inaccessible, or other than men. * She is the level they can & do attain to when, transcending themselves, they hold together in their ^{outlook} ~~sympathies~~, all things terrestrial & ^{when, observing} ~~looking out upon~~ the Universe, they contemplate EARTH's presence in it & her place amongst.

+ Vaguely, men have always known this - witness the invocation of EARTH as Mother. Now modern ^{material} ~~science~~ & focus, or mother & child, are not only whole & part, but of the same species, & their difference is one of age. If, then, man is the child of the Planet, he grows up by becoming planetary.

C.S. The human mind has, so to say, an astronomical level, & also, perhaps. But is it quite as important, or as superior in value to what you are pleased to call the lower levels, as you suggest? ^{inmate, theoretical?}

O: Every level is indispensable to every other, & has

As regards her outer or physical aspect, what EARTH does she does as a whole: thus you do not encircle the Sun annually as a man, but as EARTH. As regards her inner or psychological aspect, not man, or MAN, or LIFE, knows that she encircles the Sun annually, but only EARTH herself. Here is applied



EARTH, as EARTH, is ~~not~~ (A)

responsible for is all the contents (B), (C), (D), etc., yet there is a sense in which the levels do not co-exist. When (B), (C) or (D) are under consideration (A) is in abeyance.

See Ch I, § 2. ^{consider} ~~consider~~ ^{it not improbable that the heavenly bodies have souls. Each of our bodies is a world, populated by millions of minute living beings. We are not conscious in them, nor are they conscious of the uniting life of the organisms to which they belong. Why should not our planet have a life of its own, thinking thoughts of which we know nothing? The mistake here (as I believe) is in separating the human & telluric consciousness too sharply. As men, we know nothing of EARTH's thoughts - but then we are not only men!}
* "To do our impulses converge means this: live by thy light, & Earth will live by his."
These lines of Matthew Arnold's (*From Religious Poems*) are, I suggest, both true & untrue. The 'impulses' are separate - & continuous.

+ "So far in the wrong direction have the crowd-values moved, that if you tell an average modern person that the purpose of your life was a communion between your consciousness & the earth's consciousness, he would think you had simply gone mad." ^{OPR}

Jan Cusper Paros: *Philosophy of Solitude* p. 192.

O: Godly enough, it is not like that at all. Spatial remoteness goes with a peculiar intimacy: in a sense, the farther it is the nearer. * Poets that speak for LIFE find ocean, mountains, snow, * clouds, more ^{consonant} ~~of~~ ^{human nature} with the deeper part of ~~man~~ (than any merely human scene). And the poets who speak for EARTH go further still. They find that, so far from her point of view being inhuman, it is really the human point of view ^{on one of its profoundest aspects}. It is the nature of man to be much more than man. To know EARTH's mind, what you have to do is to extend the range of your own sensibility. ~~There~~

12. EARTH & Moon

C.S.: But note a curious thing. It is precisely when (in terms of your theory) I am EARTH looking out on EARTH's world, that I ~~come~~ chiefly doubt your theory. How do I find out what I am like? By looking at other people. How can I picture EARTH, except by observing other as she is mirrored by other heavenly bodies? Now if Sun & Moon & Planets & Stars were obviously alive I would need no persuasion to believe also in an EARTH that lived. As a matter of fact they are obviously not alive. Why, then, should we flatter ourselves that EARTH is unique?

O: There is probably life on Mars, & possibly life on Venus. * And no-one can be sure that many other stars have not got living planets, or have had them, or will have them.

C.S.: Let us stick to what we know. While there may be other live heavenly bodies, there certainly are other dead ones. You will agree the dead ones are the typical ones. My point is that a star or a planet does not have to be alive to be a perfectly satisfactory specimen of its class, whereas a dead man is no man. Even a dead fly is not really a fly. You cannot say so much of ~~the Moon~~.

O: There are plenty of stars, & plenty of time, & plenty of space — ^{Too much space-time.} in fact, for you to be sure about the distribution of life in ~~the universe~~. For all you know to the contrary, all heavenly bodies are either (a) at the 'seed' stage & will one day spring to life, or (b) alive as EARTH is alive, but too distant for observation, or (c) alive with quite a different sort of life from ^{EARTH'S} ~~the~~ — so different that you might not recognise

* Thus Tennyson, mourning his friend, can declare:
"What art thou then? I cannot guess;
But though I seem in sleep of power,
To feel thee more diffusive power,
I do not therefore love thee less:
My love involves the love before;
My love is vast's passion now, with
The ~~night~~ ^{night} ~~path~~ ^{path} ~~God~~ ^{God} & ~~hiding~~ ^{hiding} ~~thou~~ ^{thou},
I seem to love thee more & more."

In Memoriam, CXXX

+ "How can we be so narrow-minded in our obstinate anthropological jealousy as to deny any sort of conscious life to the great mother of all the life we know? ... If the thought comes, that comes to us when we fling our spirit into the elements, brings an indescribable inspiration, felt as much in the city as in the country, why should we think of this inspiration as a comic phenomenon, dependant on comic conceptions, in place of a planetary phenomenon, dependant on planetary conceptions?"
John Cosgrave Perry: Philosophy of Science pp. 191, 192.

* This is the Astronomer Royal's opinion (Life on Other Worlds, p. 211, etc.) Others (e.g. Jeans: The Stars in their Course, pp. 54, 60) are more doubtful.

Of the cosmology of Varro (116-28 B.C.) as reported by St. Augustine: — God is the soul of the world, & the world is divided into heaven & earth, heaven into the air & the sky, earth into land & water — all four being filled with living souls. "The space between the highest heaven & the moon he fills with souls ethereal & stars, affirming that they both are & were celestial gods. Between the moon & the tops of the winds he believes living souls, but invisible..."

City of God, Book VII, ch. vi.

p. 201

See also Giddens & Thomson: Biology 1901

⑥ If Joly's theory of that the continents ^{periodically} drift westwards under the Moon's attraction (& so ~~and~~ expose new areas of heated basalt to the cooling effects of the ocean) then the Moon plays a major part in the pulse of the EARTH.

⑦ ~~Denison~~ ^{Denison} The period of human evolution is roughly the same as the lunar month - a fact which Denison suggests might point to the origin of life in the ~~sea's~~ tidal zone: more likely, it is an adaptation to ~~making plants~~ connected with ~~making a~~ moonlit nights as favorable for making.

It is life, or (d) the mortal remains of once-living creatures, or (e) the 'dead' organs of greater living bodies, & so alive in the sense in which your boots are alive, or (f) a combination of some of these two or more of these categories. Conceivably, your self-portrait as the solitary island of life in an immeasurable ocean of death may be no more than a kind of astronomical ~~transmission~~ parochialism.

C.S. Take the nearest heavenly body - the Moon - a mere 230,000 miles away. From what we know about conditions there, & from what we can see for ourselves, there never has been & never will be life on the Moon.

O: First, notice that the Moon is really one of the most vital (& I do not use the word casually) of EARTH's organs. Probably it was at one time part of EARTH's globe. However that may be, it is now the more effective for being detached, & in a position to influence EARTH's life in many ways.

Think of the all the animals & plants whose livelihood is bound up with the ^{ocean} tides - the tides for which the Moon is principally responsible - & think of the countless ways in which these species have modified other species. Think of the way the tides have moulded the surface of the globe & so the LIFE of the globe: the whole course of evolution - supposing there could have been any ~~such~~ evolution ^{under such conditions} - would have been utterly different in an EARTH without a satellite.

Now there are a number of creatures - chiefly man - whose life-cycle seems, in some as yet unknown way, to be linked to the Moon's phases. Finally, I need not enlarge upon the part the Moon, through science & literature, has played in the development of mind on EARTH. The point is clear - the Moon is an EARTH-organ.

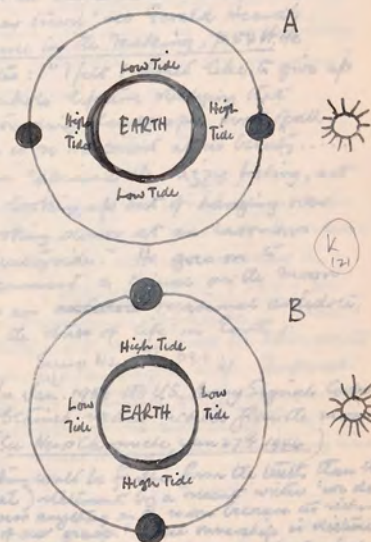
Planet & satellite, and not two, but one. EARTH's rim is not her crust, or her atmosphere, but the circle her Moon draws about her. And all within that circle is alive with one life. The Moon lives.

C.S. You admit that the Moon, in itself, is dead.

O: Even that is not quite certain. Something odd has been noticed in the crater Eratosthenes by Dr. Pickering - something that might be organic.

C.S. But it is safe to say the Moon is uninhabited & uninhabitable by life as we know life.

When Sun & Moon are in line the combined effect is Spring Tides (A) When they are at right angles, the Moon's effect is diminished & Neap Tides (B) result.



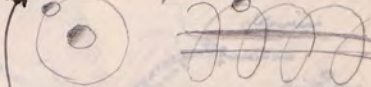
* The solid crust also is pulled out by the Moon: a rock-tide (so to speak) runs round the globe.

For head with foot hath private amitie,
And both with moons & tides.
Herbert: Man

Quoted - "The Moon & Plant Growth"
(Pub Anthroposophical Society)

* H. M. Fox: Proc. Roy. Soc. B, 95, 523 (1924) On evidence for lunar influence on growth of plants, see H. Kolisko: The Moon & the Growth of Plants, & C. F. C. Beeson in Nature, Oct 26, 1946.

According to H. M. Fox (Science Progress Oct 1922) there is a species of seaweed in the Red Sea which blooms at full moon.



Budai (Revue de Pathologie Comparée, June 1929, March 1934) studied temperature charts of a large number of furs patients in a Paris hospital, & found a correspondence between their condition & the phases of the moon.
See also Geddes & Thomson: Biology, p. 187.

* The Moon is EARTH holding herself at arm's length, & ~~the~~ Earth projected, extended. The Moon is that aspect of EARTH which is common to all countries & men. In a hundred ways, then,

4
CELL

5
CHITRE

6
EXT.

8

9

An American Indian sage says to his followers:
"It is a sin to wound or cut, tear up or scratch on common
mother by agricultural pursuits." "You ask me," said
this Indian sage, "to plough the ground. Shall I take
a knife & tear my mother's bosom? You ask me to
dig for stone. Shall I dig under her skin for her bones? You ask me
to cut grass & hay & sell it & be rich like white men.
But how dare I cut off my mother's hair?"

GOITEN

Primitive ideal 101.

Traces: Adonis, Atlas and Orin, i, p. 88.

On theories which are (or are not) 'self-referential'
- i.e. include themselves in their own subject matter -
see F. B. Fitch, in *Mind*, Jan. 1946. A theory which
denies the theorist is clearly 'self-referentially inconsistent'.
(Hist. Ap. 46 p. 75)

unawareness
Then must come a time when EARTH's ~~consciousness~~
must ~~not~~ give place to awareness, when Science (having
squandered the planet's resources, turned prairies into deserts,
upset the balance of species, & misapplied itself in a hundred
ways) must come to realize that science is. EARTH
is due to re-discover that she is a living whole that
cannot be hacked at like dead material, or tinkered
with like a machine. She is ~~due~~ to recover her self-
respect. * Meanwhile, as Aldous Huxley reminds us, "Modern
man no longer regards Nature as being in any sense
divine & feels perfectly free to behave towards her as an
over-weening conqueror & tyrant." "The results are before
us."
* Perennial Philosophy, p. 93.

* Fechner, while dwelling his great energy & gifts to ~~the~~ ^{demonstrates}
(what was to him so evident) ~~that~~ EARTH's livingness, realized
that the 'stony opinion' that EARTH is a 'stone' is a ~~dependent~~ ^{pre-}
judice that reason is powerless to dislodge. ~~Fechner~~ He shakes
the tree, but not till the apples are ripe with the full. They are,
I think, a good deal ripe now (Jan. 1851), when Fechner
published *Zur Psychologie*. ^{London 49}

He ignores the fact that rocks blossom,
sing songs, love, & even geologize.
He ignores that most remarkable of
all geological specimens - himself. 
- rocks become conscious. 
after most in the E. North
the W. North

O: Precisely. But let me explain. EARTH must die, breaking down into a lot of dead particles, in order to build up again to a larger life. That is where common sense & science come in. But the larger life must be realized, enjoyed, lived - otherwise it is not a fact. That is where I come in. It is not enough that with your help EARTH should die, nor enough that with mine she should ~~live~~ live. EARTH's life - all life - is a matter, not of staying alive or staying dead, but of simultaneous dying & resurrection. Deathless life is no life, nor is lifeless death. EARTH-butchers, after all, have their function, & there is a good deal of sense in the materialist's desolating & senseless world.

so rich & fresh & glowing, & so stable & unified, moving in the heavens, turning wholly to heaven ~~for~~ living free, & leaving me with her to that same heaven - so beautiful & so true that I wonder how man's opinion could be so prevented as to see in Earth a mere dry clod...

* Apart from the poets, the greatest apostle of ~~Earth~~ the living EARTH was perhaps Fechner, who, in Zentralvorstellung was of a country scene: - "It was only a ^{small piece} little bit of Earth; it was only a moment of her existence; & yet as my look embraced her, ~~more~~ more it seemed to me not only so beautiful an idea, but so true & clear a fact, that she is an angel & an angel carrying me along with her to heaven..." I asked myself how the opinion of men could ~~not~~ have so open them away from life as to believe Earth to be only a dry clod..."

"Fechner's whole soul (says Paulsen) is given to that thought. With ever-changing raptures he urges his contemporaries, at last to awake from their deep & to contemplate objects with a clear eye. Does not the earth really bear a universal life? Are not all its parts, the liquid interior & the firm crust, the oceans & the atmosphere, comprehended into a great whole whose parts interact in manifold ways & yet in harmony?"

Introduction to Philosophy, p. 102



AB is the my observer taking an ever narrower view of what I am, & ending by discovering that I am Nothing, at B. BC is my observer finding more & more in me. Both are right. I am what I am to all observers.

Fechner was not so combined in himself the his motto with admirable thoroughness. In Z A II he writes: 'The highest philosophy is the philosophy of the individual.'

O: So it is in fact, but you say that mine do not cover the whole.

4. The reconciliation.

C.S.: There is nothing to choose between us, then, if I play as essential a part in the process as you do.

O: We are complementary. For you the train of events is moving inward to a centre that is absolutely dead. For me it is moving outward to a circumferential state is absolutely alive. But the two movements are the one life: the life is in the whole sphere & not in any part of it. Without one another we are nothing.

C.S.: Would a well-intentioned EARTH require two organs to be named?

C.S.: Then why try to convert me, seeing that my view is necessary to yours?

O: Because there are really not two viewpoints, but three: yours, mine, & ours. Observe that I have moved round to ~~you~~ give your opinion equal status with mine, & to include it in mine. I ask the same of you. Don't give up your insight, but include mine. Only so can an agreement be reached that is worth reaching.

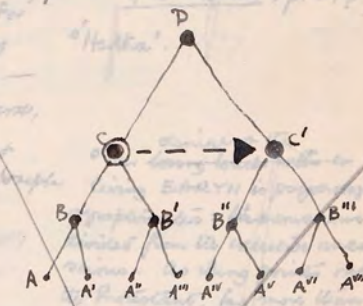
C.S.: But ~~you~~ surely our agreement would bring all to a standstill: the life is in the disagreement. Even agreeing to differ, then, might be sufficient to slow down the ~~process~~ metabolic process.

O: You are right if you mean that neither the ~~one~~ your ^{metabolic} attitude nor my anabolic attitude must be allowed to weaken the other. That would have the same effect as failing to distinguish the up-lines from the down-lines in a railway system. But you are wrong if you mean that a man ought not to contain within himself consciously to ~~even~~ adopt both attitudes. At first you

+ does not the appeal of winter as against summer of sea as against land of desert as against fertile country, & above all the appeal of shows that ~~there is~~ ^{there is} a hidden unity upon the world, ~~not upon~~ ^{not upon} ~~from~~ ^{from} EARTH ~~rejoice~~ ^{rejoice} & ~~truly~~ ^{truly} ~~the~~ ^{the} ~~claiming her own~~ ^{claiming her own} & ~~holding out~~ ^{holding out} LIFE & MAN & all that comes between ourselves & herself? ~~It is~~ ^{It is} ~~ally to ignore~~ ^{ally to ignore} ~~then~~ ^{then} ~~late~~ ^{late} ~~development~~ ^{development}, getting back to our primitive EARTH self, is ~~necessary~~ ^{necessary} for our ~~body's~~ ^{body's} health.



I really, the chemist should live a symmetrical life, as a private citizen amongst men, as chemist amongst molecules & so on, & as a philosopher (or philosophical chemist, so to say).



Individual C is a specialist; individual C' is another specialist of the same level. They supersede their ~~predecessors~~ ^{predecessors} in D. At B level, C is not a specialist, because to exist is to be a whole consisting of complementary specialists B, B', A, A'', etc. ~~Personally, I have C~~ ^{Personally, I have C} ~~status is to be~~ ^{status is to be} ~~incomplete at~~ ^{incomplete at} C level.

X "And he desires for those for happiness, for lightness, for light. 'tis the who Riddles in his haunting night the hopes down-rose." Mendels: "EARTH and MAN."

enrichment one half of the process & I enrichment the other. If I now complete myself by embracing your half, & you complete yourself by embracing mine, the process goes on before - within us rather than between us. We are now more complex, more balanced, individuals. What all this means in practice is that our moods will alternate, as EARTH's moods alternate, between the analysis that kills the world & the synthesis that revives it.

CS: But you say that to live at all is to achieve this balance.

O: So it is in fact, but your awareness & mine do not cover the whole fact. We must distinguish between our lives & our livings. At the conscious level we specialise in deed & thought. We whose lives depend on the perfect balance of katabolism & anabolism ~~within our own bodies~~ ^{within} EARTH's body, get our livings in that body by action or thought that is either mainly katabolic or mainly anabolic. This one-sidedness cannot be avoided. But it can be corrected. You can & should take time off from your common-sense attitude to take up my view. I should ~~do the same~~ ^{do the same} show equal hospitality to yours.

CS: Would a well-constituted EARTH require her organs to be narrow specialists?

O: The entire hierarchy of wholes & parts is organised upon this principle of balance above & balance below, with always lack of balance at the level of the individual who is under consideration. There must be lack of balance in you at that point where you play your conscious part in the world's affairs, because lack of balance is the price of action. Alice was right: what makes the world go round is everybody minding his own business. There is a time for broad-mindedness, but EARTH goes round because there is also a time for narrow-mindedness. You get on with your katabolic job; I get on with my anabolic one. But, off-duty, let us seek the metabolic lost aspect: that way lies happiness, lastingness, lightness which are at once EARTH's own. X

CS: I do not dispute the need for specialisation, I only deplore it. ~~but its inevitability~~ ^{but its inevitability} ~~is a necessary evil, at worst, our modern curse.~~ ^{is a necessary evil, at worst, our modern curse.}

O: It need not be. A chemist or a physicist is not only a better scientist, but a more satisfying man, for the discipline of special-

isolation, provided then at times when he can ^{put aside} his professional point of view & take up the point of view of LIFE & of EARTH. When, in the one mood, he rises & becomes the living EARTH⁺, & in the other, descends to become a tool with which EARTH at once slays & dissects herself, his life is truly embedded in EARTH's life, & his science, no longer a one-level, static discipline, begins to correspond to the real world — the world of vertical process.

EARTH herself has alternating moods, & they last a long while. For the past five hundred years or so, she has been busy analysing herself out of existence. The discussion here may be a tiny straw in the wind, indicating that EARTH is about to change her mood. * Is she at last due to reap in enhanced consciousness of living the fruits of her long unconsciousness of dying? Part of the answer note with me. I may say with Shelley:

How glorious art thou, Earth! And if thou be

The shadow of some spirit lovelier still,

Though evil stain its work, & it should be

Like its creation, weak yet beautiful.

I could fall down & worship that & thee. ©

(^{through} ~~caution~~ to the world) I may ~~go further~~ say with Teilhard: "Every star has its own world of sense-perceptions, & over & above that a world of consciousness, which comprises in a superior unity the consciousness of its creations, while it is closed against that of the other stars, but altogether open to God; so that the stars constitute an intermediate & mediating grade of existence between their creations & God, & the earth is one of these stars." * She is a star which, according to Swinburne, says to Man: "For behold, I am with you, am in you & of you; look forth now & see." ° And again: "Man, pulse of my pulse, & fruit of my body, & seed of my soul." ° EARTH claims MAN; MAN claims EARTH — the facts can be read either way. The projection of the divine Man upon the planet & the universe, quickening them, flooding them with significance, is not good science, but it is deeply true & deeply satisfying. And it has never been more beautifully expressed than in the lines of Joseph

Many Plunkett: —

I see his blood upon the rose
And in the stars the glory of his eyes,
His body gleams amid eternal snows,
His tears fall from the skies.

All pathways by his feet are worn,
His strong heart throbs the ever-living sea,
His crown of thorns is turned with living thorns,
His cross is every tree.

When all arguments have been exhausted, when all appeals to the understanding have failed to convince, then remains the appeal to the heart. No doubt the real reason our world is a morgue is that we want to live in a morgue. But, deeper down, there is a more insistent need — to realize the universal life & to mingle with it. Underneath we all know, as poets do, as we do in moments of illumination, that our life is not ours but the whole world's, that ~~our~~ the way to the source of our being lies through the planet. "Remoteness from the unconscious... means an uprooted state. That is the danger... confronting every individual who through one-sidedness in any kind of -ism loses his relation with the dark, maternal, earthly origin of his being." ° So speaks the eminent modern psychologist. His message is at least 2500 years old, as old as the Upanishad which says: "He who dwells in the earth, & within the earth... whose body the earth is, & who rules the earth within, he is thy Self, the ruler within, the immortal." °

+ ~~But~~ John Cowper Powys speaks of this large, calm, luminous mood, with a feeling of the earth, as the mother of us all, carrying us through lovely space...
Philosophy of Solitude, p. 124.

+ *Prometheus Unbound*, Act I.

"I dare not speak like life," she says, when Shelley's Prometheus reminds her that she is a living spirit. +

* Rainer Maria Rilke inquires:

"Earth, isn't this what you want: an invisible re-arranging in us?"

....What is your urgent command, if not transformation?"

(quoted in *Renascence*, by Nicodemus)

° *Prometheus Unbound*, Act II, Sc. III.

x ~~Teilhard~~ Teilhard, *Tagebuch*, pp 68 ff.

~~Teilhard~~ Teilhard: *Trans: Lourie (Religion of a Scientist)*, p. 274.)

° 'Hekha'. P 77

° Our being ~~traced~~ ^{denial of the} living EARTH is psychologically symptomatic: the conscious is divided from the collective unconscious. As Jung points out, the Protestant, far more than the Catholic (for whom the archetypal ideas are made visible in a variety of symbols) "has destroyed the earthly body of the godhead," & the Jew has never found it.

"For both of them, the archetypes, which to Catholic Christianity have become a visible & living reality, lie in the unconscious."

"Mind & Earth", a contribution to Jung's symposium *Mensch und Erde*, trans.

Darmstadt, 1927. The English translation, by H. G. & C. F. Baynes, appears in *Contributions to Analytical Psychology*.

° Jung: *Op. cit.* *Contributions to Analytical Psychology*, p. 140.

° *Bṛhadāraṇyaka Upanishad*, III, VII, 3.