He had First Matter seen undressed;
He took her naked, all alone,
Before one rag of Form was on.

Butler: Hudibras, Pt I, Canto I, §60.

That the absolute Substance groundlessly is and not is not, that is for us the wonder of all wonders.

Eduard von Hartmann: Religionslehre, p.528.

Edward

Except for the point, the still point,
There would be no dance, & there is only the dance.

T.S. Eliot: "Burnt Norton"

Look within; within is the fountain of all goods. Such a fountain, when springing waters can never fail, so thou dig still deeper & deeper.

Marcus Aurelius: Meditations vii, XXXIII p.23

All around him Patmos lies
Who hath spirit-gifted eyes,
Who his happy sight can set
To the great & the minute

E.M. Thomas: "Patmos"

Dead forms a never-dying life do shroude;
A boundless sea lyes in a little cloude.

Robert Southwell: "Of the Blessed Sacrament of the Aultar"

"What of vile dust?" the preacher said
. . . . . .
When God to all his paladins
By his own splendour swore
To make a fairer face than heaven,
Of dust and nothing more.

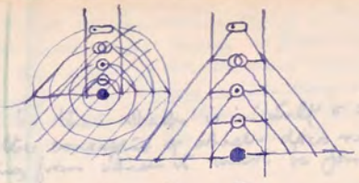
G.K. Chesterton: "In Praise of Dust"

Matter cannot be divided into parts of parts to infinity in respect of its spatial dimensions, or of that dimension which appears as temporal. And matter, as usually defined, and as we have defined it, has no other dimensions. It cannot therefore be divided into parts of parts to infinity. And therefore it cannot exist.

J.M.E. McTaggart: The Nature of Existence §362

Suppose a man had moulded all sorts of figures out of gold, & were unceasingly to remould each into all the rest: then, if you should point to one of them & ask what it was, much the safest answer in respect of truth would be to say 'gold', & never to speak of a triangle or any of the other figures ..... Now the same thing must be said of that nature which receives all bodies. It must be called always the same; for it never departs at all from its own character ..... by nature it is there as a matrix for everything, changed & diversified by the things that enter it, & on their account it appears to have different qualities at different times...

Plato: Timaeus: 50 A,B,C. (Comford trans.)



CHAPTER IV

~~TO THE CENTRE, AND BACK.~~
~~THE CLOSE VIEW (continued)~~

The Close View (continued)

1. ~~Towards the Centre~~ The physical basis

I appear to be a man. Science is not satisfied, & on closer inspection I turn out to be a society of animals. ~~Careful~~ But ~~research reveals that~~ these are really molecules; ~~that the~~ molecules are, in fact, atoms. And atoms have now been induced to explode & ~~to show it to be~~ electrons and protons. ~~in action~~. What, then, are electrons and protons? Are they, too, exploding of something else ~~in action~~? My observer's quest is the stuff I am made of, but so far he has found only structure and behaviour in each region. The structure's building materials & the thing that behaves always ~~turn out~~ prove, in the ~~next~~ region below, to be a structure of even finer materials and a behaviour of even finer agents, ~~& not a substance at all.~~ In the search for my basic physical stuff, the observer is always referred ~~back~~ downwards. Are electrons & protons the primary stuff of the world?

Science is an enterprise of yesterday & today, & there is no telling what ~~further wonders~~ deeper levels millennia of research might not uncover in me? Quite possibly future scientists will (it would be a poverty stricken one,) find a world in a proton ~~electron~~. It is ~~now~~ conceivable, as Anaxagoras (~~but never enough to me to~~) Leibniz believed, that matter is infinitely divisible, that there are worlds within worlds without limit. ~~Modern physical science~~ ~~I shall assume here that~~ ~~I agree with them~~ ~~that~~ ~~that~~ Leibniz was wrong. ~~However that~~ ~~suppose~~ ~~being~~ Scores or claim, ~~that~~ it seems, my observer ~~sooner or later, my observer comes to~~ ~~must come to~~ the end of his search, having found the core of me. What is this core likely to be?

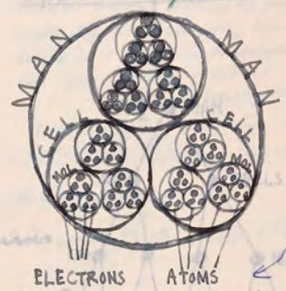
Is it continuous, or broken ~~up~~ into units? If the former, is the continuum featureless? If the latter, are the units ~~homogeneous~~ distinguishable? How can units give birth to pluralities, & sameness give birth to variety? Such questions have occupied philosophers of every age, from Thales, Anaximander, Empedocles, & Heraclitus (who respectively induced all things to water, air, & fire) to Spinoza (with his one Substance), Haeckel & ~~Spinoza~~ ~~& others~~ (with their World-ether), S. A. Alexander (with his primordial Space-Time), & finally Russell & Whitehead (with their Minimal Events). Most who have considered the question have held ~~Bergson is a notable exception – have held~~ that there ~~must be, under~~ can be no change without that which does not change, and that there must be, ~~neath that which changes~~, a kind of changeless substance, ~~and~~, as a condition of motion, a thing which moves. But ~~For~~ go as far as Parmenides in one direction & deny change altogether, or as Bergson in the other direction, & ~~and~~ ~~that~~ there is only change, ~~there is nothing that changes~~ without ~~anything~~ a basic something that changes.

Samkara (with his highest matter or ether which is Brahman) & the Alchemists (with their Quintessence), 'infinite substance' Spinoza — Ethics I. 3. Natural Philosophy London 1911 + Max Müller: Indian Philosophy, p 204. The Riddle of the Universe. XII 2 First principles, ~~pp~~ 127. ~~which makes~~ ~~matter~~ 3

• Eg. Space Time & Deity, p.
• Eg. Russell: Outline of Philosophy, p 287 + Whitehead: Science & the Modern World, pp. 129, 87
• ~~See particularly~~ E.g. Creative Evolution, p 317.

Burnet 52

~~Zeno~~ How many boxes are there in the nest of boxes, & what does the last one hold?



~~Each circle involves itself into smaller ones: does this go on endlessly?~~

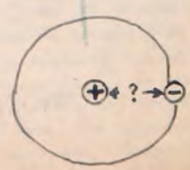
• Anaxagoras (Burnet: Early Greek Philosophy, p.258): – "There is there a least of what is small, but there is always a smaller; for it cannot be that what is should cease to be by being cut."

• Leibniz: Monadology §65. "Each portion of matter is not only infinitely divisible ... but is also actually subdivided without limit."

* Kant's second Antinomy of Pure Reason was (a) that matter cannot be infinitely divisible, nor (b) can it be composed of simple & unextended parts. Kant's 'solution' was to make space one of the forms of our perception & not objectively real.

The question of the continuity of physical 'substance' is linked with the question of the continuity of space. Important discussions are: Bergson: Creative Evolution, p 162 etc + Russell: Our Knowledge of the External World p 132 ff.

Wright HMP 276



We question is:

~~The problem~~ is: what, if any, are the potential features of the space between my electron-observer & myself as proton? What would an observer, who could sufficiently annul himself, register there? Or is this space, perhaps, unoccupiable by observers & uninfluenced by me, & consequently as good as non-existent?

"I understand substance," says Sp., "to be that which is in itself & is conceived through itself: I mean that, the conception of which does not depend on the conception of another thing from which it must be formed."

But the question is whether ~~I doubt whether~~ the Universal Substance, or Ultimate Matter, (whatever name it is given) is, when found, really worth having. It cannot ~~be the~~ ~~not~~ ~~for~~ unless it is featureless, & it cannot impart information because it is featureless. ~~He, London is, I suspect, to give a name to a gap so that the gap remains.~~ ~~If it is One, how explain the world's manifoldness, if Many, the world's unity?~~ In short, the philosophers, ~~in search of~~ having postulated a substance, ~~in search of~~ & in spite of everything quality never has existence, has on their hands the problem of explaining the difference between existence & non-existence, qualities, & non-existence.

2. The Centre of the regions: Unity & nothingness

My observer finds that, ~~he cannot surpass the centre of the regions through which he has travelled~~, ~~Nevertheless~~ his journey has, nevertheless, revealed tendencies which give a clue to what lies at the end, ~~of it~~. First there is the fact that at each successive level ~~uniformity~~ increases, ~~along with numbers~~ the number, & the variety decreases. Two of my liver cells are ~~probably~~ more alike than any two men. Two of my carbon atoms are probably far more alike than any two of my cells. Electrons are ~~all~~ supposed to be all precisely similar. ~~I cannot help feeling that this last is an exaggeration, but it is~~ However that may be, the evidence is especially clear that progress is towards ever greater similarity between ever more numerous units. Since any remaining differences would call for further analysis, the ultimate units are presumably so alike as to be indistinguishable even to the ideal scientist. But in that event what is left to separate them? Are they not One, according to Leibniz' principle of the identity of ~~discern~~ indiscernibles?

Such a conclusion is supported by the second ~~fact~~ clue noted by my observer: the 'smaller' units are, in actuality, anything but small. It appears easy enough to point out the boundaries of my human body, or of a cell of mine, but ~~my electrons~~ the physicists' units refuse to be so confined. They are world-wide, though centred here; each is an organization of electro-magnetic tensions in the whole of space. My observer seems to be ~~coming towards~~ approaching a region where units ~~overlap~~ overlapping & finally merge into a continuous field. The Many melts into the One.

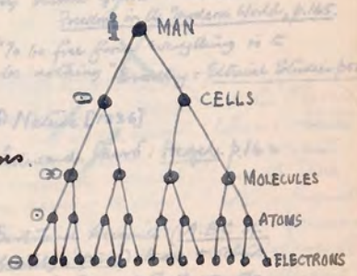
What is this One that is entirely featureless? Each of my regions was less ~~interesting~~ varied, & proven content, than the last; each left some quality or value behind. This centre, ~~surely~~, is the place where no content, no distinguishing mark, is left. & there remains — Nothing. From the other side I, who am at my observer's goal, can add my confirmation. I am not Many, but One. The billions of little lives I declare to be one life. The billions of billions of billions of individual molecules and

But the matter is finally settled by the observer who is already at the centre — myself confirmed &

(Indep. 137)

* Spinoza defines substance as that which exists in itself, as that the idea of which does not presuppose the idea of any other being as its source & origin → E. Three.

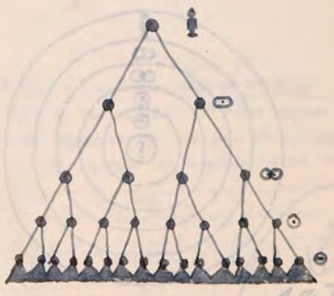
* Goethe, Mach, & Ostwald held that matter is continuous. For modern science, ~~the what is left of 'matter' is discontinuous, & the~~ continuity is found rather in the ~~space~~ spatio-temporal field, of which matter is a local crumpling. See J.W.N. Sullivan: Atoms & Molecules, p. 44. and Jeans: Mysterious Universe, p 138.



° Leibniz believed that "there are never two beings which are perfectly alike & in which it is not possible to find an internal difference." (Fourth Letter to Clarke)

* Meyerson (Explication dans les sciences, p 205) takes the view that scientific explanation is ideally the ~~difference~~ reduction of differences to seeming differences between underlying identities.

• See James Ward (Realm of Ends, p 195 ff.) on the unattainable lower-limit of Pluralism — an ἄπειρον, indeterminate Being, not differentiated into individuals. See also Eddington: (The Expanding Universe p 59) on the subject of a homogeneous medium as a basis for changing realities of physics.



There is a celebrated Persian ~~story~~ parable of a contest between certain Greek & Chinese painters: while the Chinese painters exquisitely, the Greeks were content merely to polish the surfaces allotted to them, till they reflected the work of their rivals & all the world besides. So, by following the negative path to the central nothingness, they arrived at all things. X "To be but extract from the corpulency of bodies," says Sir Thomas Browne, "or resolve things beyond their first matter, & you discover the habitation of Angels .... the ubiquity & omnipresent Essence of God." °

X This story appears in Al Ghazzali's Ihya, & again in Jalaluddin Rumi's Masnavi.

° Religio Medici Pt I, § XXXV.

and atoms and electrons — universes within universes of inconceivable complexity — emerge as the simple fact: myself. At the centre there is unity. But unity of what? What am I but the things I take in? As Hume showed, I can search for ever in my experience without ever finding an "I" who has those experiences. "God, who only knows me, knows that I am nothing." • ~~As in Whitehead's words: 'I know myself as a function of what is not myself.'~~ * I am a Vacancy-for-a-world, a Receptacle, ~~Unfurnished~~ Accommodation. * In myself I am ~~alone~~ unreal *. The view out & the view in agree in this, that at the centre the many are One, and the One is ~~empty~~ nothing-in-itself. "I become a transparent eyeball; I am nothing; I see all." It is true Emerson ⊕ is speaking of a mood, a realisation, but whether I realise them or not, such are the facts. "The thing in itself is nothing." X

• Browne: Religio Medici. Pt II, Sect IV.

* The degree of my reality is the degree in which I ~~grasp~~ see the world. Thus John Macmurray writes of 'unreal' people: "Losing the outside world they lose themselves; their inner life dies & goes into dissolution, & they become ghosts & echoes..." Freedom in the Modern World, p.165.

"To be free from everything is to be nothing" Bradley: Ethical Studies p52

⊕ Nature [1836]

X Edward Caird: Hegel, p.162

And, after all, this nothingness at the Centre is what & naught have been expected. I need ~~elbow room~~ nothing of not regard to be myself — to be anything whatever. I am what I ~~do to space~~: take away my space & you abolish me. The centre of my Regions is that one spot in the universe where, because I am given no elbow room, I am ~~Nothing~~. * crowded out of existence. * Alice had reason to be a little nervous about her shrinking so much, "for it might end, you know," said Alice to herself "in my going out altogether, like a candle." What is less expected is the sudden turning of the tables. When all is lost, then all is found.

* Bertrand Russell (A.B.C of Relativity, p.210) ~~two~~ & others have pointed out that we do not know what is happening at the centre of a particle of matter, but only what is happening in its field, where the matter is not. I go further & say that nothing is happening at the centre.

3. The centre's ~~as such~~ function ~~a species of nothing, but it is not for the sake of a~~ The centre is ~~no~~ merely theoretical limit to the spell I cast over space. To say that it is necessary & does work is an under-~~statement~~ statement; in fact ~~estimation~~, * there are plenty of good reasons why my observer should regard it as his goal — the very law of me. Two of them concern me here. First, to this centre converges all that which acts upon me. I cannot be got at any other way: the train of events which does not arrive at this terminus is to me as though it did not exist. ~~The world scores a bull, or misses me altogether.~~ Second, it is from this centre that I act. I am powerless suddenly to initiate a motion in the region of my cells, or molecules, or manhood: the disturbance starts at the centre & works its way through ~~way~~ region, developing as it advances. ~~This is only another way of saying that~~ It is for this reason that, when my ~~obs~~ scientific observer wants to know what is really happening, he draws nearer.

* On the immediacy of interaction between bare monads see Ward: Realm of Ends, p 255.

Here at the centre I really do act, and really am acted upon. + Here I keep house; ~~the rest is only politics~~. And I stay at home: ~~to~~ those who think they have found me out of doors, in other regions, are mistaken. They see ~~the ghosts~~ aspects of me — ~~ghosts~~ appearances, manifestations infinite in number & variety, but ~~ineffectual~~ powerless. They ~~see~~ see the ~~apparent perfections~~ appearance of that central ~~fact~~ reality which, though changeless, is ~~the author~~ initiator and ~~patient~~ subject of change; which, though one, is ~~pre-~~ & contains yet the begetter of infinite multiplicity; which, though nothing, is yet the condition of all. ⊕

+ Here are many passages of the Taoist philosophers in which the concept of the Tao seems to approach the concept of the Central Nothing. "The sage abides by actionless activity." "The Tao is hollow: use it & there is no overflowing. How fathomless it is!" "Are you able to become an (unself-conscious) babe? Are you able, as you cleanse the mysterious mirror, to leave no traces of self-consciousness?" "Go on to the limit of emptiness: Hold fast to the stability of stillness." "Hume to the root, home. I affirm to the stillness."

But to think to a ~~point~~ to discover the world in it. "Here the figures, here the colours, here all the images of every part of the universe are embracted to a point. O what point is so marvellous! ... These are the miracles.... forms already lost, mingled together in so small a space, it can recreate & reconstitute by dilation." •

• Leonardo: N. Botts, pp. 117, 118.

(Tao Te Ching, II, IV, X, XVI.)

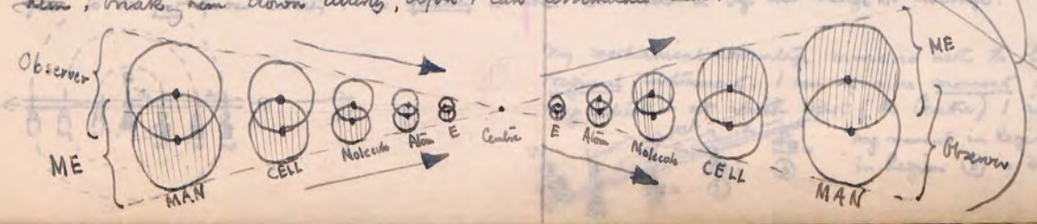
4
CELL

5.
CHANGE

+ There is an episode in David Lindsay's unmarketable Voyage to Arcturus (p.167) where the hero finds the animal he is looking at become tissues & a bloodstream, & then innumerable bright points like suns, & finally nothing. At this point he finds himself emotionally identified with the animal.

Here I act — but how? I push this paper-weight. Because it is a cylinder, it rolls across the desk. Yet my paper-weight is itself & I am myself. We are two different things. Nobody could confuse us; there is no secret understanding between us; what is mine is my own & not to be confused with what belongs to this piece of metal. How then do I move it? How can 'motion' leave me, jumping in some unimaginable disembodied form from the tips of my fingers, and settle in the paperweight? And how can the paperweight, which has now rolled back again, make my hand a present of some of its motion?* As Hume showed, this bandying about of 'states', this transition from cause to effect, is not transparently natural: it is merely common.* I labour under the delusion that to see an occurrence a hundred times, or to see it a million times is to understand it better still. The norm is true: only the exceptional is unmysterious. I think I know why my paperweight moves when I push it, but in fact I know no reason why it should not pass through my hand, or explode, or turn into a hundred little paperweights, or even start a conversation with me about what it ought to do. I cannot explain how any transient action effect is possible, much less why a particular effect should follow a particular cause.

Causation is a profound mystery, but it is a mystery that fits into the general picture. Two circles touch, but however big they are the point of contact is infinitely small: the place where they are one is the place where they are Nothing, yet something. Even so my paperweight and I act on one another because we come to terms, because we meet on common ground — the centre, nothingness.* Here we do more than agree: we sink our differences — or rather we sink, leaving our differences floating, till we reach that lowest level of all, where we are identical. At the centre there is no mine & thine, no this & that, no here & there, no me & it: my paperweight & I are quite indistinguishable. So it is with my observer: he can only get at me by approaching, but he comes on my terms. When he gets to my cell region I refuse to recognize him as anything more than cells; in my molecule region he is for me mere molecules; and so to the centre, where he is nothing. I have abolished him. We have abolished each other. Nothing can touch me (I should say: only nothing can touch me) because to act on me & be acted on by me is to come here & share my nothingness.* All action is stooping to conquer, where stooping is absolute abasement. However little we have in common, a creature can always get at me, & I can always get back at him, provided we rid ourselves of every personal peculiarity that stands between us. And when our commerce takes such extreme forms as eating the one or thinking about the other, the same rule applies: I have to digest the other, break it down utterly, before I can assimilate it.



Parmenides & the idea of change was unthinkable: how can a thing become what it is not?

Hubert ~~points out that~~ change is unthinkable: either it is internally caused, or externally caused, or uncaused — & none of the three makes sense. The doctrine I put forward below is actually a combination of all three.

Cf. On this see Paulsen: Introduction to Philosophy, p. 211 ff.

(according to Hume)

* ~~Treatise of Human Nature~~

* Causal efficiency exists not in objects but in the mind. When I observe a ~~constant~~ relation between two objects to be constantly repeated, I get the idea of one causing the other: "after a frequent repetition, I find that, upon the appearance of one of the objects, the mind is determined by custom to consider its usual attendant, & to consider it in a stronger light upon account of its relation to the first object. It is this impression, then, or determination, which affords me the idea of necessity." Treatise of Human Nature, Bk I, Pt. III, 14. Rogers 375

* The view put forward here is ~~very~~ a variant of ~~similar to~~ the doctrine of Lotze, in Microcosmus, that interaction is only possible if elements are phases of one underlying substance. Cf. ~~See~~ R. B. Perry: Philosophy of the Recent Past, p. 90; James Ward: Realm of Ends, p. 615 ff.

+ As Marcus Aurelius says 'no man can properly call anything his own, no not his son, nor his body, nor his life.' (Meditations XII, XIX) What I really own, what I have & hold, is — nothing; what I share is — everything.

* This is another way of saying there is no 'contact'. ~~This agrees~~ with the views of modern physicists. On the subject of ~~contact later~~ the absence of contact between material particles, ~~see~~ Cf. Bertrand Russell: ABC of Relativity pp 7, 12, 197. + Outline of Philosophy p 168.

In chemistry.

Because, at the place & moment of contact, the contacting bodies vanish. This lines up.

Whether our conference is such that we are aware of the other, or eats him, the same rule applies.

O Thirty spokes together make one wheel;
And they fit into 'nothing' (at the centre):
Herein lies the usefulness of the carriage.

Thus it is that, while it must be taken to be advantageous
to have something there,
It must also be taken as useful to have 'nothing' there.

* "And Smallness, or Unity, is ascribed to God's Nature because He is outside all solidity & distance & penetrates all things without let or hindrance. Indeed, Smallness is the elementary Cause of all things; for you will never find any part of the world but participates in that quality of smallness.... This Smallness is without Quantity or Quality; it is Impossible, Infinite, Undimitted, &, while comprehending all things, is Wholly Incomprehensible."

• Tao Te Ching, Ch. XI. (trans. E. R. Hughes.) p149

(Upon ~~it~~ this Centre the mystery of causation (whether ~~it~~ it be the action of mind on body, of ~~mind~~ body on mind, of body on body, or of mind on mind) is focussed. And since the Centre is also (as I shall argue in a later chapter) in some sense the Whole, the doctrine I am advocating here is essentially the same as the occasionalism of Geulincx & Malebranche: God is the ~~sole~~ efficient cause of every event. ~~The apparent cause is only~~ The stimulation of my eye is not the cause but the occasion of my seeing, which God ~~causes~~ makes to occur in me.)

× Descartes had suggested that the Pineal Gland was the medium that enabled mind & body to interact, but Geulincx & Malebranche proper to make this work devolve upon God. In principle both were right. The ~~Centre~~ infinitely small & the infinitely large are alike involved in the Centre. See Ch XII, §

There are two varieties of nothing: the nothing that is prior to something, and the nothing that is contrasted with something. Of these the first is meaningless or unthinkable, while the second borrows so much definition from its environment (like a hole in a cork) that it is really much more than ~~nothing~~ a blank. My centre belongs to the second category. It is very far from being ~~is not~~ a mere nothing. ~~My centre & its regions are as~~ It is inseparable from its regions, as the still centre of a wheel is inseparable from its revolving rim. The ~~whole~~ concentric system is a ~~one~~ whole of interdependent parts, none of which is comparable in importance with the central starting point & goal of all the system's traffic.

~~And certainly no aspect of me is more mysterious than this 'nothing'. I have really done nothing to explain myself what I really am: I have only explored my ignorance.~~ This central void out of which springs all I do & into which flows all that is done to me, this ground of my being, ~~this~~ is in truth the ultimate mystery. This, ~~perhaps~~ purely, is what William Law refers to as 'a root or depth of these ~~mysteries~~ is what the Pythagoreans intended when ~~they spoke of the fire that lies at the centre of the world in the "General tower of Zeus".~~ from whence all their faculties come forth, as lines from a centre, or as branches from the body of the tree.' It is the focus of the Buddhist mandalas, the ~~Principle of~~ undifferentiated & unlimited 'Principle' of Chuang Chou. ~~This, again, is the Philosopher's Stone.~~ But the literature of the centre is immense: men have found nothing else so fascinating. The name it is known by depends on the epoch & the interests of the thinker. For A~~naximander~~ it is the Unlimited; for Parmenides it is the unchanging, unmoving, unbroken Uniformity; For Plato it is the Receptacle, the nurse of all becoming; for Aristotle ~~the~~ prime ~~or formless~~ matter; ~~primum materia~~; for the alchemists the Philosopher's Stone; for Bruno the universal ether which is itself the world-soul; for Leibniz naked, slumbering monads; ~~the celestial Ether~~ for Boehme the Ungrund; ~~and the Abyss~~; for a recent writer "the yawning abyss of non-being in his (man's) own nature."

I do not for a moment equate ~~such~~ all these very diverse notions. Yet each is, I think, aimed at the Centre. And each, in so far as it is a description of something, is bound to be wide of the mark.

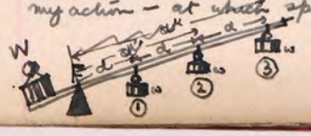
In another of its aspects it is the Atman of the Upanishads, the Synteresis of Alexander of Hales, Bonaventura, Albertus Magnus, & St Thomas, the Fünkelein of Eckhart, the uncreated ~~spark~~ light, the scintilla, the divine spark, the apex of the ~~mind~~ soul, & of other mystics, the Smallness or Reality of the Pseudo-Dionysius:

4. Is action at a distance possible?

To act on me is (at least at the point ~~d'appui~~ of application) to become me. There is no action by mere contact — whatever contact may mean — and a fortiori there is no action at a distance.

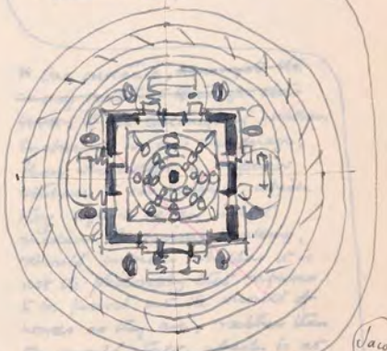
(C.S. points out) But this is in fact a contradiction, merely, to the conclusions ~~of the first two chapters~~ of this book. ~~There~~ I ~~recorded~~ found have reluctantly said that the secret of interaction is to be careful not to coincide, but on the contrary to keep one's distance — the more of it the better. If I would benefit by my observer's human actions I must retreat from him till I get to the place where he is human, while by this same ~~act~~ method I put myself in a position to act humanly towards him. What is given is the fact of our activity: its quality is what we make it by our range or leverage.

My mechanical advantage increases with the length of my lever, which is a regional instrument. I am of more moment as I recede from the fulcrum of my action — at which spot (the Centre) I am of no effect at all.



My movement in Region ① is 1 wd, in Region ② = 2 wd, in Region ③ is 3 wd, & so on indefinitely.

'Mandalas' are found amongst all peoples & from the earliest times, but they reach their greatest complexity in Chinese & Tibetan Buddhism, where they are used as instruments of contemplation. The centre (where the Buddha is often represented) is the point to which the highest significance is attached.



~~Buddhist~~ Mandala.

Jacobi 132

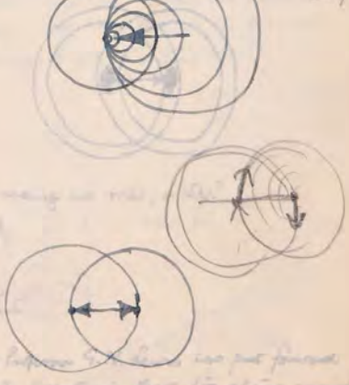
~~* Aristotle: De caelo ii, 13.~~
~~See also Heath: Greek Astronomy, XXXVI.~~

° Timaeus, § 49, 50

° Nicolas Berdyaev: The Destiny of Man, p. 54.

• "Yes is in the soul", says Eckhart, "something which is above the soul, Divine, simple, a pure nothing; rather nameless than named, rather unknown than known. ... Sometimes I have called it a power, sometimes an uncreated light, & sometimes a divine spark." Cf the 'centre of the soul' of Plotinus (Ennead VI. 9. 8)

° Divine Names IV, 3.



~~* When the arm of the lever is lengthened it works. The arm's effectiveness increases~~

Is ~~not~~ this not action at a distance, or, more precisely, action by overlapping, where centre does not meet centre, but the centre of one party coincides with the circumference of the other?

~~We~~ To get at ~~one another by getting~~ a man out away from ~~one another~~ him. This may will sound odd: it leaves out half the story. ~~I find that I have already~~, in the last paragraph, ~~and~~ contains the key words ~~that~~: towards. I do not act ~~on him~~ by shower o he on me: we behave towards one another*; we act in each others' direction. Each of us ~~sets~~ going from his own centre a train of words that ~~builds up~~ works outwards till it reaches the other's centre, & there is no interaction till both ~~get home~~ arrive. It is as if ~~we~~ each of us lit a ~~pair of~~ fuse~~s~~ declined to explode a charge in the ~~other's~~ of the other's middle: action at a distance is, in fact, delayed action.

At the risk of further repetition, let me be quite clear about this. I am at my centre, when ~~I find~~ I am nothing, & my observer is at my circumference, where ~~he finds~~ I am a man. So far, ~~all is transparently simple~~: but it is here the ~~first~~ complication starts. But we both ~~change our minds, projecting~~ project what we ~~have found~~ register: each of us ~~now~~ claims, that he knows what is in the other place. My observer says I am a man at my centre, and I say I am nothing at my circumference. ~~These two pairs of statements are contradicting. They are also true.~~ We are both mistaken: projection is ineffectual. The spot where I am a man is there at the circumference and here at the centre; the spot where I ~~am nothing~~ cease to be anything is here at the centre and there at the circumference. Thus it is just as true to say I am a man here breaking down to nothing over there, to make way for my observer, as it is to say that I am nothing here building up to a man where my observer is, in order to oust him. In fact, ~~that is how I act on him~~ act upon him — by establishing out there a centre of my own which coincides with his. And he in turn acts on me by finding ~~through~~ his centre in me. After all, then, ~~what I call~~ action by overlapping is not merely the action of a centre on a region, or of a region on a centre: it is action between centres. ~~And there is only~~ Rather it is there ~~that are really one centre~~. ~~identification~~ Unification.

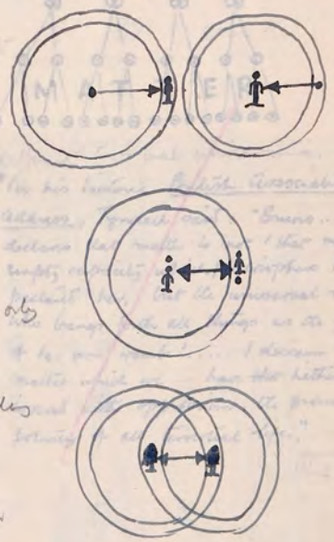
~~For~~ The secret of my power to act is first that centres through many are one, & that

But note the consequences: ~~my~~ centre is not here alone, but potentially everywhere. More especially ~~it~~ I find it is in my object; ~~as my object's centre is in me~~: our interaction is the game in which we ~~handy~~ exchange centres & their contents. The light that stretches between us, dividing & uniting us, building us to ~~manhood~~ equal status & destroying us ~~again~~, is ~~as light, the centre in action~~ one aspect of this game.*

"Sometimes the instinctive logic that underlies linguistic expression is subtler or suppler than the logic of the schools" (Otto Jespersen: Logic & Grammar, Society for Pure English Tract No XVI)

Usage & Analysis, Grammar, Logic

* One instance, ~~among all the many results of thought that lurks~~, of the astonishing wisdom enshrined in our language. Those who adopt a superior attitude to our tongue, which they regard as an inept medium for serious thinking, should consider whether it is not the philosophy that refuses to be pound into the mould of words as they are, rather than the mould itself, which is at fault. Good workmen sometimes blame their tools — but only when the tools are bad ones. Certainly it ~~would be gracious~~ is ungracious to slander an instrument that, sensitively used, can give ~~the workman~~ its user so many ~~valuable~~ ~~useful~~ hints.



* Professor G. N. Lewis has put forward the hypothesis that two atoms connected by a light ray may be looked upon as in contact. The 'interval' is zero in relativity theory, & Professor Lewis suggests that this fact be taken seriously. (See J. W. N. Sullivan: The Basis of Modern Science, p. 201.) The doctrine I am advancing here has something in common with this suggestion.

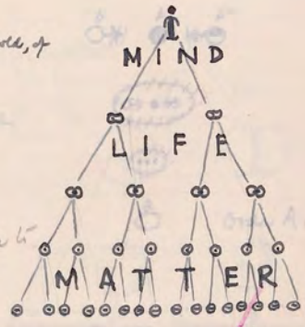
looked at the other way,

The light that is nothing becoming something is, ~~from the~~ looked at the other end of the path, something becoming nothing: it is as if the centre holds itself at arm's length, & looks both ways. Light is the an infinitely telescopic two-way Arm which by in a gesture ~~movement~~ extracts Being from the magician's hat of Non-being, & puts it back.

5. A ~~sample piece~~ model of the vertical process, with cross-sections.

Yes, says common sense, but how am I built up and demolished? Is it some ineffable virtue of my centre, or ~~an~~ some effortless & automatic peculiarity of the space that surrounds it, that is the secret of my growth? The contents of my regions flourish till what was nothing is a man, & all my observer has to do in the matter is to retire from me. Is there no more than this to my making?

Consider what has to be explained: not first the elaboration of more & more detail & contrasting where before there was uniformity, but the arrival of entirely new qualities. The close view of me is of a world that is neither hot nor cold, of a world without a ~~sound~~ whisper, without ~~a~~ the faintest tint, without a twinge of feeling, or the ~~ghost~~ dawning of a thought. How does such a world — too drab to be a nightmare & too featureless to be drab — grow up into a man & a man's world which, besides being coloured & noisy & scented, ~~& so on~~, is rich in every variety of thought & feeling? What is there in electrons which ~~produces~~ gives rise to this particular reference to them? * How do atoms build up in the physicist his desire to study them? Lettuces was cells, and cells are primitive animals, indifferent to moral considerations, yet Lettuce's hand ~~danger in~~ did not withdraw from the flame — why?

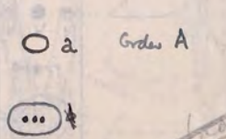


*In his historic British Association address, Tyndall said: "Bruno .... declares that matter is not 'that mere empty capacity which philosophers have pictured her, but the universal mother who brings forth all things as the fruit of her own womb' ..... I descern in that matter which we ... have ~~the~~ hitherto covered with opprobrium, the promise & potency of all terrestrial life."

J. Caird
Phil Rels

~~The vertical process that works such miracles is not easily followed. To slipping those less fugitive patterns which are the cross-sections of the process is the obvious first step, ~~just as~~ for the same reason that an architect (without for a moment forgetting that the building is really three-dimensional) gets his floor plans right before designing the elevation. What, then, is the typical plan of one level of myself? ~~& how is it typically related to the levels above & below?~~~

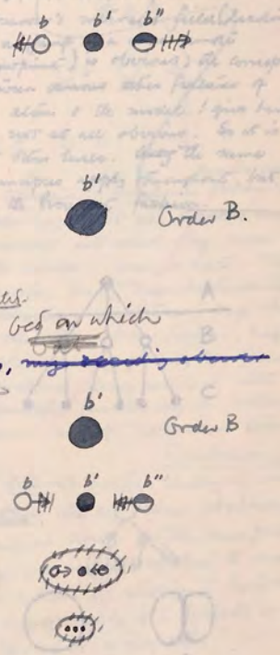
Perhaps my observer can help here. Suppose him to be approaching me. His field of vision contains a unit (a) ~~cell it~~ of order A, at first it is ~~as yet~~ undifferentiated, but as it grows, ~~gradually showing~~ signs of structure appear, ~~it is no longer homogeneous.~~ ~~At first this structure may seem continuous, but soon it splits into~~ this structure presently ~~needs deeper~~ resolved into tiny but distinct ~~but similar~~ parts of order "B". ~~By now unit (a) has grown so much that its boundaries are~~ Meanwhile ~~fall outside the observer's field: for him (a)~~



but inside ~~[illegible]~~ tiny ~~[illegible]~~ rich in ~~[illegible]~~ ~~[illegible]~~ & usefulness. the growth & the work.

~~is no more; & he has left him a multiplicity instead of a unity.~~ The observer now contemplates

the B units behave? They do three things: they grow bigger & bigger; the scatter ~~withdrawing~~ ~~from one another~~ as if they ~~distinct one another inherent~~ & reveal ~~their~~ ~~their private~~ peculiarities of form. ~~The original a unit has now swollen so much that its boundaries are outside the observer's field, & its parts strike as unique individuals.~~ The units that were ~~precisely~~ similar being objects are now dissimilar large objects (b, b', b''.....), ~~& they are~~ still swelling and scattering. But the observer can no longer take them all in, & he ~~is faced with the problem of choosing~~ has to choose one to attend to. Having, more or less arbitrarily, ~~chosen~~ selected (b') he studies its behaviour. Everything happens as though it ~~pushes~~ all the others away, ~~till (for the observer)~~ ~~they are annihilated, & only b' is left~~ in the centre of the picture, ~~still growing~~. But once more the ~~land~~ field shows signs of structure, ~~& its boundaries pass beyond the field of view~~, ~~& the process is repeated~~ ~~& the process is repeated itself. As it goes on~~ ~~field of view is a Procrustean bed on which~~ ~~the approaching observer is a Procrustes in whose bed (or field of view)~~ ~~he has only to relate from me & relate me to wholness.~~ ~~This he does~~ ~~He does this, & this he does~~ ~~sees me as~~ ~~the ~~rapidly~~ shrinking~~ the ~~rapidly~~ shrinking unit (b'), ~~it is~~ which behaves as if it were a ~~powerful~~ magnet, pulling in towards itself from outside the field ~~more~~ (or so it appears to the observer) units b'', b''', b''''.... of various types but of the same order B as itself. ~~This goes on till all are congregated in single ~~[illegible]~~ mass.~~ ~~But they have now shrunk so much that they are undifferentiated, & presently the central magnetic b has pulled them so close together that they are one~~ ~~While a little later the observer sees them shrinks till they are indistinguishable~~ ~~& presently the central b has pulled them so close together that they are one~~: There is now only unit (a), & its structure. As (a) shrinks, its structure melts away, & it ~~starts to pull in units~~ engulfs up ~~fragments~~ other units like itself.....



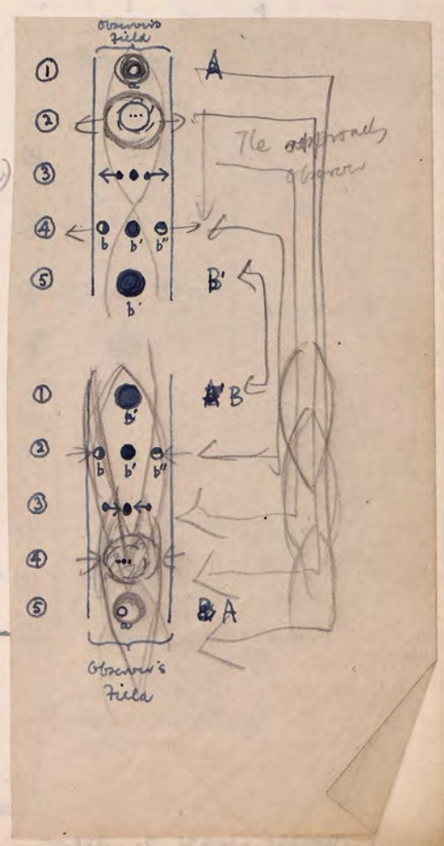
Let me summarize these results:-

(i) TOWARDS THE CENTRE: The transition from level A to level B involves:-

① the presence of unit (a) of order A
② (1) the development of similar parts, of one order B, ~~within (a),~~ & the disappearance of (a)
③ (2) their ~~differentiation into dissimilar units b, b', b''~~ mutual 'repulsion' & growth.....,
④ (3) their ~~mutual repulsion~~ differentiation into dissimilar units b b' b''....
⑤ (4) the ousting of the rest by b'.

(ii) AWAY FROM THE CENTRE: The transition from level B to level A involves:-

① the presence of unit b' of order B
② (1) the ~~presence~~ introduction ~~appearance~~ of differentiated units b, b', b''... of the same order B,
③ (2) their mutual 'attraction' & shrinking
④ (3) their loss of differentiation, & the ~~appearance~~ emerging of (a)
⑤ (4) their ~~emerging to~~ total incorporation in (a).



This, according to my observers, is ~~a sample~~ the schema of the vertical powers ~~or~~ general pattern ~~reduced to its bare essentials~~ simplified, & ~~This is what~~ how the process that works

~~The first~~ The ~~[illegible]~~ is abundant. First, note that the ~~Bow & the Spindle~~ is transitory, observers account exemplifies the law of the spindle' ~~which~~ which the previous chapter postulates. As he recedes, this object ~~diminishes, then alternates gross & diminishes.~~ Second, note that his account exemplifies the law of projection — ~~reflection of the of~~ of aspects; the object projects others of aspects, states, advances to a higher state by unsupplying them, ~~other again projects others & the new states~~

(9a)

which makes & unmakes ~~the world~~ me.

Since he appears moving ~~looks like~~ to the observer, who gets his information by taking part in the process* itself, it deserves ~~to be~~ to be taken seriously — subject to confirmation by such other evidence as can be had.

~~Supposing~~ Let us now, that he takes a cross-section of the process by ceasing to move with it, ~~so that he may~~ in order to discover whether the horizontal view lends support to the vertical. He comes to a halt in the region where b, b', b''.... are presented as dissimilar units of the same order B. They are, say, cells — ~~nerve~~ bone cells, cartilage cells, muscle cells, ~~liver cells~~, & so on. Now ~~the~~ observer ~~deliberately forgets~~ ignores the fact that (in an ~~equally~~ real 'superior' order of things) these cells are attracting one another & sinking their differences till they are one, & that (in an ~~equally~~ real 'inferior' order of things) these cells are repelling one another & accentuating their differences till one has ~~& absorbed the half~~ ousted the rest: ~~the~~ in other words he treats level B as through levels C & A (on which B is, in fact, entirely dependent) did not exist. Can he, at this level B, yet discover in my cells' ~~behaviour~~ 'horizontal' behaviour hints of their 'vertical' behaviour C-wards & A-wards?

Certainly he can, especially if he is prepared to ~~wait long enough. Say~~ spend some time over his observations. ~~take his observations back into my past.~~ I ~~started off as an Embryo that was for my observer first one cell,~~ begun as a single cell, which projected ~~Then~~ a number of similar cells. ~~Then these cells becoming~~ grew ~~became~~ more & more dissimilar. Each, in the general scramble to get a living, ~~to~~ was obliged to become a specialist in body & manner of life. ~~This~~ Ruthless competition, & ~~the~~ multiply throwing ~~that~~ forced cells to such lengths. Once the cell is freed from these conditions & lives on alone in a laboratory culture, it ~~tends to~~ ~~becomes~~ reverts to the unspecialized state; but in my body the price of survival is a highly peculiar adaptation to a highly peculiar environment. ~~This~~ Such adaptation is no concern for the general welfare — it is non-altruistic ~~for himself~~ (in disease) ~~each for himself~~, even to the existing of the others. ~~And the end, or death, of the struggle~~ descent to a lower level of being. (disease,*)

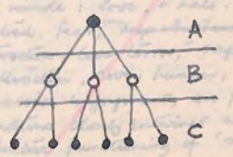
This horizontal picture is clearly ~~nothing but~~ the first half of the vertical picture over again, in slightly different terms. All ~~four~~ the stages — ~~multiplication~~ proliferation from oviself, differentiation, ~~repulsion~~ ovi-projection, & ~~ovating~~ the shift to a lower plane, are here repeated. But there is still the second half of the vertical picture, which is precisely the contrary of the first half. Does this also manifest horizontally?

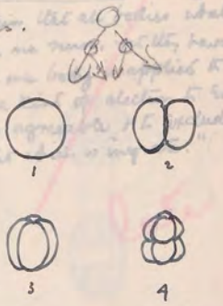
~~That~~ Contradiction, which is the ~~they~~ essence of the vertical process, is ~~latent in the cross-sections: a little probing brings it out.~~ not absent from its cross-sections. My cells are many; they are extremely specialized; they are anything but altruistic. Yet ~~each behaves it~~ they ~~were~~ could hardly have done better for me if

(i.e. cell-division leads growth of the whole)

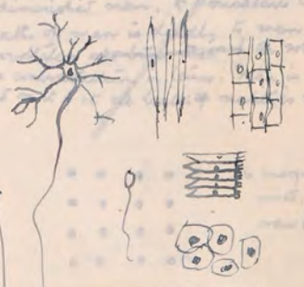
And As the organism gets older, projection (~~cell-division~~) of the new no longer ~~succeeds~~ exceeds the destruction of the old. Finally it ceases altogether: the end is ~~the reference~~ disease, & death, & descent to a lower level of being.

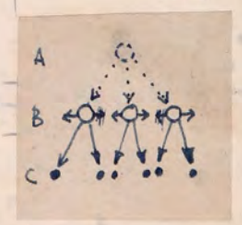
* There are many variations & complications which this simple model overlooks. For example, in the atom, the correspondence between the saturated orbit (with 2, 8, or 18 electrons) and the observer's saturated field (leading to a jump to a more remote viewpoint) is obvious; the correspondence between various other features of the atom & the model I give here is not at all obvious. So it is at other levels. ~~But~~ The same principles apply throughout, but only in the broadest fashion.





Early stages in the development of the ovum, before differentiation starts. When differentiation is complete there are some 50 kinds of cell, including:-





Spindle projection

they had been ~~a~~ a company of saints & martyrs inspired by a single ideal — to offer their lives a continual sacrifice for ~~the sake of the~~ the other life of the whole. My cells seem to have little in common, yet their great differences only reinforce the unity of what they build. If they ~~had been~~ were men it would be said of them that they ~~did~~ do not sink their differences so much as dedicate them in self-effacing service, & that what draws them together ~~also~~ is mutual love.* What is such a picture but the second aspect of the vertical process — complete with the ~~same~~ stages: differentiation, attraction, loss of differentiation, ~~&~~ merging, & the shift to a higher level — described in new terms?

In any case, ~~the~~ consequence is the emergence of ~~the~~ higher, or human order.

* Attraction & repulsion ~~belong to~~ can be observed all levels. At one level I have insight into what they mean from the inside: love, & hate. "Anger, hatred, fear," ~~says Whitehead "terror attraction, love~~ terror," says Whitehead, "attraction, love, hunger, eagerness, massive enjoyment, are feelings & emotions closely entwined with the primitive functioning of 'retreat from' and of 'expansion towards.'"

Later

6. The regulés of sociability — & unsociability.

The question is still to answer: how are the qualities of myself & my world built up out of nothingness?

Such a question can only be answered in terms of other equally insoluble mysteries. ~~I can only hope~~ The most I can attempt is to state it & them sequpicently, & even this programme will fill the greater part of the book. In this ~~latter~~ part of the inquiry I am taking the observer's view of me. ~~And~~ He is limited to ~~watching~~ noting from outside the behaviour of ~~bodies~~ units ~~that~~ (swelling and shrinking, approaching & receding, & executing ~~various~~ other movements) ~~with a view to~~ so that he may discover ~~the connections between this behaviour and~~ the ~~that~~ sort of behaviour that goes with the ~~emotion~~ emotions & desires ~~accompany it~~ qualities. What this behaviour might mean in the experience of the actor himself (whether man, or cell, or lesser unit) is really ~~not the~~ no business of my observer's, & any interpretation he makes in terms of his own experience is provisional, & indirect. ~~Not~~ Not until Part IV, where I invert the view outwards from the centre, is the inside story of creatureness taken up in earnest. Here the outsider's account (in so far as he succeeds in remaining an outsider) is bound to be rather like a deaf man's description of a play in visual terms. ~~of a symphony~~.

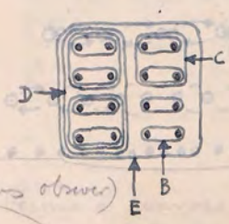
Martin R. & M. 7

+ Seneca said that he returned from men a diminished man, & Rousseau that the breath of man is deadly to man, & it is nevertheless ~~obvious that~~ the solitary man is a contradiction in terms. Man is men. And so it is at all levels: ∴ reality is social.

With these limitations acknowledged, let me ask again: what is the secret of creatureness?

It is sociability.+ And sociability entails ~~first the coming together of units of the same order or level, secondly~~ the performance ~~by the units of different functions~~ of diverse functions by units of one order (involving their differentiation in structure as well as behaviour) ~~that~~ the knitting together of their functions, ~~&~~ & the emergence of a unit of a new order with new characteristics. Sociability is, in fact, a section of the vertical process ~~as recorded~~ noted by my receding observer. The many that become the one; the separate that merge; the differences (witnessed by the receding observer)

16 unorganised units, of order A.



The same, organised into four orders: B, C, D.

~~In other words, the~~ ~~that~~ Another name for the ascending process is sociability: when similar ~~units~~ ~~as~~ differentiated units ~~as~~ draw together, but a new order of unit — a society — emerges. Here sociability is creature of ~~the~~

& another name for the descending process (witnessed by the approaching observer) is unsociability

that, interlocking, make agreement all the firmer:— these make a live society and are the condition of live creatures. "Fellowship is ~~[illegible]~~ life, & lack of fellowship is death." + William Morris: The Dream of John Ball, Ch. 4.

Let me run over a few examples. The disembodied electrical charges, or local warpings of space-time, or centres of world-wide electro-magnetic fields (whichever description is preferred) of which I am composed do not behave as if each were the only one existing: fortunately for me they have to do with one another. There is 'attraction' between electrons & protons, 'repulsion' between electrons, & this tendency finds scope in societies of between two & several score electron & proton members. Each type of society has its ~~regular & rhythm~~ rules for members, its dance-patterns ~~so to speak~~ which, to an observer who ~~does not cannot~~ fails to follow the swift motions of individuals, are the structure of the society itself. Now the point to note is that this new society, which is an atom, behaves ~~as a whole~~ quite differently from its members as individuals. For example, under suitable conditions, it acts as if it were a solid particle; it has a tendency to link up with other atoms of ~~certain~~ specific types; it absorbs & emits radiation in packets or quanta, & so forth. It is something new in the world.

Diagram (purely schematic) to illustrate some of the 'social' relationships between protons & electrons in the Helium atom.

My atoms, in turn, are sociable. They get together in communities sometimes hundreds or even thousands strong, sometimes only two. But the molecule's behaviour is ~~always unique~~ of a new order. Thus when two hydrogen atoms enter into intimate rythmical ~~relations~~ intercourse (of a sort quite unlike the ~~relations~~ intercourse of electrons & protons) with one oxygen atom, the three are one molecule of water, & water conducts itself quite differently from the gas hydrogen, & from the gas oxygen, & from a mere mixture of these two. Somehow water has arrived out of non-water, & somehow the new arrival comes of the fact that certain atoms are busy weaving networks of social relationships. The same tale is repeated at my molecule level (atom-societies show themselves capable of chemical behaviour unknown at the atom level), at my cell level (atoms molecules that are 'dead' as individuals are, as giant communities, 'alive') & finally at my human level (where extremely primitive animals succeed in passing themselves off as a man, thanks to their wonderful social organisation).

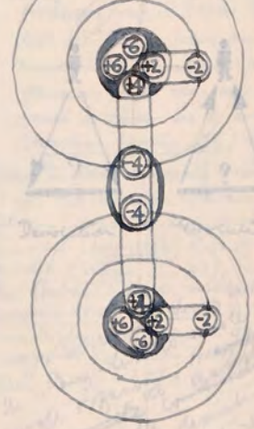
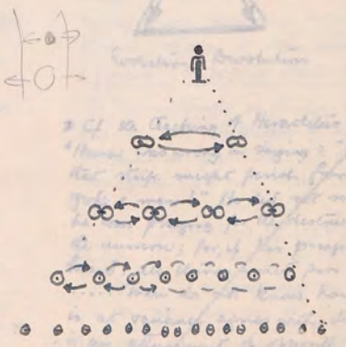


Diagram to suggest a possible pattern of 'social' relationships when two Carbon atoms form a Carbon molecule.

~~In short,~~ I owe all I am & do to this universal sensitivity which units show towards their fellow-units. I am a pyramidal social enterprise. My existence is point on an inconceivable number of knife-edges of social conduct. An outbreak of ~~[illegible]~~ uncompromising individualism at any level would



Society is a projection-reflection mesh — with 2 tendencies — to become a finer, & to become a coarser mesh.

Projective-reflective activity is always tending ① to draw in its object (= sociability) = anabolism = growth

& ② to repel its object (= unsociability) = katabolism = distinct to grow & assert itself

Too readily naturalism assumes that the part is prior to the whole, the lower level to the higher, life to mind, & materiality to life. Too often it is taken for granted that progress is inevitable, that evolution is not counterbalanced by devolution, that the world-process is one-way. The downward, destructive tendency is just as real as its counterpart.

mean my instant dissolution. How is it that — at least till I die — this does not happen?

But it does happen, & happens all the time. I am disintegrating every moment. The creative building of higher levels on the basis of lower ones (under such titles as the Epigenesis of James Ward, the Emergent Evolution of Lloyd Morgan, the Holism of General Smuts, & the Emergent Vitalism of C. D. Broad) was one of the dominant notes of the philosophy of the recent past; unfortunately the implication often was, too often implied first, that 'sociability' explains the emergent character, & seems, that it was the whole truth instead of a half-truth.* The demolition of the higher levels is apt to get overlooked. Yet this negative aspect is just as much a matter of fact, & just as much a matter for explanation, as its positive counterpart. It is not a fact at all obvious how I, with all my human qualities, can sink so low as to be electrons & protons (& these I certainly am), any more than it is obvious how my electrons & protons can by the practice of sociability rise themselves to manhood in me. Indeed there is a sense in which it is not the higher but the lower levels, with their privation of qualities, which call for explanation. The upper levels, lively, poignant, ~~coloured~~, rich in every sort of contrast, are presented for my immediate inspection; they are real beyond doubt. Not so the world of electrons & atoms & molecules, which is for the most part ~~inferred intimately~~ difficult country, invaded only ~~known rather by what occasionally escapes from it than by human invasion~~ by the specially equipped. It is my descent & degradation to this limbo, no less than my return to where I belong, which is the problem. ~~of the cyclical world process~~.

This much is certain; what sociability ~~apparently creates~~ apparently maintains, unsociability ~~apparently~~ destroys, & the two are inseparable. New structures are continually produced by the building up of raw material; raw material is continually produced by the demolition of old structures. My electrons, ~~are as much~~ while are my manhood lying in ruins, as my manhood, ~~this~~ is the fruition & apotheosis of my electrons, ~~too~~, & of all levels coexist in me, ~~because all levels must be achieved all the while~~; nothing is done once & for all. The individuation in me kills me; the sociability nourishes me; & to live is both. I live, that is to say, by the death-dealing failure of my parts to reconcile their differences; ~~& by dying a~~ ~~to kill as~~ no less than ~~I die not~~ by their life-giving success ~~alone~~ in social organization.* It is as necessary to my manhood that it should continually commit suicide ~~destroy itself~~ give up its life (by a sort of progressive outbreak of anti-social behaviour incited from the top) as that it should continually rise from the dead (by a spreading of sociability from the base).

* James Ward: The Realm of Ends.
Lloyd Morgan: Emergent Evolution.
J. C. Smuts: Holism.
C. D. Broad: The Mind & its Place in Nature.

* Whitehead, who ~~in effect~~ ~~insistent upon~~ makes ~~the~~ world in terms of 'organisms' which are societies of societies, ~~of events~~, denies that colours, sounds, scents, &c emerge from nature. Following Plato, he calls these 'eternal objects', which are required for nature but ~~proceed~~ belong to an ideal & permanent realm. See Science & the Modern World p 129 ff. Again, as is ~~all things~~ inevitable where the problem is fundamental, is not this a restatement of the problem rather than ~~of emergence, & not its~~ 'solution'?

'Devolution' 'Evolution'

~~Life-blood is the descriptive social & biological term for the continuous social process by which the single organism, man, is built up of cells.~~

Evolution - Devolution

* Cf. the teaching of Heraclitus: "Homer was wrong in saying: "Would that strife might perish from among gods & men!" He did not see that he was praying for the destruction of the universe; for, if his prayer were heard, all things would pass away.* ..... Men do not know how what is at variance agrees with itself. It is an attunement of opposite tensions, like that of the bow & the lyre."
Burnet: Early Greek Philosophers, p. 136.

Q late

that the heads is a social one, & that its qualities are maintained & enforced as social relationships at every level, that when these social relations fail the qualities vanish.

7. The members of the societies

But what (common sense wants to know) are these electrons, atoms, & molecules, in reality? In the previous chapter I spoke of the electron as the 'observer' of the proton, & in this chapter of the 'social' relationships between such units. Am I not guilty here of a vicious anthropomorphism? Have I any better reason for attributing lifelike & mindlike characteristics to atoms* than a savage has for attributing the same characteristics to rocks & rivers & trees? Is Lotze just romancing when he says that "behind the tranquil surface of matter, behind its rigid & regular habits of behaviour, we are forced to seek the glow of a hidden spiritual activity."? × When he says that what the scientist ~~work~~ calls force is really will & Bradley says that the only real causes are actualities of spirits, — are they all innocuous?

Let me start with what is reasonably certain — my own experience of what it is like to be me. As man, I realise some of the peculiarities of this place — those which have human interest, which are important for me as man. But I realise them as having pattern, continuity, emotional tone, & thereness. The pattern develops, & in this I seem to play an important part. ~~The fact~~ The truth is, I know myself in terms of this developing pattern: apart from it I am nothing. ~~The ordinary way of~~ In ordinary language, I am aware of the situation, & I react to it in accordance with my purposes. All this happens at the human level. But I am not only human. The question is: what happens at other levels of myself? I am an immense hierarchy of individuals, all behaving with due respect to their particular circumstances,+ & if they failed in this I would vanish. How, at these lower levels, do I act appropriately? For example, how do I as a molecule take account of the position & mass of all the other molecules, & adjust my behaviour properly to them all? Science assures me (in her own phraseology, of course) that this is what I actually do at molecule level, but adds that it is her business to record the performance, not to explain how it is done.

How is it done? As a man, I lay hold of what is here where I am, & not what is somewhere else; & as a molecule I am not likely to improve on this arrangement. I can only suppose the molecule somehow takes in the situation where it is, so far as the situation is 'molecular', holding its various aspects together in a unity,° & projecting them upon a molecular environment.× ~~For~~ The molecule ~~it~~ behaves in a manner befitting to the situation ~~so far~~ because the situation ~~has~~ has become a part of the molecule's existence. So also with all my subsidiary units: each is constantly taking on certain characteristics of the place where it happens to be, & is behaving in accordance with its own nature as thus modified. The characteristics it takes on are those which apply to it — those which belong to its own level. The rest it leaves aside.

If this seems doubtful, consider the alternative. It is that by some miracle an atom in my body 'knows' what is going on all over the world, in all its inconceivably complex atomic detail. How it gets this information, far excelling

* The panpsychism sketched in this section derives from the long succession of more or less pluralist philosophers — Leibniz, Fechner, Paulsen, Clifford, Ward, & in our own day, A. N. Whitehead, C. H. Richardson, W. K. Wright. Ward's Realm of Ends is the book to which I owe most here, though I cannot follow him in many points of detail. See also Plato's Parmenides, 132, E.ff. in which he discusses the dilemma: either 'all things think', or 'there are thoughts which exist without being in any mind which thinks them.'

× Microcosmos i, p. 408.

Three observers a b c of ~~the same~~ any one level, know themselves in terms of each other.

+ It is love & hate, Empedocles taught, which sets the elements in motion.

~~Bacon~~ Francis Bacon believed that all bodies have perception, & 'evermore a perception precedeth operation; for else all bodies would be alike one to another.' (Natural History, IX) For him 'the total depravity of inanimate things' (to use Sir Hamilton's phrase) was a fiction.

Spinoza believes all individual things to be animate (animate) though in various grades. (Ethics, II, XIII; See also III, 41) And Leibniz, of course, makes the universe animate down to the least of monads.

Even Hobbes was obliged to admit there was something in Bacon's view. (Element. Phil. iv, 25.)

° Whitehead's term is prehension. Things are 'grasped into a realised unity, here & now', but 'the things so gathered into the grasped unity have essential reference to other places & other times.' (Science & the Modern World, p. 87.)

"The connectedness of things is nothing else than the togetherness of things in occasions of experience. Of course, such occasions are only rarely occasions of human experience." (Adventures of Ideas, p. 224 (Pelican edition).

× Projection is ~~all important~~, for me, the sine qua non of every level.

"As the outcome of a prodigiously long evolutionary process," says Lloyd Morgan, "responsive behaviour is directed towards the source of physical influence." (Contemporary British Philosophy, 1st Series [Ed. Muirhead] p. 285) I would add that, while the evolutionary process ~~produces~~ gives rise to higher & fuller projections, projection of some kind must be there from the start.

— ~~and~~ "what is nothing for itself, is truly nothing at all," says Ward. "Nature thus resolves into a plurality of conative individuals; & the range & complexity of the correspondence between a given individual & its environment marks the stage to which it has advanced in its interaction with the rest." × × Realm of Ends, p. 21

+ It is believed in Tibet that if one stops all mental activity one becomes invisible to others. (See David-Neel, op. cit. p274) Whatever the facts, the existence of the theory shows a widespread & ancient recognition of the doctrine that projection & inflexion are correlative.

Get this

in range & in accuracy the information available to science, is quite inapplicable. ~~Does~~ Does the atom send out innumerable scouts to all other atoms, receive their reports, & use them as a basis for its plan of action? No, the idea is absurd. At atom-level I function as I do at man-level, by taking to myself what is here where I am. For me as for James Ward, the physicist's atoms are "the outside appearance of so many active beings, each of which is something for itself." × And, after all, the mysterious view, the view which, at first so disciplined & transparent, is really opaque to the understanding (not to say actually meaningless), the view on which the burden of proof rests, is not pantopsychism (at its materialist opponent. Matter or energy apart from all mind — that is de facto impossible, that is the fantastic speculation, that is the costlier, the occult, the monstrous.

But at man-level (common sense points out) I am conscious of what I am; at the ~~lower levels I am unconscious of what I am.~~ Between these two conditions is a world of difference.

But these primordial units, C.S. maintains, are incapable of consciousness.

This is not the place for a discussion of 'consciousness', whatever that may be. Here I will only briefly state the doctrine of this book, & ~~have delivered arguments for later chapters.~~ At the human level I am a view outwards (I call this my mind) & a view inwards (I call this my body). ~~I do not see how any other~~ By far the safest hypothesis is to take this fact seriously, & argue from it to the unknown. The ~~other~~ only alternative is to argue from the unknown to the ~~fact of myself can exist unless it is of a similar dual nature.~~ ✱ Doubtless, at the lower levels, the view outwards is very limited & abstract — but that is ~~only~~ to be expected when the view inwards is equally impoverished. ✱ The meanest the body the meanest the soul. It is idle to expect of an atom any great hold upon reality. But some hold it must have. For the atom to exist at all is for it to embrace just so much of the world as

When my outlook is atomic I am an atom —

; when my outlook is human I am a man — my

n I have no outlook at all I am ~~Nothing~~, the ~~to, then, is that~~ An atom, then, is an atom because it

whole, because it is so much less ~~'concerns'~~ 'aware.' than a ~~at atom - but than at the human level, because exist is to be aware of some of the characteristics of the this' 'here'. When I am utterly unaware of what, to the 'here' of my observer, who can observe~~

~~... not (the sub-atomic)~~ the lowest level up to man-level, my story is one of increasing appreciation of the situation, with increasing contribution to the situation. + But the situation in all its levels is essentially one & the same, & it is grasped in essentially the same fashion. As Lloyd Morgan expresses it, "there are no physical systems, of integral status, that are not also psychical systems; & no psychical systems that are not also physical systems. All systems of wants are in their degree psycho-physical."

• Emergent Evolution, p.26.

For the time being, my answer to common sense's charge of anthropomorphism is that since the units under discussion are mine, or fully represented in me, anthropomorphism of some kind is fully justified. Human introspection, as Leibniz maintained, can give information about the subhuman. I regard my subordinate units as a lower power (so to speak) of myself, as myself not yet at my best. More generally, I say that an existent thing is in principle like myself, if only because it is continuous with me, & in the end, is me. The alternatives to this view are wild guesswork about things whose natures are alien to mine, or utter scepticism.

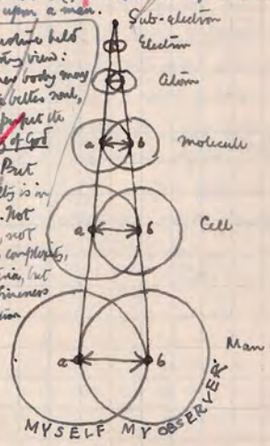
⊕ In this book I reject the notion of 'unconscious mind' which seems to me (as to many others) to be a contradiction in terms. I follow Leibniz, Clifford (Lectures & Essays, II, pp 61 ff) & Ward in believing that there is no absolute unconsciousness. ~~To see~~ (and attacked & ridiculed Hegel's attitude)

× Realm of Ends, p.64. Wundt (with like Clifford) linked his ultimate physical units (atoms) with ultimate psychological fact (will) calling the result the 'will-atom' — the essential unit of existence. (Philpe 129)

Goethe says: "Man is properly the only object that interests man." & Pope: "the proper study of mankind is man." As I would put it a man is (i) a view out upon men, & (ii) a view in upon a man.

× St Augustine held the contrary view: "the meanest body may include the noblest soul, & the most perfect the lowest." City of God VIII

VI. But the difficulty is in definition. Not mere bulk, not even mere complexity, are the criteria, but these plus finiteness of organization & function.



The view out = a → b
The view in = a ← b
My 'here' = a
My observer's here = b

Like Bradley, Ward insisted that there is no being or fact outside psychical existence. & "Actuality is .... entirely experience: its factors are never abstract possibilities, they are living agents; & the result of their interaction is a perennial epigenesis, the only creation that pluralism recognises."
Ward: The Realm of Ends, p.108.

~~In making reality experience~~

Le Personnalisme (1903), p.500

Charles Renouvier (La Nouvelle Monadologie (1901)) also insisted that the germs of conscious life are present from the beginning, & that & unfold as circumstances allow. Renouvier is one of the many modern philosophers who maintain that causation is only applicable as analogous to our own volition.

(like Leibniz & Spinoza)

• Nature of the Physical World, p.259 ff

TP To reject this view is to assert a fundamental discontinuity in nature: at some point, impossible to pin down, in the evolution of the 'matter', 'mind' puts in its embroidery, ~~appearance & fact is not~~ pointless, (because absolutely unnecessary) ineffectual appearance. The unknown produces from its womb this profile so utterly unlike its parent, & this in spite of any possible gulf between ~~minded objects & merely physical ones~~ mindless & minded matter. If this is not superstition, what is it? As Eddington, along with many other men of science, ~~—~~ shows to make clear, science tells us nothing about the atom's intrinsic nature, & it is ridiculous to assert that the atom is non-mental. Then wonder ~~how systems of atoms can possibly~~ that the thought ~~that systems of atoms~~ produced by systems of atoms comes from.

The motless pillar of a mountain's weight
Is active living spirit. Every grain
Is sentient both in unity & in part,
And the minutest atom comprehends
A world of loves & hatreds.

× "Queen Mab"

• True Christian Religion §. 499.

So writes Shelley × Swedenborg agrees both in similar vein, & when two such utterly different men as the English poet-revolutionary & the Swedish engineer-seer are agreed it is time we took notice. If, says the latter, there were not "something analogous to free-will in the soil, in the seed sown therein, & in all parts of the plant .... there would be no vegetation of any kind. The same is true of every metal & stone..."•

The primates are all at loggerheads, & nothing is achieved; they reach a measure of agreement, & higher units emerge; they cooperate properly, & the result is the living whole. This whole is the final reconciliation of its members, their discovery that, after all, they have a common aim. → All stages of this discovery coexist; it is not made & done with, but is for ever in the making & the unmaking. The essence of life, as Whitehead says, is "conformation of purpose," & the essence of death, I would add, is disagreement.

Surely it is best to go by what I have first-hand knowledge of — myself, particularly at the human level — & to argue from this known to the relatively unknown substratum, while making due qualitative allowance for ~~the~~ differences in level.° ~~Surely~~ In practice, complete scepticism is impossible, & the only serious alternative to the interpretation of my ~~subsidiary~~ inferior levels in the light of my superior levels, is their interpretation ~~in the light of~~ in terms of 'machinery', or 'matter', or some other concept ~~which~~ with whose nature I have no first-hand insight, & which itself ~~requires~~ calls for the illumination it pretends to give.+ The working rule of this book is:— use first what lies to hand; make what is known go as far as possible (& it is surprising how far it will go) ~~it will go~~ before calling in unknown agencies. I feel sure that the basic information for answering all the great problems lies here with me, for the most part despised as commonplace, while I go off in search of the extraordinary. To the country of ~~for~~ myself, if only I could realise it, ~~see it~~, every type of being accredits ~~sends~~ its ambassadors. ~~school~~ ~~representatives~~. Such, at any rate, is my working hypothesis.

'All things are full of gods' said Thales.* But the gods are hardly even godlings: what is certain is that they are 'sociable'.

And sociability is the keynote of all types of being, for the simple reason that, to exist at all, a thing must embrace aspects of its fellows, & in return, contribute aspects of itself to its fellows.* What is this but Sociability? Existence itself is social, ~~& to withdraw altogether from society would be to withdraw from being~~. To become less social is to sink towards the base of the pyramid & the level of nothingness, while to become more social is to rise towards the apex of the pyramid & levels of fuller being. The most complete individual is he who is founded upon & includes the most comprehensive system of social relationships.

"Our world," with Rufus Jones, "is not one we know. It is the one which rests immovably on the basis of social experience .... Destroy the social fabric & all that we now call 'nature' would vanish. "⊙ "The concurrence of the concurrence of men." ⊙ Social Law in the Spiritual World, p.64.

What is the alternative to a universe of includes & including sentients. Each experiencing (what may ~~truly~~ loosely be called) 'social relationships' with its equals? (apart from refusal to inquire into the matter at all) The alternative is a universe of inscrutable things-in-themselves — mysterious & opaque 'substances' driven hither & thither by equally mysterious (or even mythological) 'forces' or 'necessity' or 'laws' — an alternative, in fact, that leads away from the light of our first-hand experience into the shadowy realms of sheer guesswork & meaninglessness. The choice, as Fechner sees so clearly, is between the 'daylight view' that besides our 'consciousness' is still more 'consciousness', extending below ours & above it, rank by rank, from the lowest or least-inclusive to the highest or all-inclusive, — between this ~~daylight~~ wonderful world & the midnight world of dead, pointless, & unknowable mechanism.× Why choose the second? ~~Wholesomely mystification is~~ Mystification is bad enough, but when it takes us straight to a hell of a universe it is madness. The results of the antipathetic fallacy are before us. "You have not crossed the Rubicon of philosophy until you have perceived the necessity of mind, that, upon its operations .... all hinges, that in thought you have the end, & aim, & justification of nature."° To which I add that we start life on the farther bank, grow up by crossing to this the common-sense side, & grow up further by retracing our steps across the Rubicon.

+ If what lies here, at the ~~low~~ common terminus of all the incoming trains of events, is always a sensation or a percept (or something of the kind), if this event which I am is invariably ~~always~~ 'mental', then to assume that other Reres & other events are in themselves utterly different — i.e. 'material' or 'non-mental' or 'neutral' — is surely unwise, if it is not actually meaningless nonsense.×

After all, it is not as if we understood 'mechanism' or 'matter': or found utmost regularity of behaviour in the smallest constituents of nature. On the contrary, Heisenberg seems to show that ~~precision~~ absolute precision does not belong even in the minutest workings of the atom. ~~at the lowest levels of~~ What looks like iron necessity or ~~rigid~~ the rigid uniformity of natural law may well be no more than a statistical effect, the ironing out of ~~the~~ large individual differences by the simple expedient of ~~as~~ taking the average or total performance of very large numbers. At any rate the old notion of compulsive law, ~~forcing~~ ~~[illegible]~~ to fall or cohere or freeze, is now quite discredited — "range of the mesoforms which occurs between them."

• Adventures of Ideas, p.202.

"It seems that, in bodies that are actually living, a coordination has been achieved that raises into prominence some functions inherent in the actual occasions." (p.200) Ward (Realm of Ends, p.148) describes evolution as creative beings, at first interacting casually, coming to have common ends.

° In a somewhat similar way, the Thomists apply the doctrine of the analogy of ~~Philosophy~~ Prosphaneiotes to the hierarchy of levels. The properties of a thing are to the being as do properties of another thing are to its being, & analogy, rightly used, is an important instrument of knowledge. See Gilson: God & Philosophy, & Dorothy Emmet: The Nature of Metaphysical Thinking, p.176.

+ For the view that Materialism is really mechanomorphism, which is a myth — a myth that is useful & illuminating up to a point — see Canon Streeter's Reality, p.9ff.

• Burnet: Early Greek Philosophy, p.48.

* This is the doctrine, sometimes called Spiritual Pluralism, taught by Fechner, James Ward, Whitehead, & many others, from varying points of views. What these philosophers have in common is the view that man-in-society gives the clue to all grades of being.

• The Viscount Palmerston: Speech, House of Commons 5th March, 1857.

× "The first thought" says Fechner, "leads away from all experience & from everything which is conceivable in terms of experience; hence it leads us into the dark, because the notion of the "thing-in-itself" behind consciousness .... has in fact no basis in experience. .... The second thought leads out of the light of common experience only into a higher light, inasmuch as our consciousness ..... furnishes us with a clue to the more universal, broader, higher & more luminous consciousness, & supplies us with the means for inferring it."

Lowrie: Religion of a Scientist, p.158.

° W. McNeile Dixon: The Human Situation p.158. A modern version of panpsychism is propounded in this book with a ~~great~~ literary charm rare in philosophy. See pp. 354ff particularly.

× This point is argued by W.H. Sullivan in his Basis of Modern Science, (P) pp210 ff.

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units corresponding to Bruno's minima, Leibniz' bare monads, ~~*~~ Whitehead's primaliz~~s~~ I shall call them 'sub-electrons'.

primitive events or occasions, + Alexander's point-instants.°

Burnet 10, 11, 14

° I do not mean that these conceptions (to which may be added the ἀρχαί, θεοί, + ἀρχή of Anaximander, Thales, + Aristotle respectively) are equivalent: rather I mean that they are different ways of apprehending the same reality.

8. The pyramid of societies.

I am a pyramid, broad-based upon nothing, that grows more solid + lively and interesting towards the apex; a pyramid that preserves itself in this condition by constantly destroying itself from the apex downwards + rebuilding itself from the base upwards.

I have already outlined the architecture of the pyramid. ~~Its architecture~~ It is divided into horizontal stages or storeys: electrons+, atoms, molecules, cells, men. To these I add, at the base, ~~minima, primates (to use Whitehead's term)~~ sub-electrons. By ~~which~~ I mean ultimate indivisible physical units that are two-sided like the waves of the sea — many above + one below, divided only as to their crests.x ~~but unified~~ In this ~~respect~~ book sub-electrons are what I have called the centre, which is one, caught in the act of becoming many; they are ~~and~~ nothing ~~caught in the act of~~ becoming-something. In the sub-electrons, non-being is found taking on the minimal amount of being. Now I do not ~~mean to~~ suggest that this picture is anything more than symbolic, or that it explains what is — after all — inexplicable: ~~anything~~ — it is more like a myth than a hypothesis. Nor do I ~~suggest~~ imply that there are no levels of organisation between the electron + the sub-electron — for all I know there may be ~~many~~ a very great number. What the sub-electron stands for has been made clear in the earlier part of this chapter, and, ~~nevertheless a most important aspect of reality, and I hope to~~ as this inquiry goes on, the necessity for its presence at the base of the pyramid will, I think, grow clearer.*

x Giuseppe Caponbacchi, in Browning's poem, sees Guido sink to: the doleful end,
At the horizontal line, creation's verge,
From what just is to absolute nothingness —
Inge: Christian Mysticism, p. 216.

* See Ward: Realm of Ends, p. 254 ff., on naked monads, which he regards as marking the bottom limit of both mental + material abstraction. "The physical concept of such a limit is the dynamical concept of a mass-point as a centre of force. The corresponding psychological concept answers to what Leibniz happily described as 'menus momentaneas seu carens recordationes.'" Ward considers that these monads give the 'uniform medium' required for the interaction of higher monads (p. 257).

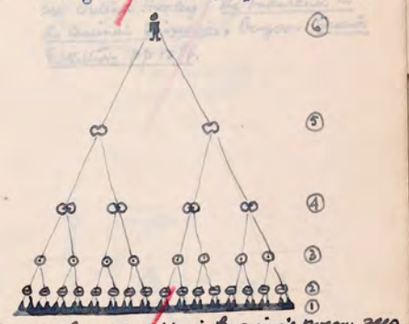
The next noteworthy feature of the pyramid is that it has an indefinite number of sub-levels (or 'mesoforms', to use Needham's term*), ~~to~~ not clearly defined, within the main ~~levels~~ storeys. Such are the organs + tissues that lie between my cell-~~life~~ level + my man-~~life~~ level + the chromosomes, genes, + colloidal particles that lie between my molecule* level + my cell level. These ~~such~~ pseudo-individuals are like committees + sub-committees formed within a club: they are essential to the meaning of the whole, but they do ~~not enjoy~~ lack the autonomy + distinctness that the club enjoys at its level, or the club-member enjoys at his level.

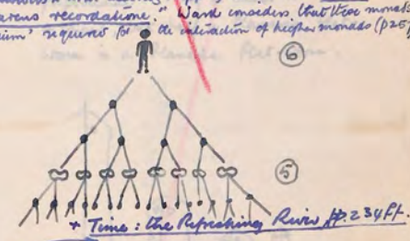
Then there are the hierarchies within the atom.

* Here the term 'molecule' presents a number of difficulties. For instance, silicon atoms link themselves in a regular network in which each atom shares its four outer electrons with each of a neighbour, so forming a crystal; however many millions ~~of molecules~~ of atoms this crystal contains, it is in effect one molecule. Again, it is arbitrary whether ~~the larger + less stable~~ such aggregates ~~of molecules~~ as proteins, ~~which~~ whose molecules lack true atomic union, ~~should~~ be called 'super-molecules', or polycules. Many — if not most — of the levels of the hierarchy, including those above the level of man, present difficulties of one sort or another. In the present state of knowledge I do not think ~~any~~ a perfect schema is possible.

+ By 'electron' I mean electron + positron, + any other similar particles (such as positrons, mesons, + neutrons), which physicists look upon, ~~or may come to look upon~~, as elementary. (except where the context implies to the contrary)

Phil. Notes & Queries





+ Times: the Refreshing Review, p. 234 ff.

Finally, But I must not allow myself to be taken in by ~~a schema~~ the details of a hierarchy that is ~~perhaps~~ no doubt arbitrary + is certainly provisional. What constitutes a distinct individual or 'monad', or a clearly-marked stage of development, is a matter of opinion, + advances in science are bound to put any ~~such schema~~ scheme out of date. The general pattern alone will remain, + it is only the general pattern that is important. The temporary — or contemporary — details, with their endless of myths, +

'If we look carefully,' Needham writes, 'at the steps between the successive levels of organisation we find that the sharp lines of distinction are only made all the more sharp by the "mesoforms" which occur between them.'

prejudice, & the provincialism of a particular age, are embodied here because it is in these terms that I must think if I am to think at all. They are scaffolding, without which no structure of more than one storey can be built. ~~without it.~~

Nevertheless some sort of working guide I must have, however, as to what constitutes a true mental or individual.+ Strictly speaking there is no such thing on earth. A true or perfect individual is one whose inner conflicts are all resolved, who is independent of surroundings, who is indivisible without loss of quality, determined from within, beyond the reach of accident, clearly defined, sufficient unto itself. The degree to which a thing has these characters is the measure of its individuality. Clearly I fall far short of the ideal; so does a cell, or a molecule, or an atom. On the other hand, compared with my pen, my clock, & the cloud I can see out of my window over there, their individuality is of a very high order. The cloud comes nearest to the ideal of an aggregate: half of it is just as cloud-like as all of it, its boundaries are vague, its shape at the mercy of every gust of wind, its parts are a rabble.* Nevertheless even the cloud is not entirely without individuality: the fact that I can pick it out & name it shows as much.° To be at all is to be in some degree an individual. As Locke pointed out, the principium individuationis is existence itself. At the other extreme there is, say, the man I would like to be, a man truly original, pursuing one entirely worthy aim under all circumstances, imperturbable, the same in success & defeat, self-sufficient, not divided against himself — yet even this paragon would be far from attaining true individuality. He would still be utterly dependent on his environment, subject to a million accidents, constantly obliged to change along with circumstances, in big things practically powerless, destined to die. If there are degrees of being, so that it can be said of one who absolutely lacks individuality that he is not, & of one who absolutely has individuality that he is, then I lie midway. ~~"Man partly is," said Tennyson, "and wholly hopes to be."~~

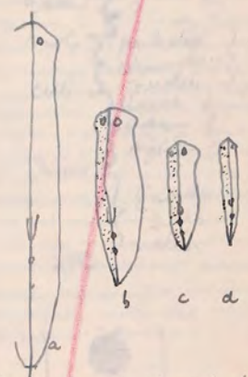
Is the individuality of one of my units, then, simply a question of how high its place is in the pyramidal scheme? Obviously not. My heart has a status above its atoms, yet in important respects it is less truly an individual. The nucleus of a cell in my heart stands higher in the scale of wholes & parts than a molecule in that nucleus, but it stands lower in the scale of individuality. Clearly there are two criteria here, & they do not run parallel.

The pyramid is not therefore a confused & useless conception: its architecture is only more intricate than I had bargained for. The fact is that, ~~while there is from the base to the apex a general increase in individuality no~~ While there is from base to apex a general advance in individuality (particularly in its aspects of self-determination & independence)

+ For various aspects of the question see Julian Huxley: The Individual in the Animal Kingdom, Bergson: Creative Evolution pp 13 ff.

* The literature is immense, but one of the most interesting discussions of the relations of the part to the whole is Woodger's in Proceedings of the Aristotelian Society, 1932, XXIII, 117. See also L.T. Hobhouse: Mind in Evolution p 413 ff.

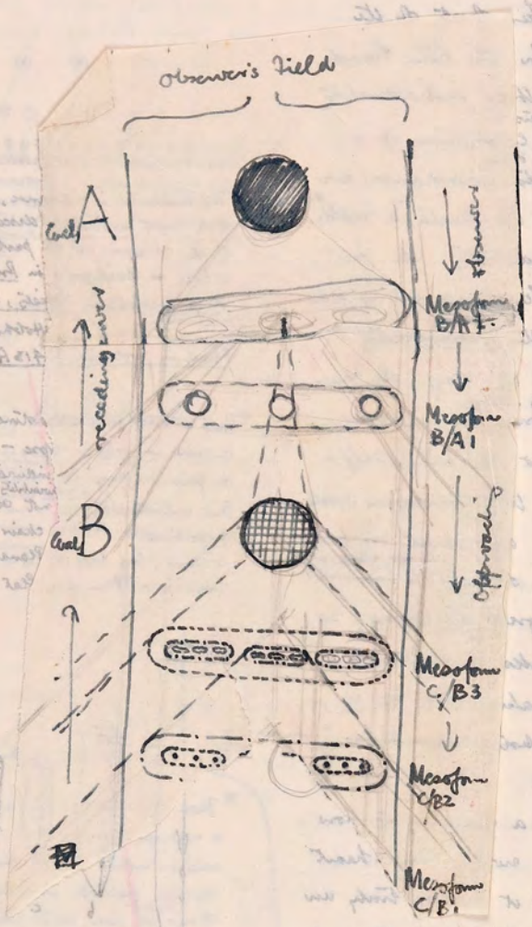
° Half a stone is a little stone; half a man is only a corpse — that is the price we pay for individuality. But individuality & indivisibility are not simply proportional. Half a chair is not a chair, but half a Planaria flat-worm is a Planaria flat-worm.

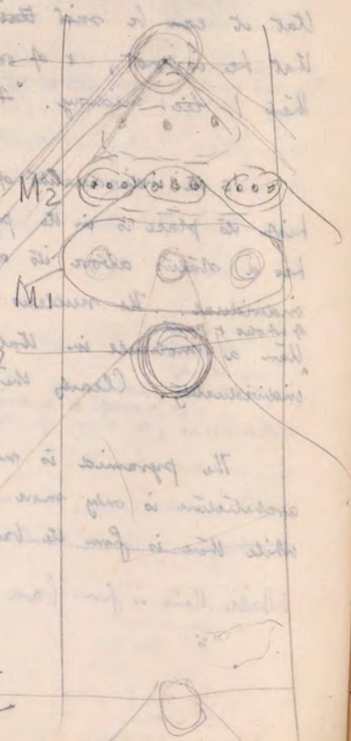


Planaria lugubris (a) cut in half, regenerates itself out of its own body, ~~till the material~~ till the other half is made up (d).

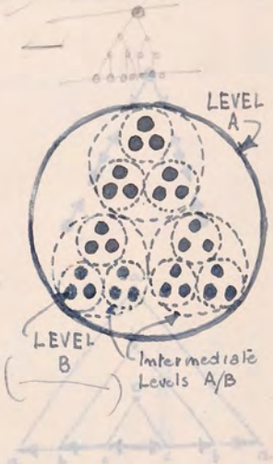
4 CELL

5 CENTRE

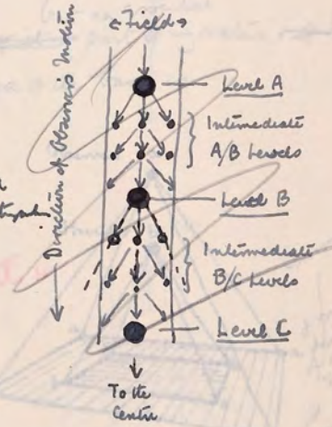




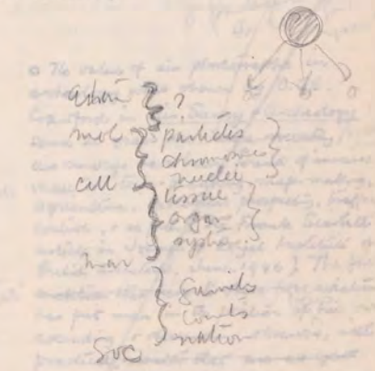
~~I have defined it~~, this is an ~~uninterrupted~~ fluctuating & not a uniform ~~increase~~ progress. Each storey ~~repeats in some measure~~ recapitulates some of the features leads to the development of the whole. At the base of the typical storey ~~are~~ is the lone units or individuals (atoms) of that stage; a little higher, ~~these~~ a number of these units are held together in loose associations of more or less undifferentiated members; higher still, more inclusive (messy forms) associations appear (~~becoming, as a rule, larger~~ & both integrated. ~~differentiated internally~~ as to their parts & more ~~& more~~ unified as to their whole); then suddenly, ~~till~~ at the top of the storey, (which is the base of the next one) there appears a lone individual of a higher order. One is reminded of those Renaissance ~~buildings~~ palaces (Italian) of which each storey mirrors the whole façade: to specify a feature two particulars are needed: its storey, & its level within the storey.



~~But~~ And this, after all, is very much what any observer ~~notes in his~~ (~~§ 5 above~~). ~~Whether he is approaching or receding~~ only sees parts at different degrees as he recedes ~~or approaches~~ discovers ~~has decided~~ sees, there aid for him, between each single and distinct unit, an intermediate condition where a number of such units are ~~linked but not unified~~ held together by mutual relations (e.g. of ~~alternate, they are a higher level are more loosely linked~~ ~~It is when these units are (relations) unduly diverse, is attained, when one upsets the rest, a lower level~~ intermediate classes). But not yet unified: the ~~new fact that~~ units are together in his field of view, but still distinct. In other words, while a unit's storey or order is settled by the status of its parts, its position in the storey or order is settled by the mutual relations of its parts. Thus there are ~~logically~~ integrated individuals of a ~~very~~ low order (e.g. an atom of ~~oxygen~~ carbon) & there are loosely integrated individuals of a ~~very~~ high order (e.g a ~~football team~~ their).

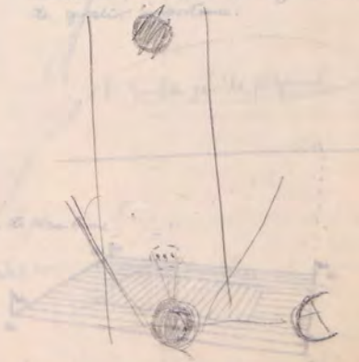


My architecture has many further subtleties. Not only do the storeys reflect each other, but ~~the façade~~ as a whole, ~~but~~ even the ~~strong courses reflect the storeys they demarcate~~ detailed features follow the same pattern: even the entablature is a building in miniature. The more complex 'higher' atoms are not necessarily more ~~complex~~ self-contained, or 'whole' than the 'lower' ~~atoms~~ ones: indeed the periodic table of elements is the whole façade in miniature, with storey after storey. Or again, at the human level, the richness of my mental content may be inversely proportional to its unity. In any event I live ~~by~~ rythms of more individuality & less: ~~while~~ I cannot visibly change my parts, ~~I cannot avoid~~ but my existence depends on the disturbance & notification of their unity. But these are details that do not properly belong here. The architectonic principle is what matters: it is that, in every part of my structure, ~~that~~ loss of individuality (which is distinctness & difference) shall alternate with gain of individuality (which is unity & identity). On this rythm, in the whole pyramid, in every storey of it, & in every part of every storey, all the creatureness I have is founded.



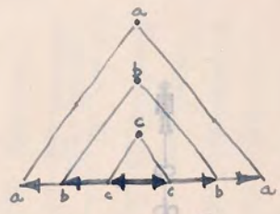
§9 The ~~Flattened~~ pyramid ~~and its observer~~ observer at the apex of the

Every individual in the pyramid is what it does, & what it does has two vertical components, the upward & the downward. Every upward effect



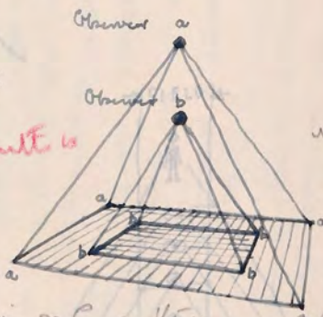
What ~~is~~ to expect is the pyramid which is the ~~subject~~ topic of this chapter? (as Rilke says) "It is almost literally a ~~[illegible]~~ castle in the air. At the base is myself, here ~~[illegible]~~ of embellishing; at the apex my observer. Between ~~them~~ us lies space, ~~the~~ space that "pinnacle transparency ~~transform~~ ~~[illegible]~~ from us to the top." My observer moves up & down; & as he does so the pyramid grows & dwindles.

is creative, every downward effect destructive. There are two exceptions: the base & the apex. The man can only destroy, the sub-electron can only build: that is to say I exist as a man by self-embellishment, as sub-electrons by self-creation, as intermediate ships by ~~both~~ the traffic between these two. More accurately, the base is the only level of true creation; all others, by ~~embellishing apices~~ raising an apex that sublimes or takes in more & more of the base, realise progressively what is created there, or, by sinking, realise less & less. They originate nothing, destroy nothing, own nothing, & all they seem to have is borrowed.



He can pick his observation post, but not the view he gets from it.

~~My observer's field of view is constant. There are upper & lower limits to what it can hold.~~ Now this is ~~an~~ no accidental ~~or contingent~~ limitation, ~~that it is neither of my observer nor of my space; it is but~~ but an essential part of my nature, ~~& his~~ the precondition of the whole pyramid. I am a man because ~~this quantity~~ a certain area of the base is ~~of sub-electrons~~ at the apex, a man; I am a cell because ~~one twenty-billionth~~ a certain fraction of that ~~quantity of sub-electrons~~ area is at the apex, a cell. When the observer ~~is at~~ descends & reaches the base I ~~am a sub-electron~~ vanish altogether, ~~because that is all his field will accommodate~~ because he can take in. ~~I am not~~

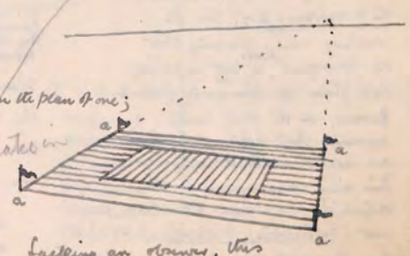


unexpected & many observers of ancient sites have been made & particularly in the last few years

Having built ~~this~~ the pyramid, I ~~must~~ now carry it to the ground. The result is ~~the fact~~ it has never been more than the plan of ~~the~~ a structure set out in all its details, rather as buildings are set out on the ground with pegs & string before the work starts. ~~How then can~~ Strictly speaking, then, I can't talk of ~~the~~ a pyramid which is my or of higher levels. If the higher levels ~~exist~~ Pyramid ~~they~~ it, I should not ~~are~~ my observer's, not mine; & ~~if this~~ in so far as there is ~~in any sense~~ is a pyramid, it is one which he marks out in space ~~by his movements~~ during his flight away from the base where I really am. Everything happens as if my observer were an archeologist & I were the confused ~~traces~~ outlines of some long-forgotten ~~structure~~ monument. On the ground there is not the slightest trace of anything ~~unusual~~ of interest, but when ~~the archeologist takes~~ an aerial photograph is taken of a thousand feet ~~ancient structure~~ heights the plan is quite clear. ~~He does not perhaps imagine that~~ Now there is a sense in which he has rebuilt ~~the structure~~ this monument, ~~of which he~~ & that he ~~is~~ is himself ~~the~~ pinnacle of it. ~~So it is with~~ My observer ~~He~~ ascends, as the apex of an ever-growing pyramid. But it is a pyramid of ~~space~~ thin air: ~~he has no notion~~ he is climbing nothing ~~anything~~ more substantial than ~~than air~~ space. However high he rises, I, who am the reality he is concerned with, am never raised an inch above ground level.

o The value of air photographs in archeology was shown by O.G.S. Crawford in Air Survey & Archeology some 20 years ago: ~~more recently~~; the air surveys have been found of immense value in town-planning, map-making, agriculture, geological prospecting, traffic control, & so forth. See Frank Scarlett's article in Journal of Royal Institute of British Architects, June, 1946.] The fact is ~~another~~ this here is shown how aviation has put man in the position of his own ascending & descending observer, with practical, ~~results that are as yet hardly recognised~~ & intellectual, & also emotional, results that ~~may well be~~ are of the greatest importance.

Yet what is the pyramid's ground plan without one who can take it in; what is taking it in but ~~putting oneself~~ being ~~himself~~ in the right position rather to take it in; what is being ~~in such a position~~ but ~~the latter~~ fulfilment & execution of the plan? Thus it is not a matter of indifference to me whether I am observed or not: no observer, no apex; no pyramid — not even the plan of one; ~~The effect I have on space is that that~~ ~~He cannot~~ takes in more than a given amount of me ~~without passing~~ is to pass to a higher level, ~~or~~ less than another given amount ~~without passing~~ to a lower level, & to reduce the pyramid.

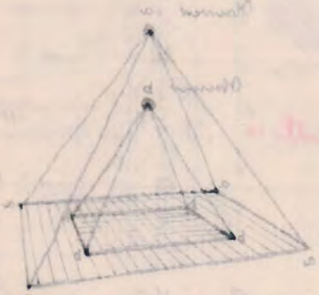


& Enlarge the pyramid

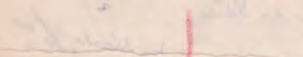
Lacking an observer, this area is non-existent.

4 CELL

5 CHURCH



It is not unreasonable – it is only inconvenient – for me to believe that the moon is only a few inches wide, but without apparently suspending it takes my car as I travel along it – rather like a large object passing down the throat of an oblate.



* It is interesting to note that Heraclitus & Epicurus held that the apparent size of the sun is its actual size.
See Heath: Greek Astronomy, p. XXVIII.
Bertrand Russell (see Outline of Philosophy, p. 311) would not disagree with this opinion.

* See First Dialogue of Hylas & Philonous, (p. 219 in Everyman Edition of Berkeley's New Theory of Vision, etc.)

(Quoted in Pre of Raja, 241)

'Space swelled,' says De Quincey of an experience in an opium dream, & was amplified to an extent of unutterable infinity.* this was not so fantastic a vision as he imagined it to be.

* Confessions of an Opium Eater (1927 p. 114) (Clough)

Not that I have said about the number of the units in me applies also to their size. The atom is no smaller than the cell; the man is no bigger than the protist. & within one level, of course, there are differences of size & spacing just as there are differences in number, but only within restricted limits, & there is no carry-over from level to level. Either a unit appears in my observer's field – in which case it cannot be very small or very large – or it does not belong in his present field at all: its place is in the field that was or is to come. The foot of Berkeley's mite, where it appears, is as big as Berkeley's foot; in the region where it does not appear it ~~does not exist~~ is not too small to see – it is just non-existent. Not for nothing is it impossible to accommodate the eye to two different levels at one moment. Gulliver cannot live among the Lilliputians & the Brobdingnagians at the same time; nor, as a matter of fact, can he live among either without conforming to their scale.

My atom size is just as spacious as my man-size. The unit or individual the master of space. Space is not a container, a receptacle, a medium, but a product.

Eddington E E 93

* See Lloyd Morgan: Mind at the Crossways, p. 17, for the contrary view, namely that the emergent is not implicit, there from the beginning. C.D. Broad, on the other hand, considers that higher capacities are latent in the primitive units. This view comes nearer to the scientists. As Joseph Needham points out (The Sceptical Biologist, p. 247) it was. Knew all about atoms one would know all about animals, but to know all about atoms one has to study animals.

* Trans: E.R. Hughes, in Chinese Philosophy in Classical Times p. 287

⊙ But note this: for him there is only observation, not emergence. All he is doing is putting himself in a position to discover what there really is at ground level – what sub-electrons they turn out to be. Everything ~~at the centre~~ really are. Every emergent quality, value – all the world's colours & sounds & scents, all its beauty & ugliness, goodness & evil – ~~every emergent feature~~ belongs at the centre.+ There is no development. There is only discovering.* In writing this book I am describing the topography of sub-electrons: they have got together in me to write an autobiography.

I know of no better description of the creative power of the centre than that, written twenty centuries ago, in the book Huai Nan Hung Lieh: "Thus, open out the Tao, & it envelops all space: and yet how small it is, not enough to fill the hand! So limited & yet so able to enlarge: so dark & yet able to make light: so weak & yet able to make strong: so soft & yet able to make hard. It binds all space together, & is the container of the Yin & the Yang.... So delicate & rich, so fine & minute!" (~~Trans: E.R. Hughes~~ p. 57.)

* Trans: E.R. Hughes, in Chinese Philosophy in Classical Times p. 287

+ ~~This doctrine~~ ~~[illegible]~~ ~~[illegible]~~ ~~leads~~. "Matter can develop life & consciousness unless it has in its potentialities of this in its nature.... Evolution must means the manifestation of the potentialities of things by removal of the obstacles ... Radhakrishnan, in his summarising, the teaching of the Upanishads on this point (Philosophy of the Upanishads p. 57.)

more View

And, there is a (unless) observer from whom I can borrow buoyancy ~~from an observer~~, I am, ~~in~~ Entirely Earth-bound, ~~nowhereness~~ & without a trace of self-consciousness.

He brings out what I am.

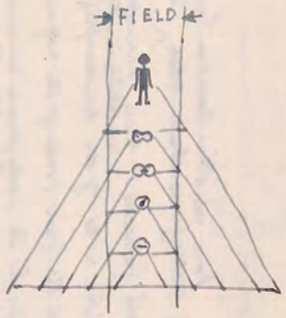
He is more than necessary to me: he is a good half of what I am. For if I am to achieve any (Status) at all ~~higher than sub-electrons~~ it is in his eyes that I must do so. ~~For emergence~~, for other words, ~~is more~~ there is more in emergence than the coming together & seeing of divine units: ~~is necessary~~: there must be ~~an~~ observers of roughly equal status for whom that seeing is a reality. ⊙

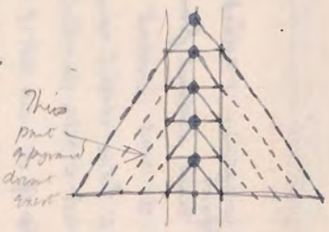
at two levels

10. The superimposed pyramids.

If what I have written in this chapter is moderately true, ~~a~~ the startling (& I think, important) fact emerges. ~~If it are thus it~~ (It is thus:) There is only one of me — one sub-electron, one electron, one atom, one molecule, one cell, one man — at each level. (~~& (b) there is no difference~~) This fabulous numbers ~~are fabulous literally as well as figuratively~~ really, literally ~~are a~~ fabulous. For common sense this is sheer nonsense. ~~So~~ it will remain; ~~*~~ the argument I now put forward ~~will~~ is directed towards & proceeds from another side of my human nature, which has learned that every piece of common sense needs its piece of 'nonsense'. An uncontradicted truth is ~~at best~~ a half-truth.

My observer is attending to a number of units, ~~the~~ is not satisfied, More & more similar units are drawn into his field. But this cannot go on: the strain is too great; there comes a moment when the many are one. Of course there is ~~an~~, between levels, ~~a number~~ multiplicity; & of course, the interval between the realisation of the new unit & the realisation of several new units may be infinitesimal. But, at the very most, I am a few hundreds of cells, molecules, & so on; & from certain points of view I am only one of each. Certainly it is meaningless to describe me as twenty billion ~~of the~~ cells & I know not how many quadrillions of molecules. In other words I am really more like a sky-scraper than a pyramid — or rather like a tower, whose base is my observer's field, & whose storeys are little pyramids.





*

Common sense repeats that this is absurd, & that I am failing to distinguish my observer's infirmities from his abilities. What is more, I am applying his visual limitations to levels at which vision is impossible.*

To this I ~~replied~~ say that I rely on the observer at my apex, ~~or~~ If he is wrong in such a crucial matter as my number, & my size, he is likely to be wrong in everything, ~~and~~ I may as well resign myself to a solitary existence at ground level — or rather non-existence — I prefer to believe that what common sense calls ~~his~~ infirmities are ~~my~~ peculiarities ~~of his problem~~ the peculiarities of my region. What he registers is truly myself. ⊙ To common sense's second objection I say that my observer's incapacity is not of vision alone: he cannot imagine the numbers of cells I am alleged to contain — let alone the number of electrons. Nor can he figure to himself a ten-thousandth of an inch — let alone a thousand-millionth. ⊙

"In the reproduction of size", says Amiel, "the mind is merely the dupe of itself".

Journal, 1st February 1876.

* The electron microscope can magnify up to 30,000 diameters & reveal some of the larger molecules. That is the present limit.

⊙ J.B.S. Haldane (however, Possible Worlds, p.6) makes the point that the scientist, ~~must believe in the huge figures to use~~ because ~~his calculations are successful~~ the answers to his calculations are successful in practice, must believe in the unimaginable numbers by means of which the right answers were arrived at. ~~For any that number & fact cannot be divorced~~

And, there is a (usually) observer from whom I can borrow buoyancy, I am entirely Earth-bound, & without a trace of self-consciousness.

He brings out what I am.

He is more than necessary to me: he is a good half of what I am. For if I am to achieve any status at all it is in his eyes that I must do so. There is more in emergence than the coming together & seeing of diverse units: there must be an observer of roughly equal status for whom that seeing is a reality.

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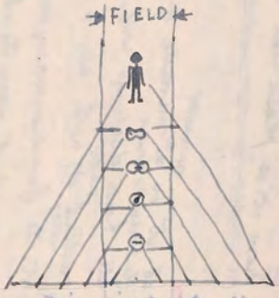

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4 CELL

5 CHURCH

× As Whitehead truly says, "perspective is the dead abstraction of mere fact from the living importance of things felt."
Modes of Thought, p.15.

Schultz 569

In Adventures of Ideas Ch XII, § VII, Whitehead discerns the traditional philosophy of overlooking the main characteristic of 'sensa' — their "enormous evolutionary importance." The vicious notion has been introduced of mere receptive entertainment, which for no obvious reason by reflection acquires an affective tone. The very opposite is the true explanation."
~~(p in this chapter)~~

(1) Small angles problem
(2) Importance of analysis

The pyramid which I am is organized: indeed it is a miracle of organization. And the essence of organization is (A) that each functionary (except the highest & lowest) shall have dealings with one immediate superior & a relatively small number of immediate inferiors, with all & sundry, & (B) that the work of the organization shall be divided & subdivided amongst the functionaries, so that each minds his own business as if it were the whole business. That is to say: at the root of all organization is, first, the principle of numerical limitation, & secondly, the principle of spatial limitation, of the constant field, of the non-existence of the very large & the very small, of the immensibility of levels. Let me expand these two principles somewhat. (A) It is common knowledge that the real work of an organization is done by individuals & small groups, & not by large numbers of large numbers. This is not a device of bureaucracy, but a practical necessity. The General who thinks in terms of thousands of private & who gives direct orders to the ranks instead of to a few major officers, instead of a few brigadiers, is no general. And so it is with me: the indescribable complexity of my psycho-physical organization is only possible because there is a sense in which it does not exist at all. From base to apex I am an essay on the meaningleeness of large numbers. The savage who does not count above ten is a realist, & so is the common-sense man that refuses to believe that there is multiplicity at the lowest levels myriads of cells: it is only by descending to these levels that cells only exist at their own level, and at their own level only as individuals or as small groups, because for organization entails abhorrence of multiplicity of numbers. (B) It is equally common knowledge that an organization works well only where each member of it — the secret of efficient organization is to divide & subdivide the general task. Divide et impera is a practical rule of universal application because it exposes the fallacy of exaggeration. (AMIEL) Each district is for its governor the whole country. The district officer does not administer a smaller territory than that of the provincial governor. Subdivision does not diminish, neither does aggregation enlarge. However you cause up the the part is as great as the whole, & the whole is as magnificent as the part — that is the secret of organization. Each official is, in his own way, just as important as any other, & is fully justified in treating his own task as a large-scale, macroscopic problem. If he looks upon it as a minute & trivial matter, in comparison with the whole, of no consequence whatever, the whole itself breaks down. Thus the whole is greater than the part only because it does not — not a part, but the whole. Each effective member of an organization plays his part as if it were the whole. He does not do so.

In short, the principle of numerical & spatial limitation is more than spatial, more than an accident of vision, an essential of all observation. (whether sensory, perceptual or conceptual.) And I am a hierarchical organization of mutual observers — a hierarchy in which the five structural principle on which I, (who are a pyramidal organization of mutual observers), am built. The numerator of the function (my members) keeps pace with the denominator (my size), they cancel out, or rather they cancel out in effect, the result approximates to a unity. At least it does so until, at the base of the pyramid, the denominator is nil, & the result is infinity. At the centre I become all because I have reduced my designation to nothing. (Carlyle.)

preserves a roughly constant relation to the denominator (my size), they cancel out — my number & size are so linked that their tendency to abnormality the abnormalities of the one correct those of the other. The result approximates to $\frac{1}{1}$ or unity. At least it does so until, at the base of the pyramid, the denominator is nil, & the result is infinity. Which is only another way of saying that at the centre I become all because I have reduced my designation to nothing. As Carlyle justly says: — — — —

E.g. As man I am one unit of unit-size, or $\frac{1}{1}$, As cells I am 15,000,000,000,000 units of 1/15 billionth unit-size. i.e. 15,000,000,000,000/15,000,000,000,000 or 1/1. In both cases the result is unity. But as sub-elections I am, in the limit, $x/0$, the result is infinity: $x/0 = \infty$.

~~But~~ its concreteness & actuality ~~belong in other also~~ have no other ~~location~~ place but in them. 'drawalism'

Now it is plain that any account of ~~such a~~ ~~state~~ as so defined ~~realm~~ must abstract from its fulness. Any descriptive device whatever does injustice to the total facts, & even the most involved story is a gross oversimplification. ~~Immediately, this book has its own set of vicious abstraction.~~ By the time I have finished ~~this book~~ it I hope to have clothed some of the bare bones of the argument with living flesh: meantime it is essential ~~to~~ ~~see~~ not to take the skeleton for the body ~~some~~ concreteness. Philosophy is oversimplification: ~~the only question is whether~~ the whole of instead of a part of it. If it were not it would be ~~a substitute for~~ life ~~itself~~. The only question is whether the oversimplification ~~works~~ works, ~~proves satisfactorily~~ whether the sample of experience which it offers is a revealing one.

With these general considerations in mind, let me try to answer common sense's objection in detail. ~~First~~ The first point to note is that, just as the observer is ~~more than one who sees~~ not merely a pair of eyes, so his 'field' is not only a field of vision. At the higher levels it is much more than that, while at the lower levels there is no direct vision. Nevertheless there always is what I mean by a field. Consider atoms. How are these presented to the observer, but ~~as~~ in the guise of (a) written or printed words, or (b) spoken words, or (c) mathematical symbols & formulae, or (d) diagrams & models, or (e) ~~imagery~~ sensible effects of atomic events, or (f) imagery corresponding to one or more of these presentations? ~~(This list could be extended~~ Now in all of these modes, data is given in a field, ~~which may be~~ — to a spatio-temporal frame of ~~limited~~ restricted capacity. What is called the observer's specious present (i.e. the period in which ~~there is temporal~~ events are earlier & later, yet present) is ~~limited~~ ~~as to the~~ ~~number~~ ~~duration of its contents~~ simply the temporal ~~limit~~ property of this field, & it is limited as to its ~~the~~ ~~extent~~ capacity is or duration of its contents. ~~to a few seconds at most, while the spatial capacity~~ — ~~but~~ the data that ~~no less than~~ ~~the~~ ~~spatial or temporal~~ ~~extent~~ of his field is as limited as its spatial ~~extent~~ capacity. And all this is true ~~the very large & the very small~~ & the very numerous ~~the very slow & the very swift are as ~~normal~~ ~~then~~ as~~ whether he is imagining or perceiving, whether his approach is through symbols or direct: ~~Imagination cannot transcend the limitations of perception~~ — ~~the limitations~~ conditions of vision are typical, ~~of~~ in many important respects, of the conditions of observation in general. The observer's ~~incapacity~~ is ~~not~~ more able to imagine a billion objects ~~separately~~ as such than he is able to see them; he is no ~~better at~~ more capable of thinking of the very small & the very large than he is of perceiving them. Thought can ~~analyze & recombine~~ manipulate the data of perception in endless ways, but it ~~cannot~~ can build no structure of which they are not the material, or which does violence to their properties. For instance, an observer cannot ~~picture it~~ represent to himself a new ~~primary~~ primary colour, or neither can by input to himself a tenth-thousandth of an inch — let alone ~~a millionth~~, or ~~a billionth~~ the reputed size of an atom or Sirius. If he thinks of an atom in terms of mathematical symbols, these are arranged in a field, & they are, individually & in groups, neither very large nor very small. If, on the other hand, he thinks of an atom in terms of a model or a diagram, it is of handy dimensions — the size of a golf-ball or a ~~cricket~~ football, ~~say~~. In short, the method of this book ~~is working for which is~~ is to work from the relatively known levels ~~of~~ where vision is paramount ~~to~~ to the relatively unknown levels (where vision is ~~difficult~~ difficult, or occasional, or indirect), making ~~due~~ such allowances as the principle of proportionality seems to call for. This method ~~is~~ assumes a continuity, an absence of violent breaks, ~~in~~ throughout nature: until I get evidence to the contrary, I ~~am~~ take it that the broad principles of my ~~organizing~~ fundamentals are the same at those levels where ~~observation is~~ the data are meagre & obscure as at those levels where they are abundant & clear. Now this method & these assumptions ~~are~~ stand or fall, not by any intrinsic ~~virtue of their own~~ they may have, but their success or failure in practice. ~~Do they work?~~ ~~Are~~ Are they effective in co-ordinating the enormous mass of more or less ~~unattached~~ detached & fragmentary scientific data that has accumulated in the past century? Is the ~~result~~ result aesthetically satisfactory? ~~Does~~ Does it ~~help~~ help to ~~satisfy in with our intuitions help~~ meet our emotional needs, & comply with our deepest intuitions ~~about~~ about the universe & ourselves? Does ~~intuition~~ ~~suppo~~ confirm it? Above all, does there emerge a body of cumulative evidence, ~~drawn from~~ ~~no~~ whose ~~organ~~ parts are like organs of the ~~whole~~ totality, ~~of the~~ ~~no doubt of independent life~~ ~~and~~, though ~~incapable~~ ~~or interdependence~~ invalid by themselves, ~~but~~ ~~valid~~ give one another all the ~~in their~~ mutual support they need?

It is much too early to answer these questions with any confidence. Yet I think it may be said here that the doctrines of the chapter, ~~which though its framework is~~, & in particular the principle of numerical & spatial limitation (which C.S. ~~finds~~ has criticized for its spatial origins) already begins to fall into place in a larger ~~system~~ whole, & even now are not required to stand by ~~itself~~ themselves. ~~Later chapters will develop, bring out more clearly the~~ ~~cumulative~~ A great deal more cumulative evidence (~~which by later chapters, with~~ I shall, it ~~hope~~ to carry full conviction, but it ~~will~~ belongs in later chapters. Here I ~~shall~~ ~~do~~ is needed ~~one~~ example of the kind of evidence I ~~mean is~~ have in mind.

Rate of change, like number & extent, are roughly constant at all levels

or a cube whose six faces are simultaneously visible;

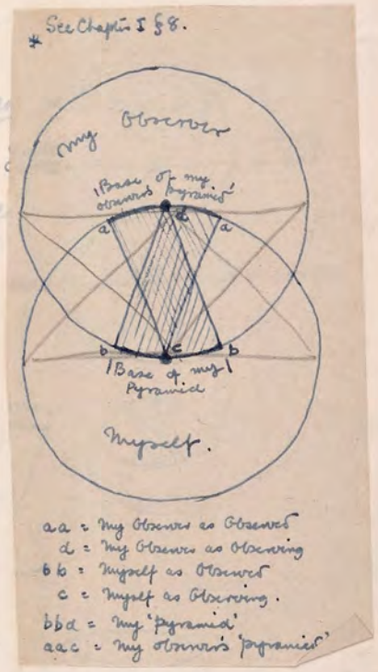
whether ~~he~~ ~~he thinks in terms of~~ ~~millions~~ ~~billions~~ ~~or billions of~~ millionths or billionths, ~~there are no~~ ~~no~~ he is conscious of no uncommon slowness, of no tedious urgency.

* Lecture

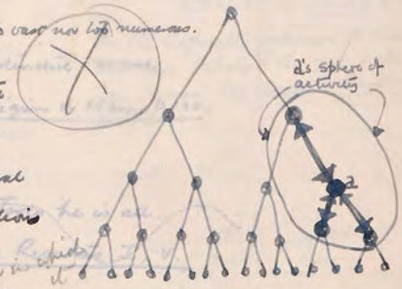
I do not mean mind not in intellectual goods in sense now exist. — There is more in the Taj Mahal than ~~the~~ mere blocks of marble. Nevertheless there is not in it which is

What he can do is to contemplate certain marks on paper — such as 10^{24} or 10 μμ — which he can get into his field. The situation which these marks are supposed to stand for cannot be got into any field because, I suppose, such a situation does not exist. To common sense's further objection that an *ideal* observer could register my twenty billion cells as cells, instead of as a man, I say that such an observer would be ideal only in a Pickwickian sense: his capacity would be capacity for destruction. ⊕ I, and all things that are, exist by limitation.

This limitation is two-sided. The law of Equality* puts me & my Observer on an equal footing. Unless he is a unity he is no observer, & unless ~~the~~ his object is a unity it is not observed. When the unity of either falls below ~~a certain~~ standard there is a shift to the next level, ~~where~~ and the situation is restored. And the observation is mutual. I survey the observer at my apex because I am at his apex. Each is the other's equal, but reversed & overlapping. Pyramids always go in pairs. ~~And~~ The pairs are well-matched: observers are no more ideal than what they observed.



Finally, ~~it is~~ the principle of numerical & material ~~dimensional~~ limitation (as it may be called) underlies all organization, all wholeness, all individuality. I am an individual because I am organized, & what the working of an elaborate organization ~~is~~ is like I know from experience. There is always a pyramid of officials, each of whom deals with ~~two~~ one immediate superior & a few ~~of his~~ immediate inferiors, — certainly not direct with large numbers of subordinates. He has to do with what he can conveniently handle, with what is neither too vast nor too numerous. Several ~~stages~~ grades below ~~himself~~ his own. The official current flows up & down through the proper vertical channels, with the consequence that the real work is done by ~~small three-level~~ individuals & tiny groups at the confluence of their ~~papa~~ particular channels. This is not ~~bcauc~~ bureaucracy; ~~but~~ it is nature. The General to whom his rank-and-file are Brown, Jones & Smith, instead of ~~and brigade~~ a Battalion, is ~~not a~~ no General. So it is in me. The indescribable complexity of my bodily organization is only possible because ~~it really~~ there is a sense in which it does not exist. From base to apex I am ~~instances of~~ an array in the meaningless of large numbers & small sizes. The savage who ~~cannot~~ does not count above ten, ~~knows~~ has thought. There is something, after all, in that common-sense mood of mine when I refuse to believe in my cells and my molecules and my atoms. So long as I stay a man, they are a fiction.* It is only when I ~~by~~ descending to their level that I find them, & my descent is what makes up their reality.



⊕ For a real observer one cell is a cell, and ten thousand cells is not ten thousand cells but a piece of tissue. His incapacity is capacity for creation.

→ Common sense argues that my increasing numbers make up for my decreasing size, & that my approaching observer is not justified in decreasing the denominator (my size) without increasing the numerator (my number) of the fraction. The answer is that in either case the result, when he gets to my Centre & the denominator (my size) becomes zero, is infinity. At the Centre I am All because I have ~~reduced my denominator to the limit~~ reduced my designation to Nothing.+

* In one of my lectures, I use the tendency ~~of~~ to talk ~~voices to write as if~~ to speak as if I could be a man & molecules at once: in fact it always takes time for the observer to get from my man region to my molecule region — time in which to 'kill' & dismantle the man.
L.S. Stebbing, in Philosophy & the Physicists, pp 46 ff., takes certain physicists to task for ~~taste~~ ~~saying~~ 'what I call level-mixing.

+ $\frac{1}{0} = \infty$. "The fraction of life can be increased," says Carlyle, "in value not so much by increasing your Numerator as by lessening your Denominator." Sartor Resartus ii, IX.

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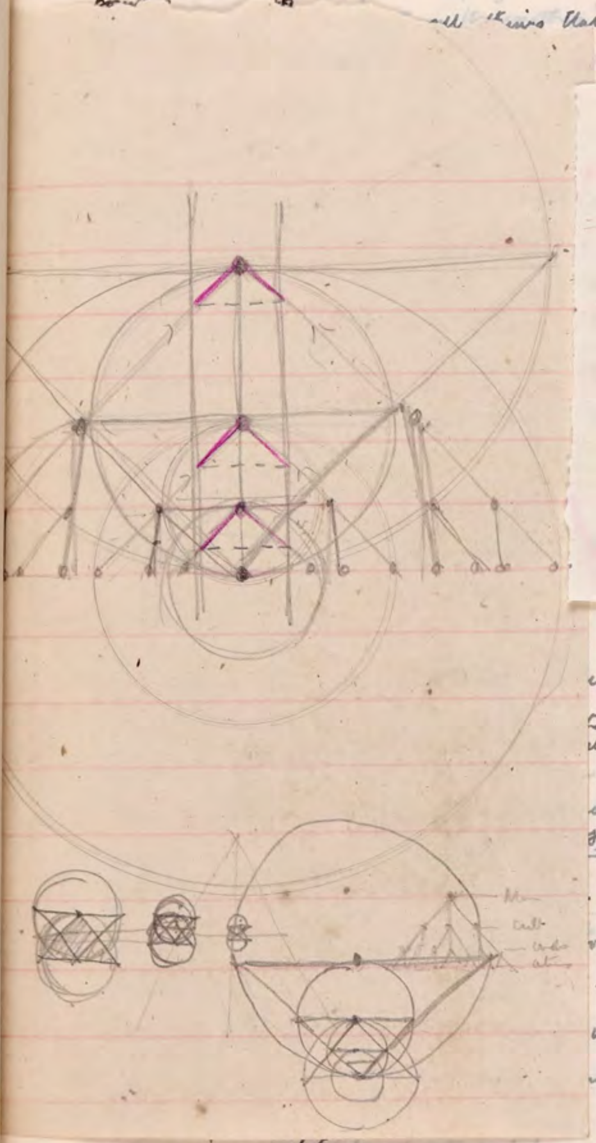

× As Whitehead truly says, "perspective ~~the~~ is the dead abstraction of mere fact from the living importance of things felt."
Modes of Thought, p.15.

Schilpp 5.69

In *Adventures of Ideas* Ch XII, § VII, Whitehead accuses ~~the~~ traditional philosophy of overlooking the main characteristic of 'sensa' — their "enormous emotional importance. The vicious notion has been introduced of mere receptive entertainment, which for no obvious reason by reflection acquires an affective tone. The very opposite is the true explanation."
~~1 in this chapter~~

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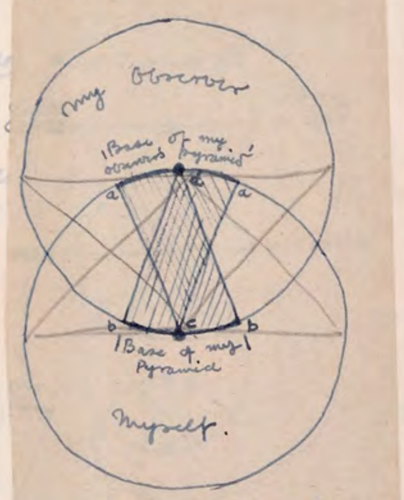
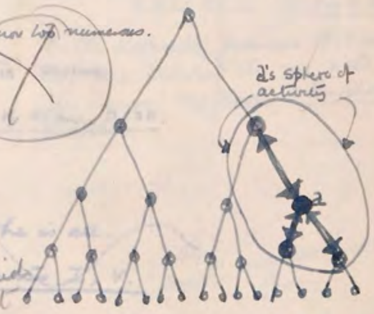
See Chapter I §8.



aa = My Observer as Observed
d = My Observer as Observing
bb = Myself as Observed
c = Myself as Observing.
bbd = My 'Pyramid'
aac = My observer's 'pyramid'



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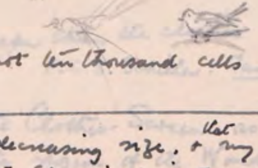

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q also in [illegible]