

A living Temple of all ages, I
Within me see
A Temple of Eternity!

OBMV 21

Trakema: 'An Hymn upon St. Bartholomew's Day'

Who does not know that a man may intuitively perceive in a second or two what he cannot express by his lower thoughts in half an hour? This is meant to show that the human mind is divided into lower & higher regions.

Swedenborg: True Christian Religion, § 603.

For the eyes of God, & perhaps also of our glorified selves, shall as really behold & contemplate the World in its Epitome or contracted essence, as now it doth at large & in its dilated essence. In the seed of a Plant to the eyes of God, & to the understanding of man, these seeds, though in an invisible way, the perfect leaves, flowers, & fruit thereof; for things that are in posse to the sense, are actually existent to the understanding. Thus God beholds all things, Who contemplates as fully His works in their Epitome, as in their final volume.

Broune: Religio Medici, Pt. I, Sect. 1.

The foundation of reverence is this perception, that the present holds within itself the complete sum of Existences, backwards & forwards, that whole amplitude of time, which is eternity.

Schlepp 288

Whitehead: Principles of Education, p. 23.

Time travels in divers paces with divers persons: I'll tell you who Time ambles withal, who Time trots withal, who Time gallops withal, & who he stands still withal. As You Like It, III, 2.

Men's curiosity searches past & future

And clings to that dimension. But to apprehend

The point of intersection of the timeless

With time, is an occupation for the saint —

T. S. Eliot: 'East Coker'

Fool! All that is, at all.

Looks new, past recall.

Browning: Rabbi Ben Ezra

We have no grasp of the future without an equal & corresponding outlook on the past.

Bergson: Matter & Memory, pp 69, 70.

Time is the supreme illusion. It is but the inner prism by which we decompose being & life, the mode under which we perceive successively what is simultaneous in idea. The eye does not see a sphere all at once although the sphere exists all at once. Either the sphere must turn before the eye which is looking at it, or the eye must go round the sphere. In the first case it is the world which unrolls, or seems to unroll in time; in the second case it is our thought which successively analyzes & recomposes. For the supreme intelligence there is no time; what will be, is.

Amiel's Journal, (27th October, 1864)

And this is my eternal plea
To Him that made heavens, earth & sea;
Seeing my flesh must die so soon,
And want a heart to dine next noon,
Just at the stroke when veins start & spread,
Set on my soul an everlasting head.

Sir Walter Raleigh, poem written in the Tower of London while waiting his execution.

The Consolation of Phil V. 6. (p 405) —

"The present instant of men may well be compared to that of God in this: that as you see some things in your temporal instant He beholds all things in His eternal P"

See
Ch. 14.
N 5 & N
Culting
Oct 9/48

Saurat 41
G.O.P.

CHAPTER XVI THE GRAIN OF THE PICTURE

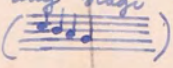
1. The specious present

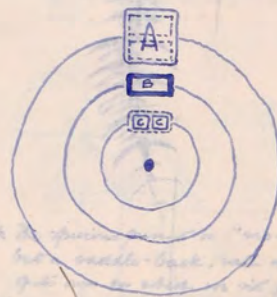
I am what my observer makes of me, but

The specious present

Obviously much more is required of my ^{him} observer than ~~mobility~~ motion along a spiral path towards & away from my Centre. He must conform to all the customs making in the region through which he is passing. In particular, he must get the knack of ^{observing} discriminating the movements of the inhabitants ^(B) of that region, without discriminating the movements of their subordinate units ^(C) on the one hand, & without noticing that the inhabitants ^(B) are themselves ^{moving} parts of a higher unit A. That is to say he must, at every stage of his journey, specialise just so much time. He must avoid being too discriminating, & too indiscriminating, of time. ^{As some psychologists} would say, his ^{moment of experience, or} 'specious present' must be adjusted (to use a technical term of some psychologists) ^{must be} correctly adjusted. adjusted.

What is meant by the 'specious present,' & how far does this concept fit in with the doctrines of this book?

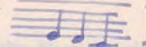
As I write these words I can hear church bells ringing a descending octave over & over again. I attend to what it is I actually hear. And I find that I do not at any stage ^{hear} just one note (say ) ~~and~~ remembers the notes ) that preceded it, & anticipates the



* He must do what Locke says he can do: "The mind, having got the idea of any length of duration, can double, multiply, & enlarge it, not only beyond its own, but beyond the testimony of all external beings, & all the measures of time, taken from the great bodies of all the world & their motions." An Essay concerning the Human Understanding, II, xv, 3.

* Experimental Psychology, p 565.

Stomys p 172

notes () that are about to follow. Instead, I actually hear at least four notes. Beyond these I am more doubtful: the ^{heard} sounds seem to fade into remembrance & anticipatory sounds; the distinctness & vividness of sensation are lacking. It seems, then, that my ^{empirical} present, ^{a moment of experience} is not a mere instant, but a duration. The edges of the duration are blurred, nevertheless it is possible roughly to measure it ^{by psychometric} as a period of ^{approximately} a few seconds ^{or up to a minute or more as mentioned} - the number depends on the methods of measurement, the individual tested, & his condition of excitement or the nature of the test. And the matter of this period - the so-called "specious present" - is that there is in it temporal succession, a before- & -after order, but no division into past and future. I hear ^{the} four notes one after the other, yet I hear them together. There is no more mystery about this than about the fact that I can see the letters of these words as separate occupied spaces, yet as one spatial pattern. If ^{indeed} my temporal field were ^{as a series of instants} an instant, I should be as innocent of ^{experience} as if my spatial field were a point or a series of points. I could not ^{note by note} hear the bells as playing ~~if~~ still less do I hear it sound ^{as a series of} ~~with~~ ^{by} ~~and come~~. I could never hear more than one note at a time. And, in fact, if my perception were confined to the instantaneous, I would not even hear a note: a note is the cumulative effect of ^{a number of} ~~many~~ air waves; one ^{wave} ~~instant~~ ^(+ a portion) produces no sound. ©

I have just looked out of my window & seen a yellow fly pass. What was it I actually saw? Not a 'still' of the bird, with wings frozen into one position, followed by another 'still' with wings frozen into another position, but a pulsing fluttering streak, some yards long, with wings in ^{innumerable} ~~many~~ positions. These positions were not compared, but occurred in their proper sequence; nevertheless their order was not a Future-Present-Past order, but a before-and-after order — a temporal order, yet contained in the present. ↗ In William James' phrase, my present appears to be a

in the present. In William James' phrase, my present appears to be a 'saddle-back' sloping off on either side into past & future, rather than a 'knife-edge' which cleaves them. And this saddle-back is by no means constant: it varies according to the level of the experiment. This can only mean that an event which is past or future for ^{some} ~~one~~ ^{others} may be present for ^{others} ~~some~~, & some thinkers have been so led ~~first~~ ^{into} ~~error~~ ^{error}, led by this consideration to deny the objective reality of time altogether. ^{with Kant,} ^{also Kant}

2 The elastic present: the fallacy of simple duration.

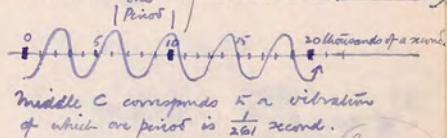
At first sight this description of the specious present is in conflict with the point of view I am adopting in this book. For me the NOW is essentially a knife-edge of ideal sharpness, a timeless mark that parts future & past. I can no more afford to ^{let} ~~admit~~ any time, however ^{brief} ~~short~~, creep into my NOW, than I can afford to let the tiniest volume of space ^{creep} into my HERE. To do away with that ~~invaluable~~ ^{inestimable} inestimably valuable Nothing

One position of the wallows 'is not past because it is before another which is present, nor is it only present when the preceding members of the series is not present. It is present while it remains within the moment of experience, & as long as it is present it is not now fading away' + my Now, ^{as a whole, experienced} is certainly very different from the scientific.

↳ a 'duration-block' within which ^{one} events necessarily ~~are~~ another without abolishing it, within which an interval of time is felt as a whole.



→ For him the present has no breadth in time: we hold times together, but do not make them present. Heintz takes up a similar view. (Germanist, Buddhist Philosophy, 1900, p. 220)



A circular diagram divided into four quadrants by a vertical and a horizontal line intersecting at the center. The quadrants are labeled: Top (T H E R E), Bottom (T H E R E), Left (T H E N (P)), and Right (T H E N (E)).

+ H. Wilson Carr: Op cit, p138.

James
Textbook 280

Meditations iii, x. p24

The ~~film~~ ^{hysteria} is functional. No spacelessness, no space; no timelessness, no time. ~~that~~ the Present to be as much as "an incommensurable Film dividing the Past & the Future." X

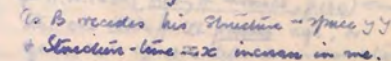
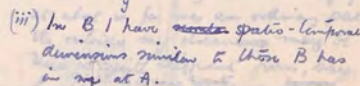
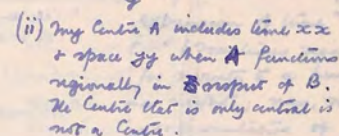
Pauls
349

points out that past & future do not belong to us.

● Marcus Aurelius rightly points out says
'that no man properly can be said
to live more than that which is now
present, which is but a moment of
time.... The time therefore that any
man doth live, is but a little, & the
place where he dwells, is but a very
little corner of the earth....' "I go further,
& say that a man is no space, & no
time ~~now~~ & therefore, potentially, all space
& all time". He has the right idea when
later on, (vii, ~~xxv~~ xv) he says: "neither that
which is future, nor that which is past can
hurt thee; but only that which is present.
And that also is much lessened, if thou
dost neglect circumstances it". (any itatia)
& then checks thy mind off for so little a
while, a mere instant, it cannot hold
out with patience." (any itatia) See also

xii II

(i) Any Centre A is an idyllic splendour & timeless



As a matter of fact, each side gains such an overwhelming victory over the other that the result threatens to be positively an embarrassment. The spurious prompt that remains is ^(if I may go on using the same phrase) ~~rather~~ altogether too ^{apparent and} ~~brief~~ altogether too long-lived for common sense's liking. For when I register an object I ^{give forth room to the} ~~register to~~ Structure-space & its Structure-time, & the latter may be a million years or a millionth of a second. This is indeed an elastic saddle-back, broadening from the keenest of razor-edges to the widest of plateaus so smoothly, ^{or naturally,} with so little strain, that the alteration passes ^{as a spatial habitation} ~~unnoticed~~. My object makes ^{causing} ~~itself~~ for itself here in me, & temporal ^{habitation} ~~itself~~ for itself now in me, without the slightest disturbance. Why is this? ^{this is where it belongs.} Because ~~it is at home.~~ ^{the place} It makes itself at home because this is ~~where it~~ ^{the place} ~~belongs for it.~~ ^{then indeed are the many mansions} So far from ~~any~~ ^{lacking} temporal accommodation, it is only in my Notes that my object can find the time to be itself; at home it cannot.

"The integral life," says Berdyaev, "unites the three moments of the past, present & future in one. And this historical reality is not dead, though it is relegated to the past; it is no less real than the current reality or that of the future..." And this (he goes on to say) is borne out by the religious consciousness, which will not ~~be~~ accept death or oblivion, & insists upon resurrection.

Meaning of History p. 72

PP 243 The works of the Prayer Book: 'God, in the knowledge of whom standeth our eternal life' illustrates perfectly this principle. As knowing God, the creature is capacious of ~~truth~~ all time.

belongs. My object has all the space & the time it needs to be itself, here & now, in me. More precisely, I ~~generally~~ allow it enough time to be whole in action ~~a moving whole~~ - not so little time that I ~~bring it to a halt~~, ~~nor so much~~ time that I cannot follow its motions.

To C.S. it is unbelievable. Does it seem utterly fantastic that my opinions present when I observe a ~~star~~ should expand to scores or hundreds of years, & when I observe a ~~galaxy~~ to millions? ^{How can my} Does it seem absurd that the scope of my present ~~thought~~ ^{view} ~~views~~ my human life-span? It should not do so. If there are two principles of ~~this~~ ^{which} this ~~imagining~~ ^{imagining} has brought out more ~~strongly~~ ^{clearly} than any other, they are, first, that I am on a ~~part~~ ^{part} with my object, & second, that each level consists of individuals that are present in & to one another. I do not see a ~~star~~ as I see a man; ~~because~~ the star has undergone a metamorphosis on a colossal scale, & with far-reaching consequences. One of these is that my opinions present is enormously expanded. Now it is true that many writers who have described the opinions present have ~~suggested~~ ^{suggested} that ~~its duration~~ ^{its duration} is quite brief ~~as compared to~~ ^{as compared to} for creatures lower in the life-scale than man, & may get longer ~~as the creature rises~~ ^{as the creature rises} for superhuman minds - if there are such. ^{Hints of this} ^{clarity} are to be found already in abnormal human experience, as when a dream, long & packed with incident for the dreamer, is for the outsider a matter of a ~~few~~ ^{few} ~~seconds~~ ^{seconds}, ^{in principle} capable of great expansion & contraction. The opinions present is nevertheless reckoned to be, in practice & for ~~ordinary~~ ^{ordinary} human conditions, very limited indeed. ~~With this view I agree & disagree~~ ^{But the point to note is that}, while the opinions present of man as man is strictly circumscribed, it is the nature of man to transcend ~~it~~ ^{it} ~~as a natural~~ ^{as a natural} ~~for me to~~ ^{for me to} ~~be in the~~ ^{be in the} ~~present~~ ^{present} ~~embracing~~ ^{embracing} a thousand years ~~or a thousandth of a second~~ ^{or a thousandth of a second} is just as natural to me as embracing a second ~~or two~~ ^{or two}. "The more we study the mystery of time," says Gerald Heard, "the more we are aware that all is present, if only we ourselves will be sufficiently present, never absent-minded, always aware, instant, undistracted by our concern with past & future, so as to notice all that is being presented."

+ Whitehead identifies 'the total temporal duration' of 'an event bearing an enduring pattern' with its opinions present. My own view is similar, seeing that the status of the event is ~~fixed by its~~ ^{fixed by its} ~~duration~~ ^{duration} the status of its objective content, & its opinions present is the ~~duration~~ ^{duration} - line of its objective content. (Science & the Modern World, p. 131.)

S-Time + action
but the abundance vanishes as soon as it is ~~so~~ ^{so} ~~realized~~ ^{realized}

⊕ E.g. John Ford, in *Contemporary British Philosophy* (1st Series), p. 220, suggests that God's opinions present encompasses the entire history of the world. "If so, the creeping progress of a world literally, to his eternal now, but the order of reality is left within it would not be altered by a hair's breadth..."

+ De Quincey's experience of "the vast expansion of time" is often quoted. "I sometimes seemed to have lived for seventy to a hundred years in one night; nay, sometimes had feelings reminiscent of a millennium passed in that time..." (Quincey, 1927 p. 114-15)

For other examples see M. Stuart: *The Psychology of Time*, p. 90.

It is important, however, not to lose sight of the distinction between the subjective & the objective aspects. Thus while events in my dream may proceed at what is for me an ordinary pace, for the outsider my dream may be momentary. This is quite different from, say, a ~~flash~~ ^{flash} ~~dream~~ ^{dream} ~~in which~~ ^{in which} ~~duration~~ ^{duration} or distance, as for me (with magnified) ~~but which~~ ^{but which} ~~for the outsider~~ ^{for the outsider} ~~is~~ ^{is} ~~momentary~~ ^{momentary}. Timing of the dream is precisely the same as before. On the effect of tempo ~~on~~ ^{on} ~~change~~ ^{change} upon the subjective estimate of tempo, see de Quincey's *Biological Time*.

• *Mam the Machine*, p. 127.

⊗ John, xvii, 3.
⊙ It is noteworthy that, for De Quincey, when space swelled time swelled also.

⊕ H.W. Carr (*Theory of Morals*, p. 126) says that our little ~~of the present~~ ^{of the present} ~~age~~ ^{age}, or geological epoch, depends on our ability to imagine a mind for whom they would be included in one moment of ~~exp~~ ^{exp} I say that, say as ourselves (when at their work), with a mind

If I ~~look upon myself as~~ ^{look upon myself as} a sort of camera recording what is in this place, I have to make two adjustments - I must focus the image & set the shutter - which together determine what shall be recorded. And in this camera (unlike the other kind) exposure increases with range: the shutter (or time-mechanism) & the focussing device (or space-mechanism) are ~~linked~~ ^{coupled}. It is quite impossible to register a remote object if the exposure is short, or a near object if the exposure is long. If I leave the shutter open, the object I am photographing recedes into the distance. As a matter of fact, the only way to record the distant is to superimpose it upon the near. To use the phrase of the previous chapter, the 'hollowness' of the foreground is filled in, ~~and~~ ^{and} my pictures have depth of ~~focus~~ ^{focus}. They have many spatio-temporal planes.

⊙ Eternal life, according to the Fourth Gospel, consists in the knowledge of God: to know Him is to accommodate all time & so to transcend the temporal altogether. My immortality, then, is that of my Object. For myself, & in myself, I mortality itself.

#3 The constant field & its variable texture: twofold space & twofold time.

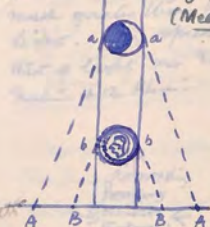
Perhaps my ^{my} ~~first~~ ^{judgement} has got the better of ^{my} ~~judgement~~. A brief glance at a Galaxy (or at the most a few hours' exposure of the photographic plate) ^{seems} to know what it is like; ^{indeed} ~~it~~ ^{it} a longer inspection or exposure, instead of yielding more information, ^{may well} ~~only~~ ^{yield} less. The truth is that what I am looking at has very little to do with how long I look at it. ^{for common sense} ~~I~~ ^{can find no relation} between the time a thing takes to be itself - ^{its} ~~its~~ ^{Structure - time - and the} time it takes to be itself to me...

Which means:

to be itself ~~in me~~ ^{in me} - which is this is the place where it arrives at the status I find it to have; ^{where, if not here, can it be, where, if not here, does it need} ~~at the status I find it to have~~; ^{at the status I find it to have} ~~the problem is: how are the Structure-lines of so~~ very incommensurate with each other made congruent & reconciled in me, so that none stands more ^{temporarily long-drawn-out} ~~than another~~? The answer is a very simple

one - ~~to~~ ^{almost literally} it stands me in the face - & the clue to it is provided by an inspection of the space which my objects fill in me. The spoke on the window-pane, the leaf on the tree, the planet in the heavens, ^{are} ~~are~~ all equally capable of blotting out, ^{or occluding} ~~for me~~, a Spiral Nebula: their boundaries in me may roughly coincide. ^{how I used to play} ~~how I used to play~~ ^{the game of guessing} how big the Moon is - big, that is, in terms of a halfpenny ranged at various distances from the eye - ^{but I give up the game before learning its lesson} ~~the Moon is big~~ ^{My objects are presented} in what I call my field of view, & then size is (in the first place) the proportion of that field which they fill of that field: thus I can say that the Moon is bigger or smaller than the halfpenny according to where I hold the halfpenny. But of course I cannot let the matter rest here: I go on to say that the Moon is 'really' much larger than the halfpenny. The big question is: how can I thus fly in the face of the facts, ignoring the evidence in favour of such an extravagant - even 'mystical' - theory? The Moon & the coin are themselves here, not over there, & here they are congruent: how can I get behind or beyond these facts? The answer is that (presumably unlike very young children & some animals) I have made a very curious 'discovery' about my field - that its space does not ^{carry} ~~carry~~ the same value all the while; it is elastic, not in the sense that its boundaries approach & recede, but in the sense that ~~the fineness of its texture~~ is extremely variable. I am in the position of a farmer whose field, though never more or less than ten acres, is sometimes only roomy enough to grow a single ear of corn, & at other times roomy enough for all the corn in the world. It is because of a similar peculiarity of my field of view (a peculiarity that I always notice in practice & hardly ever notice in theory) that I can call the Moon large & the coin small: this is only my rough - & - ready way of saying that, though

o 'Thus,' says Descartes, 'although the impression a star makes on my eye is not larger than that from the flame of a candle, I do not, nevertheless, apprehend any real or positive inequality determining me to believe that the star is not greater than the flame; the ^{best} ~~best~~ account of the matter being merely that I ^{just} ~~just~~ have so judged from my youth without any rational ground.'



a a is 'really' much bigger than b b, if A A & B B are perfect.

The Athenian soldier, really had a sound reason for being frightened of the eclipse, & Plato's 'demonstration' of how it happened (by holding his cloak in front of the soldier's eyes) left the main problem untouched.

Easter 205



+ Cf the Lines of Blake: -
Creating Space, Creating Time, according to the
wonderful Divine
Of Human Imagination throughout all the
These Regions immense.....
..... & every Word & every Character
Was Human according to the Expansion or
Contraction, the Translucence or
Opakness of Human fibres: such was the
variation of Time & Space
which vary according to the Organs of
Perception vary....
Jerusalem. 98.

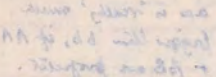
alternately

Or - to put the matter more fully
if the structure of my field
is so ~~disrupted~~ ^{disrupted}, how is it that
it seems to be so similar?

p789

Cook - rule

(IV) *instans*



+ Anyone who takes a ~~yardstick~~ ^{stop watch} or a stop watch to the measurement of EARTH is bound to find ~~only~~ ^{dead} material. Vicious anthropomorphism finds no life when it does not find ~~its own scale~~ ^{life on its own scale}, of time & space; & always assumes that what will not measure down to man will not measure up to him. The higher anthropomorphism, on the other hand, ~~does~~ ^{recognizes} that every level is ~~open~~ ^{attainable} to man (but not as ~~mere~~ ^{much} man) ~~applies~~ ^{recognizes also the} the principle of its relativity of space & time to level. — ~~to do so~~ ^{so in a sense} it is the very essence of anthropomorphism.

o The small but ~~significant~~ ^{important} part of man's growth ~~in~~ ^{growth of} time & space is the familiar fact that places are smaller & periods are shorter for adults than for children, while for humanity the planet (it is often said) is shrinking fast.

the two objects covers the same proportion of the field, the space of one is very much finer or more concentrated than the space of the other. To go back to the metaphor of the camera, I always use a film whose ^{grain} is suited to the object - the larger the exposure necessary, the finer the grain - nevertheless the size of the film, & the size of the objects recorded upon it, vary very little.

All I have just said ^{in this long parenthetical} about my spatial field, finds its parallel in my temporal field - And no wonder, since there is actually but one field having spatial & temporal aspects. If the temporal field may be taken as constant, ^{as a field,} then the spatial or metric is variable. My watch is no better at recording the time a Galaxy requires to establish itself in me, than my ruler is at recording the space that the Galaxy requires for the same purpose. I need a different ruler & a different clock for each ^{different} grade of object; the higher the grade the closer the markings on my ruler ^{do not} ^{crowd} together, & the faster the hands on my watch ^{must} go round. Galaxies & humans share the same field of mine, but they give very different values to the space & the time of that field. Directly I look at a Spiral Nebula as such I start living, ^{as a Nebula} (or rather I start realising the life I am living) in the ^{real} realm of the Nebulae - a realm in which a billion miles is a microscopic length, & a thousand years a ^{mere} moment. It is no matter for astonishment, then, that the Nebula, for all its giant dimensions, is a tiny object in me, & visible in a fraction of a second. That 'fraction of a second' ^{is so compact} ^{that it is} ^{can be expected} ^{to be} ^{in the} ^{framework of} ^{me} ^{surely this} ^{is the} ^{truly} ^{misleading,} ^{the} ^{truly} ^{unscientific,} ^{anthropomorphic!} ^{In} ^{practice,} ^{if} ^{not} ^{yet} ⁱⁿ ^{theory,} ^{the} ^{man} ^{has} ^{made} ^{the} ^{amazing} ^{discovery} ^{of} ^{twofold} ^{space} - that, instead of having only one set of spatial dimensions, (& instead of having two sets, one 'real' & the other 'apparent'), all his objects are genuinely bi-spatial. But he has still to make the ^{even more} ^{amazing} ^{discovery} ^{of} ^{twofold} ^{time}. The consequences ^{of this discovery} will be revolutionary. It is the sort of discovery that man does not make as man.

And we will go to the absurd lengths to escape our modern bogey - the pathetic fallacy. The bogey is himself a fallacy, the product of an intellectual parochialism that measures the universe in units sacred to the parish pump, & ends in a world-diagram more nonsensical than the savage's. For the best of reasons the world cannot be understood without creative imagination - it is creative imagination. You may not like it by storm, or get to know it by better knocking it on the head first, & after pulling your questions afterwards. Reality will not give up to its tricks to third-degree methods: it responds only to ^{sympathetic} ^{treatment}, without which our knowledge is not merely false, but extremely dangerous. * Thus I ask what a Galaxy or a cell or a planet is like in its own experience, I put myself into its atom's shoes, & I find reasons for believing evidence that it is ^{not} ^{altogether} ^{unlike} ^{myself} ⁱⁿ ^{my} ^{man's} ^{shoes}: in particular, it ^{finds} ^{no} ^{more} ^{difficult} ^{to} ^{suppose} ^{it} ^{is} ^{older,} ^{or} ^{bigger} ^{or} ^{smaller,} ^{or} ^{more} ^{present} ^{for} ^{time,} ^{or} ^{more} ^{slow,} ^{or} ^{more} ^{long-lived} ^{than} ^a ^{man}. * This, according to the current mode of thought, is anthropomorphism of a peculiarly naive kind. I reply that, on the contrary, it is just the opposite, & that, ^{by} ^{admitting} ^{the} ^{likeness} ^{between} ^{levels,} ^{it} ^{is} ^{able} ^{to} ^{distinguish} ^{the} ^{differences,} whereas the ordinary view, by denying the likeness, denies also the differences, & so falsifies the whole by a vicious anthropomorphism. +

x It is significant that, in so far as they do vary, moments increase in size up to the human level, & then decrease again. Thus the moment is smallest in man, bulks largest in the primates & the whole do not talk at all: ~~the~~ ^{the} same is true of time, for space is more & time is less. PAR. XXII

+ "The moment of experience..... is itself constant & not variable, however variable in extension & intension its content..... all its objective character, including space & time, are variable.... H. Weldon Carr: Theory of Moments, p. 33.

The speed at (a) is no greater than at (b), (c), (d)..... yet it is perhaps much greater than the speed of light. (On speeds greater than that of light see Eddington: The Nature of the Phenomena at all.)



At each level the dominant field aa, bb, cc, and the variable quantity of time AA, BB, CC, packed into that field.

* Royce (World and Individuals, ii, p. 229) attributes coincident our difficulty in attributing consciousness to 'inanimate' objects to be due to their different time-spans. Beings who find an experience intimately slow, or the passing of a really instantaneous, seem to us to be mindless - naturally.

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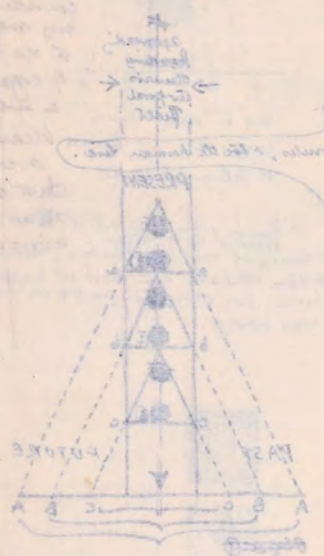
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(II. metaphor)



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+ ² commonplace but first-hand experience
is relevant: ~~the~~ I ~~was~~ reading a book
& 'unaware' that there ~~was~~ a clock ticking in
the room. I heard the clock stop, (what
is more) I heard ~~it~~ its last three
or four ticks very distinctly. ~~Did~~
~~do not venture to say whether~~ the
stopping of the clock raised my ex-
ception of its ticking to a higher level
of awareness? ~~Q. whether at the time~~
of hearing the ~~last three~~ ^{ticks} ~~last three~~
fourth ticks from the last, was
I do not ^{marks} remember hearing heard
them: they are actually missed.

Then are also those dreams occasioned
by the ringing of an alarm bell or a
knock on the door: in an extremely
short period of clock-time, an elaborate
dream is woven to account for the
knock or the ring. In such cases it
is difficult to account for the facts
except in terms of pre-cognition (I mean
^{explain} ~~dreams~~ ^{group} of what is mathematically future).
And once having allowed this much,
the principle is granted.

+ Carlyle: Sartor Resartus ii, 7. ~~111~~
x Studies in the Hegelian Dialectic.

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4. Ptolemai & Copernic
5. Spots on the field

The engine speed is roughly constant, & I get along by changing gears all the while. The reason why the fly & the bird, & the acroplane all keep pace in my field is that they are exploiting three different spatio-temporal values of that field. The fly is slow & the bird is fast & the acroplane is in between. The fly is slow & the bird is fast & the acroplane is in between. The fly is slow & the bird is fast & the acroplane is in between.

It is ^{it} ~~it~~ ^{the} ~~the~~ ^{no} ~~no~~ ^{valid} ~~valid~~ ^{objection} ~~objection~~ ^{to} ~~to ^{say} ~~say ^{that} ~~that ^{when} ~~when ^{my} ~~my ^{eyes} ~~eyes~~ ^{explore} ~~explore~~ ^{the} ~~the~~~~~~~~~~~~

nothing is happening ~~at~~ among the stars, & the motion is subrelative
 to the stars. At all levels, there is motion, but whose the motion is, whether it is

server's or his object's, is, in fact, a question ^{very largely} ~~mainly~~ of luck. At very

into, motion is interpreted as the object, at very high speeds as in super
relativity, since this interpretation helps to give the level its character.

galaxies live a full social life, but this does not mean a frenzied

of activity — their behaviour is as ordered & purposeful as order for change is well catered for; And the reason is that their ~~standard is already satisfied~~ ^{standard is already satisfied}; they

to freedom of their space; it is theirs; this have moved in; they pass to & from

at will, without restraint, as the night takes them. ^{the morning}
^{the quality of darkness} what I do on any starlit night. It is no

but that as a microscopist studying these mites nearly all these mites

to inside in ~~the~~ ^{my} ~~eyes~~ ^{glued to the eye-piece}; it is no secret

as an observer of men half of us observe & the other half theirs; & it is no accident that as an

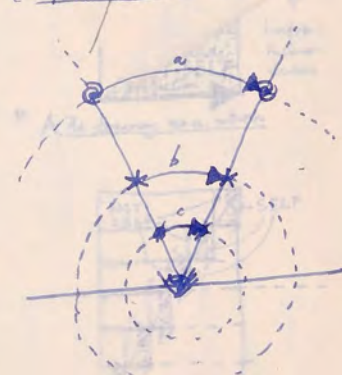
most of stairs nearly all the motion seems to reside in me. ~~what~~ ^{has not} hands on the level.

~~one~~, is. Motion then is whatever he feels; whose definition
the universe would picture the principle of relativity is more than instructive.

organism rather.

is speed (objectively) far exceeds the
of light, which has become more among
the known. Eddington points out that
after employed for special purposes a frame of
reference rotating with the earth; in this frame
the stars describe circles once a day, & are
therefore acquiring enormous velocities.

+ Plato tells that this was a sort of
'earthlight', or 'visual current'
(Timaeus, 45 C.). St Augustine
speaks of the 'beams of my eyes'
(Confessions, BK X, Ch. VII.)



The speed at (a) is no greater than
at (b), (c) (d)..... yet it is perhaps
much greater than the speed of
light. (On speeds greater than
that of light see Eddington: The
Nature of the Physical World, p. 51.)

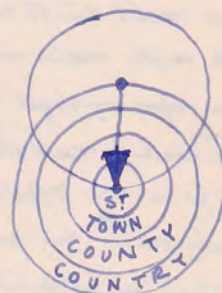
provided by
+ ~~this~~ An exception is the ~~form~~ de
Foubrune, meins manipulator, which
gives the scientist ~~a~~ hands as
well as eyes at cell-level, so
enabling him to practice surgery
upon individual cells. See also
Ch. III § 10.

for more orderly than the human
for it also more free

* This is a rather curious piece of evidence for the doctrine of equality. The opposition is bound to limitative, while the microscope imposes an over the limitative inherent in the use of the microscope to which the discovery. See Chitt. § 10.

[illegible]

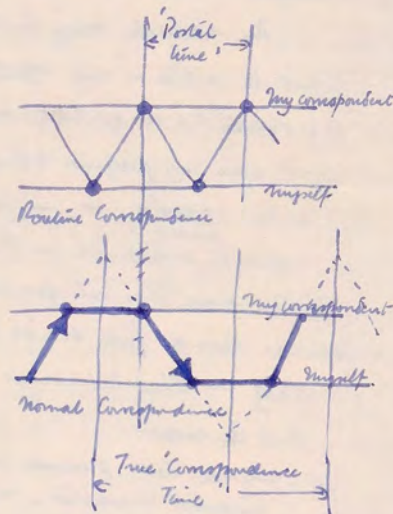
any mention of the country in this country, ~~that part of the address~~ becomes irrelevant; it might as well not exist; anyhow it is ignored. When the letter arrives in this town, only the number & name of the street, & my name, have meaning. And, finally, when ~~the~~ the letter arrives in my hands, the address is totally abolished. That is why I throw the envelope away: I have no address - no structure - here. The delivery of the letter, ^{then,} does not leave it unchanged: the business of the post-office is not ~~concerning~~ simply transmission - it is interference of the most drastic not imaginable. The ~~letter~~ passage of the letter through the post is at once my descent ~~from~~ step by step to nothing, & my correspondents' ascent from nothing to full status in me. His address, printed at the head of his letter, is fully relevant to me here, thanks to the postal authorities that have made it so. And all this, of course, is just what I might have expected. Our letters traverse our regions & must therefore be transformed: to do so is to suffer double transformation.



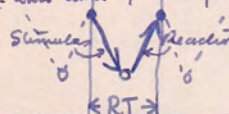
What, then, is the answer to the question about the relationships between correspondence-time & structure-time?

present themselves:

There are two difficulties, first, there are ambiguities regarding structure-time, particularly at the vital & human levels ^(see § 5) ~~then I have already stated~~. Second, there are ambiguities regarding correspondence-time ^(see Ch. §): the latter is variable, not so much because of ^{uncertainties} ~~variations~~ in transmission or postal-time, but because of delay on the part of the correspondent. Does an exchange of routine post-cards, sent off by return of post, ^{with} constitute the system of a correspondence? Obviously it does not. Though the routine reply - carrying little more than my address - has its use, what builds & maintains reality at our level is the ^{slower} two-way flow of well-thought-out letters of average length. ^{it follows that,} To arrive at the true system of this level, ^{postal time is not enough:} there must be added sufficient time for the full import of my correspondents' letters to unfold itself to me. And that 'sufficient time' is not readily measured. What ^{also seems probable,} ~~can be said,~~ however, is that while postal-time is ~~much~~ shorter than correspondence-time, it is of the same order - & the great advantage of taking postal-time is that it lends itself to measurement. I propose, therefore, to compare ^{the} postal or transmission-time of the previous chapter with the structure-time of this chapter. If what I have written above is correct, then the former should be less than the latter, but of the same order of magnitude.



What are the empirical facts? To go ^{fully} into details is beyond the scope of this book, but I will take four sample levels - man, EARTH, SUN, & GALAXY: ~~to compare~~ How does the time these take to get into touch with their equals compare with the time they take to unfold their characteristic structure?

	'Portal-time' or Reaction-time (= lower limit of correspondence-time)	Structure Time
		
1. <u>Man</u> ↑ man	<u>1/10th SECOND UP</u> (RT) In the ordinary reaction-time experiment of laboratory psychology (where the subject depresses or releases a telegraph key on receiving a stimulus), RT usually lies between $\frac{1}{10}$ & $\frac{1}{5}$ second. RT increases with the complication of the task.	<u>ABOUT 1 SECOND</u> See § above. This figure is provisional.
2. <u>EARTH</u> ↓ Other members of Solar System	<u>16 MINUTES UP</u> It takes about 8 minutes for sunlight to reach EARTH, & 8 minutes for the return journey. These are times in the year when Mercury & Venus are nearer than the Sun (at which case RT is less than 16 minutes); & the outermost planets are very much further from us (here RT is several hours up to a maximum of about 10 hours in the case of Pluto.)	<u>24 HOURS</u> The period of rotation about EARTH's axis.
3. <u>SUN</u> ↓ Other stars in the GALAXY	<u>9 YEARS UP</u> The nearest star, Prox. Centauri, is 4.27 light-years distant, but many numbers of the stars (including some of the brightest apparently brightest) are hundreds of l-y distant.	<u>250 YEARS</u> Pluto's period of rotation, approximated, Neptune's is 165 years, & Saturn's 30 years.
4. <u>GALAXY</u> ↓ Other Nebulae	<u>2 MILLION YEARS UP</u> The nearest Nebulae, M33, at 2.5 is about 850,000 light-years distant; M31 is 900,000. Nebulae at distances of over 100 million ly have been photographed.	<u>500 MILLION YEARS</u> (of this order) Rotation period in outer arms of M31 has been estimated at 92 million years; of M33 at 250 million years; of our own GALAXY at a still higher figure. +

° See any standard work on:
~~Experimental Psychology~~ E.G.
Woodworth's Experimental Psychology
pp. 298 ff.

+ Jeans: The Universe Around Us (1944)
pp. 74 ff.

I do not place ^{great} reliance on this table: it does not even half the hierarchy, & it is in a number of respects vague. ^{Possibly I have unwittingly ~~corrected~~ altered the results by selecting my facts.} I think ^{it is} enough, however, to suggest a line of research that would be ^{worth while} ~~profitable~~, & to show that the empirical evidence does tend to support my contention that 'vertical' reaction-time ^{RT} (or 'portal-time') is of the same order as, though less than, 'horizontal' structure-time ST. Or rather (since RT must just suffice to build up the bare status of the correspondents) RT ^{more or less} into the lower limit to ST. After all, the Solar System ~~is~~ ^{is} ~~itself~~ without Pluto, & a man's a man even when he is ~~at his most~~ ^{at his most} automatic, behaving impulsively.

CS Suppose it takes, for argument's sake, 100,000 years for the galactic material to move from point A to point B along an arc of the spiral. Now it is true that I can, after a fashion, see the track of this movement. But that is not because my specious present embraces 100,000 years; on the contrary, it is because the arc AB is full of material which reproduces every stage in the 10,000 years' journey. If the Nebula had been of non-circulating dust, its material it would not wear its past & its future as its coat-sleeve in this manner.

US I am concerned with what I actually find, & this I must accept with natural prudence. The fact is that the Nebula does exhibit to me a depth in time, & I find it difficult to believe this is incidental or accidental. The spatial form of the Nebula cannot be wholly divorced from its history. Does not this ^{suggest a possibility} ~~show~~ ^{reason for the rotating structure of the remote grades of being?} ~~show~~ ^{upon which the remote grades of being are solitary?}

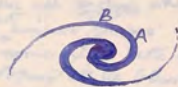
CS The Nebula is a special case favourable to your argument. ~~That~~

Suppose a variable star with a period of a second or two were discovered. * You would be able to watch the pulsing of that star pulsing at the same rate practically its true as intrinsic rate: the time interval is the same whatever the range, though differences of motion, of course, affect this interval somewhat. The periodicity of a star, like that of a light source, is the same wherever you see it from, provided you share its motion.

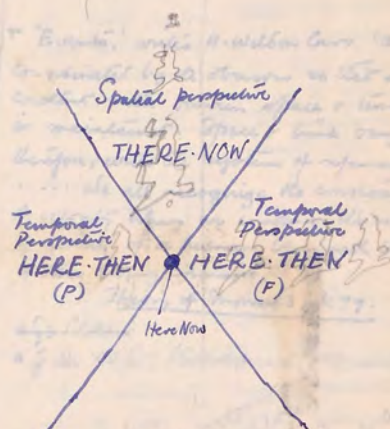
US Let us be quite clear about this. First, we must distinguish temporal from spatial perspective. An hour by my watch coincides with an hour by the ~~clock~~ ^{clock-face} town-hall clock — time does not shrink & swell with the ~~clock~~ ^{clock-face}; likewise the ~~clock~~ ^{clock-face} diameter of ~~my watch~~ ^{the clock} now coincides with its diameter last year & next year — space does not shrink & swell with the ~~time~~ ^{date} of the clock. Thus, ^{while} spatial range produces spatial perspective from the Here, & temporal range produces temporal perspective from the Now, it is not (at this stage of the argument) a fact that spatial range produces temporal perspective effects, or vice versa. What I see is subject to ^{various} variation in size, because it lies in the Now-then; what I remember or anticipate seeing is subject to ^{various} variation, not in size, but in time-span, because it lies in the Here-then. And so your variable star, lying in the Then-now, is subject to spatial but not to temporal perspective. *

CS ~~that is, it is impossible~~ This is going back in all you have said about the shutter-speed of the camera being linked to its focal length.

So it would seem; ^{in fact} ~~it seems to~~, but hear the whole story. It is quite impossible to separate the Then-now from the Here-then in the manner I suggest. ~~To see a star is to change it~~



* Actually the shortest ^{known} period of a Cepheid variable is of ^{I think} ~~about~~ ^{the order of} an hour.

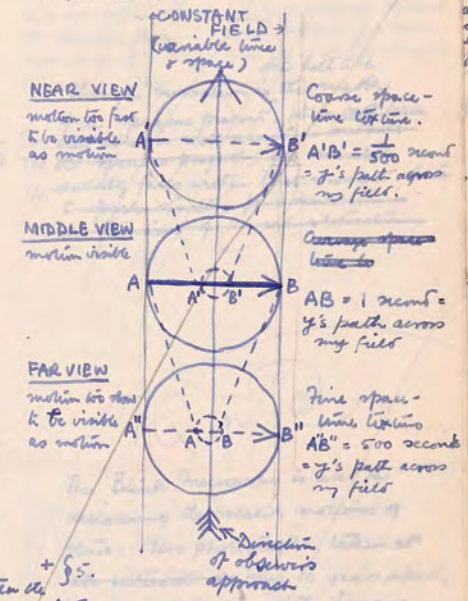


England shrank as I recede from it in space, but ~~the~~ ^{the} century England ~~at~~ ^{XXII} ~~not~~ ^{century} England are not being — they only then time is more condensed than the time of ~~the~~ ^{the} XXII century England.

^{however} * In De Sitter's universe, time behaves as oddly as space does in Einstein's. He shows us a series of clocks, each telling the correct time from its own viewpoint, but going slower & slower the more distant they are. till (at a range of ~~the~~ ^{the} universe's circumference) they seem to have stopped altogether.

Vision always entails motion (whether this motion is attributable to observer or observed is here immaterial) & is not primarily an affair of space alone or time alone. The latter are secondary products, abstractions. That is why it is misleading to consider either as though the other did not exist. I start with the object (y) moving in my field. I approach; it moves faster & faster till I can follow it no longer; my attention turns to object (z) whose pace is slow enough to follow. Or I recede from object (y); it moves slower & slower till its motion is too slow to see; my attention turns to object (x) whose pace is fast enough to follow. In the first case the object that crossed my field in 1 second crosses it in, say, 500 seconds because of my approach - I cut down its time along with its space. In the second case the object crosses my field in, say, 500 seconds because of my recession - I add to its time along with its space. And in both cases the old object is superseded by a new one proper to the new level, whose pace is that 'nominal' pace that is common to all levels. Here we have, in place of the original bed of Proclus in Chapter V, (I mean the merely spatial constant field of the travelling observer, with its variable contents) a truer because more complete version of the story: in one operation the victim's ~~space & time~~ ^{as well as his space, brought to suit the Proclusian space-time framework standard.}

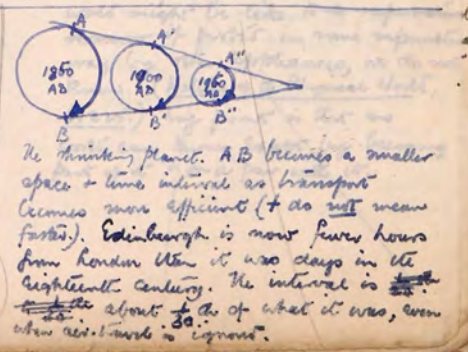
• The first lesson of relativity is that it is above all motion which attracts attention: the animal 'figures' into identity with the surroundings. Note also that the motion of object at the blurred edge of the field of vision is given, while the shape is as yet unresolvable.



• 'Events,' writes H. Wilson Carr, 'are co-ordinated by the observer so that a constant ratio between space & time is maintained. Space & time vary, therefore, with the system of reference. ... We all recognize the constancy of velocity when we compare the range of activity of a human being with that of other living creatures. Theory of Relativity, p. 79.

• §6 (Continued)
• §7 (Continued)

indicates the connection between the physical principle of relativity & the concept of a constant velocity. The adjustment of time & space is a result of the constant velocity.



Bull 124

CS. In other words, if the velocity in the field is (roughly) constant, & the space is variable, then the time must vary ~~because velocity is space divided by time~~ ^{because velocity is divided by time}. Looked at in this way time is, I grant you, just as subject to perspective as space. There remains the constant pulsing of the Cepheid variable to be accounted for. To observers who share the Cepheid's motion, its period is the same.

US. Certainly it is. ^{As we have already noticed,} there are many abstract characters of objects which are not subject to 'perspective elimination', which go on from one level to another (whether as ~~uniquely~~ ^{invariant} and are an element in the new or emergent characters) without losing their self-identity. If this were not so, there would be no continuity at all between levels. ~~A little later on we shall notice other characteristics of this sort.~~

CS. This can only mean that when I watch a Cepheid variable I am not necessarily functioning at star level.

US. If I am aware of what I am looking at I belong to the level of the thing I am aware of; & the Cepheid is ~~not~~ ^{no} less a star for displaying characters that are ~~not~~ ^{invariant} regional, ~~any more~~ ^{than} I am a man for similar reasons. The Cepheid's periodicity is only one highly abstract temporal character amongst others. In no way ~~is~~ ^{is} a star is to drag in

US. Presumably. Let me mention two instances where velocity is taken as constant, & time & space as variable. First, we say that modern transport has made the world smaller: & indeed that it has, provided we agree that the stage coach is as fast as the aeroplane. (Actually, air travel seems slower, except when taking off & landing.) Second, physicists say that light travels with a constant velocity, & the time & space of things accommodate themselves to suit.

Stocked 47
Gauguin:
Railways:
Land: 4d = 10 hours
14 days

temporal as well as spatial perspective. Underlying my perception are long trains of past memories & future plans, that I cannot get rid of if I wanted to. I do not say I have seen a point of light that lasted for a fraction of a second, but a star - albeit all that word implies. Neither do I say I have just seen a patch of skin covering one side of a nose or ^{one} cheek, with a gap or so of exposed cloth & some hairs - I say I have seen a man. And so I have. In precisely the same way, though I see him

temporal as well as spatial perspective. Underlying my perception are long trains of past memories & future plans, that I cannot get rid of if I wanted to. ^{perhaps} Though, I seem to see a man for a split second, so that he has no time even to draw one breath, yet I actually see him as ~~a man~~ ^{fully human} — that is as one born years ago & destined one day to die, who lives in certain daily & weekly & yearly rhythms. All this & much more goes to my perception of him. And note that all these elements from the outside the ^{immediate} ~~future~~ field are subject to temporal perspective. I telescope his past & future just as I telescope his height ^{when} ~~as~~ he walks off into the distance. So with stars, & with everything else. Sensation, what is merely given now, is a theoretical abstraction. I recognise men as men, planets as planets, stars as stars, & in so doing I fill out their time-as-immediately-given with time enough to bring them into existence as themselves — with sufficient structure-time.

CS The Spurious present is then ~~altogether~~ an artificial conception.

US Yes indeed, because it leaves out the all-important question of level. It is not even true to say that there is one basic opinion present ^{for objects} throughout the entire depth of the Thers-
now, needing more or less supplementing from the then-then according to level. For instance
the astronomer (using his super-microscopic photographic plate) can see stars that need
many hours to manifest themselves here, & (by superimposing photographs taken
many years apart) can see movements that need all that time to become evident.
In a similar fashion the biologist sees the ~~past~~ past & the future of LIFE in living &
dead fossils, & the historian the past & future of MAN in ^{the} ~~his~~ original documents & artefacts.
In short, man attains higher levels by (i) increasing his basic present (I
mean the time-span whose ^{material} ~~subject~~ he directly inspects) & simultaneously (ii) increasing
his supplementing present (I mean the time-span whose material he brings to the
completion of (i)'s meaning). Thus spatial perspective does, after all, involve the
temporal, & my ~~shatter-object is so~~ shatter is coupled to my range-finder. I do, in fact,
^{it is, in the end, impossible that time may be too short for our discerning.} take on such immortality as my object requires of me: And the temporal
'texture' of my field is variable as its spatial 'texture' is variable.

CS. Devices like the Blink microscope do not genuinely extend my time grasp; all they do is chee it out with spatialised time.

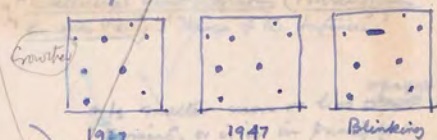
US. Isn't that just what the last chapter leads us to expect? Then we found that advance to the next level means specializing more & more time of this level. What have you got against scientific instruments? But it is the old story — common sense looking for the clear everywhere except under its nose. Having first refused to believe in higher grades of being at all, common sense then rushes into the opposite error of making them

③ A point brought out very clearly in his First Principles (§93) by Spencer, who observes that "intellectual progress consists largely, if not mainly, in widening our acquaintance with this part & this fellow."

After held to be

• Though sensation is the matter
of the specious present, it is not only there
that what is not present is outside
the specious present: all mental
activity falls within that moment. Conc.
to speak strictly, pure sensation is
the precursor of verbal abstraction.

The Blink Microscope is used for discovering the relative motions of stars. Two photographs, taken at an interval of say 10 years apart, of a small portion of the heavens, are rapidly alternated. Most of the spots appear ~~static~~ to be still, but those that have shifted appear to blink or vibrate. This enables the astronomer to see at a glance what ~~they~~ ^{would otherwise} ~~appearing in positions of~~ ^{would otherwise} ~~be in positions of~~ ^{would take hours} or days to discover.



In effect, the SUN, by means of this instrument, sees the motion of the star as motion, because ten years are to the SUN as a fraction of a second is to a man.

© Browne: *Hydrostaphia*, V, 5. p 63

+ Eddington ^{reminds that} ~~points out~~ that the world of physics is a world contemplated from within, surveyed by appearances which are part of it: ~~what~~ what the world might be like, ~~to a supernatural observer~~ if viewed in some supernatural way by other appearances, we do not know. (Nature of the Physical World, p. 225.) My point is that no world can known except by becoming part of it & on a par with it.

inevitable — as if there were not something enough already, without the bogus sort. ^x The economical solution (the solution according to Occam) is that the Blink Microscope & the rest are the natural & perfectly appropriate physical basis of my time-grasp at the higher levels, exactly as retinal & retinal after-images are the same low-down.

CS I have no scientific instruments; am I then shut out from this world when time runs so differently?

US Not at all. Two questions are persistent in social life: how one gets on with one's friends, & how one's friends get on with each other. At star-level the second of these problems has interesting consequences. I am looking, say, at two stars A & B; ^{that are} 10 light-years apart, yet for me so near that they lie side by side. Now it is reasonable to suppose that they are in touch with one another, just as I am in touch with them. I think, then, of A sending a light-signal to B — a signal that takes 10 years to arrive. ^{It is true} I cannot watch its progress (if what takes so long to creep so little way can be called progress) nevertheless the signal is no fiction, & I can calculate its position whenever I feel inclined. What this means is simply that ~~for me as a star~~ ^{for me the star} light travels far slower than a snail travels for me ~~the man~~, & far slower than planets grow — provided always I allow stars to be my living equals, in constant communication with one another. ⁺ Could there be a more striking illustration of how different the star's world is from the man's, & how they nevertheless dovetail with beautiful precision in my experience? And could there be a better example of variable time-texture in my field? "Imperceptible beings upon our imperceptible globe during the seconds which constitute our life, as we not very small & very miserable creatures compared to their overwhelming infinity?" Victor Hugo answers: ~~his own question~~ "No, since we comprehend it." ^x

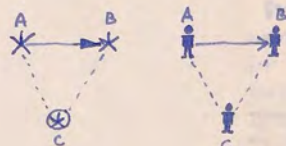
6 The scientist's spatio-temporal field: infra-human.

CS I do not follow how the infra-human units, which are for the most part invisible, come into the picture. The limit of my temporal discrimination is at best a few hundredths of a second, but here is a world where millions & ~~just~~ billions of pulses a second are the rule. It is one thing to expand one's time-grasp to centuries & millenniums, but an altogether different thing to narrow it down to millionths of a second. That, anyhow, is impossible. ⁺

US ~~then~~ ^{to} limit my temporal discrimination thus is to ignore, quite unjustifiably, all my faculties except those of the original bodily core. I have only to grow an Audition camera to see quite clearly an object exposed to view for one millionth of a second. Even so, I admit, such a period is an age in the world of electrons & light-waves. ^{But this is many} ~~There are other~~ instruments for recording ~~small or less indirectly~~ the data which, properly interpreted, reveal the lower grades of being. These have their way of making their marks in me, & not less effectively than the way of men & stars. ^{the other particles} Electrons are made in & to the physicist: ^{indeed}, if 'reality' were taken to mean the

The physicist ~~is~~ ^{actually} really does ~~does them~~ ^{the particles} in the Wilson chamber & ~~feels them~~ ^{feels them} in the Geiger counter — for ~~the~~ seeing & hearing is observation of what the object has been able to achieve when it gets as far as ~~me~~ ^{the observer}, & ~~measures~~ ^{measures} what it is.

x Royce describes our human species present as arbitrary, & ill-adapted even for the observation of our most familiar meanings. He speculates as to the vast alteration in type of consciousness that an alteration in this species present would mean. (*The World & the Individual*, i, pp 420ff.) It is precisely this view which I am combatting here. ~~All aspects of~~ ^{One aspect of} aspects of species present, each revealing a new aspect of the world, are ours if we choose to notice them.



⊕ Professor J. B. S. Haldane, in *Possible Worlds*, pp 3ff., writes fascinatingly of the consequences for the speed of light when the universe is scaled down to a model in the proportion ~~1000~~ ¹⁰⁰ 1:10⁵, but the point that he does not make does not seem to realize that the world is ^{so} scaled down for all of us. Here is another instance of the way that fact, being stronger than fiction, ~~comes to us through fiction~~.

x Intellectual Autobiography (*Portraiture de ma Vie*): "Things of the infinite."

^{opaque} + Is matter more or less ~~opaque~~ ^{opaque} to mind, or is it in principle & potentially ~~opaque~~ ^{opaque} transparent? That is the question. The answer of Hegel & of some of our modern physicists is: I am sure, the right one. "Mind no longer appears," says Deane, "as an accidental intruder into the realm of matter" but rather its "creator & governor". (*Mythematics Unimere*. (P) p. 187.)

+ This is an ordinary camera working with a 'flash-light' lasting a millionths of a second: the flash (of which the candle-power reaches millions) is produced by passing an electric current through an argon discharge tube. And the significant point is that the flash is, naturally, not only visible to man, but blindingly so, thanks to the fact that his retina does not return to its unstimulated condition directly the stimulus ceases.

Reynell O.P.P. 205

man's mind is not a mirror
and reflects the world as it is
but is a filter, selecting
certain things and rejecting
others.

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CS. A man can see right into the supra-human world of the stars without instruments; why not ^{then} into the infra-human world?

US. All his seeing is, in certain of its aspects, seeing right into the infra-human. The things ^{that right discloses} are coloured. Now what is it, (I ask the physicist) that makes the difference, say, between the pinkness of this hand & the blueness of this pen? It is the fact (he replies) that light-waves from the one vibrate so many billion times ~~a second~~ more often in one second, ~~than~~ light-waves from the other. Such a difference makes itself felt in me as a colour-difference, and as so many millionths of an inch shorter, than the light-waves from the other; these differences ^{within the temporarily & spatially infinitesimal} make themselves felt in me as a colour-difference. ^{That is to say,} ~~My interpretation~~ that I put upon this is that when I abstract the colour from a coloured object (particularly when I know something about the wave-length & frequency of its light), I am descending as far into the infra-human as I ascend into the supra-human when I see a star as such. The indescribable fascination of colours, just for their own sakes, ~~try~~ holds for children & poets & mystics (in short, for all whose sensibility is not hopelessly dulled), derives, I believe, from these three facts: that colour is ^{inherently} infra-human, that the infra-human is an aspect of the supra-human, & that both are the heritage of man. Note that,

Hand: See in
differences 187

• The appreciation of colour as such is largely independent of general level of development: though backward people generally have a smaller colour range than advanced ones, some men & probably most mammals are colour-blind. Some birds, fish, & insects have a wide range of colour vision. See H. Munro Fox: The Personality of Animals, Ch. IV.

+ W.E. Hocking writes: "The mystic recovers the power to appreciate facts of the qualities of things, achieving a new innocence of the senses in that ~~former~~ sounds, colours are felt as if for the first time: such, at any rate, seems to be the experience of William Blake, Jakob Boehme, Francis of Assisi & others." Types of Philosophy, p. 19.

Dante also the poet of Dante's is another instance of extreme to this list I would add Dante whose poetry is full of requisite & varied descriptions of colours. Radio 5/10/47. See E. S. Shors & Dante (as for instance the colour of the flowers in Purgatorio, Cant. VII.) p. 176.

to take up his supra-human heritage, he must actively fill out & render concrete the bare data; while to take up his infra-human heritage he must do precisely the opposite, and abstract from what is immediately given. Note further that, to a very large degree, the two go together.

CS. But I see an object as coloured at a range of a foot, or a mile, or many millions of miles: how, then, can colour belong to the infra-human regions of the object?

US. The answer is in the ^{previous} ~~last~~ Chapter (Section P), where I pointed out that, while an emergent quality 'belongs' at the level when it first appears, it can be discovered as an element in subsequent levels. On the other hand, ^{the colour} ~~the~~ discovers the quality ^{then} ~~it~~ and detaches it wholly from all later accumulations, has descended to the quality's original level. Take, for example, the flash of the eruption camera. Though it lasts a mere millionths of a second, it is perfectly visible. (We have already ruled out all pseudo-explanations in terms of after-lag: the theory that the eye takes time to recover from an extremely ~~brief~~ ^{brief stimulus} ~~flash~~ ^{flash} provided only it is intense enough.) The plain fact is that I do experience words ^{lasts a millionth of a second} ~~as brief as this~~ & that they are, for me, no briefer than other words lasting say a fair hundredth of a second. Then there is the Wilson cloud-chamber, which makes visible the trails of α & β particles moving at thousands of miles a second. If you object that we see the ~~effects~~ ^{not the particles}, but their effects, I retort by asking whether we see this page or do effects? To sum up, ^{man} ~~we~~ will into the infra-human ^{mind}. Doubtless much intellectual construction is needed, but who can doubt that the scientist really does experience the world he discovers?

+ On this question of temporal summation, see Woodworth's Experimental Psychology, p. 564. If the weaker the light, the longer it must act upon the retina to be perceived.

• The particles travel through a chamber filled with water-vapour which condenses in a trail behind the particles: the trail is thus made visible. It is this that an airplane sees when it is so high that only its exhaust trail is seen.

+ Külpe's Outline of Psychology, p. 384.

ability to knit together & account for diverse phenomena, then the electron is very 'real' (different orders of being are differently discerned). Registration of some kind, or ^{Objective} ~~phenomenon~~ ^{experience}, there must be; but that the mode of this registration should fit both the data to be registered & the registering instruments is only natural. ⊕ When the physicist studies the electron he grows extra-corporeal organs which at once scale him ~~up to the galactic~~ ^{down to the electronic} levels; he deals in the spaces & durations peculiar to that ^{order of things} ~~Symmetrical Pair~~, & speaks its language — the language of mathematics. The space & time of his field become of electro-magnetic texture. Take your choice: either electrons & atoms & so on are not real (in which event you must explain how 'unrealities' explain so much 'reality') or they are real & the scientist's account of them more or less true (in which event you must explain how the scientist squeezes himself into this Lilliput & comes back with his story of it).

⊕

CS. What ^{scientist} ~~the~~ does is use his imagination. ^{As a scientist} ~~he~~ can only think of an ^{electron} ~~atom~~ (if he finds it necessary to visualize it at all) by magnifying it to the size of a marble, or a brilliant ball, or a football, & by slowing down its speed to suit. That is why, when it comes to verbal description, it is to precisely such models as these that he is driven. The connexion between ball-games & physics has often been noted.

US. Which all goes to support my contention. When I say that the spatio-temporal field is virtually constant for all levels, I imply that the tempo is virtually constant. ⊕ To electrons (which is the same as saying: to nuclear physicists) an electron is no tinier or swifter than one man is to another; to galaxies (which is the same as saying: to galactic astronomers) a galaxy is not specially cumbersome or slow. As I ^{go} ~~travel~~ from region to region, I find the local ball-games ^(as it were) ~~(as it were)~~ not so very dissimilar, while to the traveller accustomed to these smaller parts the outlandish dimensions of things become as commonplace as the miles & the hours of the terrestrial motorist. He gets acclimated. He feels at home because he really is at home. † The naturalist of a level is naturalist at that level, because he has been thoroughly initiated into the spatio-temporal etiquette of the society in which he moves. Thus his fast-motion films of a plant's movements, & his slow-motion films of ^{a bird's} ~~an animal's~~, so far from being fakes, are the genuine facts about the level concerned. There is no difference between tempo; ^{the difference lies in the} ~~what has to be learned is the trick of changing the level of the performing~~ to that the one tempo. In practice, if not yet in theory, we are all familiar with this principle. ‡ H.G. Wells' Time Machine belongs on the fiction shelves, but that is only because he did not fully realize that he was the time machine. □

CS. ~~to class~~ With William James, I see no objection to comparing the tempo of different orders of being. "Suppose we were able, within the length of a second, to note 10,000 events distinctly, [⊕] ~~the~~ ... the motions of organic beings would be so slow to our senses as to be

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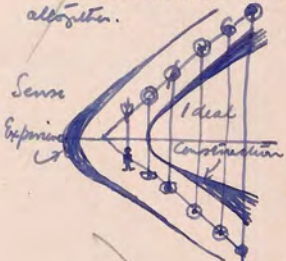
inferred, not seen. The sun would stand still in the sky. ... But now reverse the hypothesis & suppose a being to get only one-thousandth part of the sensations that we get

□ And, were things otherwise, science would be impossible. The uncertainty principle of physics & what Needham has called the 'phenomenological principle' of biology (two modes to dissect, & our methods ^{may prompt} ~~conclude~~ ^{from} a genuine study of the living) would apply to all science except anthropology, for the simple reason that the scientist is altogether disparate with his material — either fatally clumsy & insensitive, like a navy's innocent dentist, or the opposite extreme, like a dentist's nervous navy. But the law of equality, guarding against this danger, makes genuine science possible at all levels.

• See, e.g. Bergson: Creative Evolution, pp 36 ff.

As I write this words a ~~motor~~ car is present to me (with all that a car means) & yet the only sensory evidence I have of its presence is the faint buzzing of a horn. *Metaphysics*
J.S. MacIntyre

⊕ And, it is not as if ~~the~~ ^{after all,} ~~abstract~~ ^{conclusion} ~~object~~ ^{is} at any level. The ~~more~~ ^{more} data at any one time are only a fragment of the total data, and it is no more possible to ~~have~~ ^{have} ~~more~~ ^{more} ~~experiences~~ ^{experiences} ~~than it is to~~ ^{than it is to} ~~have~~ ^{have} ~~more~~ ^{more} ~~experiences~~ ^{experiences} ~~of an electron apart from~~ ^{of an electron apart from} ~~'ideal constructions'~~ ^{'ideal constructions'}. The general rule is that the more remote a level is from the common-sense axis, the more 'ideal constructions' must enter into its composition (as against actual experience). Only at the ultimate levels, however, does the latter vanish altogether.



⊕ Locke puts it thus: "There seem to be certain bounds to the quickness & slowness of the succession of those ideas one to another in our minds, beyond which they can neither delay nor hasten." *An Essay concerning the Human Understanding*, II, IV, 9.

† As H. Wildon Carr puts it (*in Changing Backgrounds in Religion & Ethics*, pp 117 ff) when we pass from one space-time system to another, space-time does not seem to alter, but adjusts itself to our chez-nous attitude. Cf. (*Theory of Moments*, p 136) "we cannot mean ... by the specious present some definite quantity of abstract moments, for this we mean; we must mean some instant value of conscious apprehension to the variable moments which form its content."

‡ As in point of fact we are (thanks to extra-corporeal growth) approaching this condition: the Audioton cine-camera photographs at a thousand frames a second, compared with ~~some~~ 24 a second in the ordinary cine-camera. *Particular*
NC. Aug. 1913

• *Order & Life*, p 28. It is true. Of course, that this is not first some clearness, some disturbance of the phenomena under investigation by the scientist. But this occurs at the level concerned. Moreover some disturbance is essential: to exist at a level is to function. Hence, engaging in social relationships.

Note that (in a sense) my ability to descend to lower levels, without abandoning
 higher ones, gives me a vast lean of life—provided I recognise the principles
 of constant velocity. ^{in its first place,} It is true that the electro-magnetic vibrations that make
 up the green light of the aspen leaves outside my window are no more
 hurried for me than the vibrations of the leaves themselves; ^{in the next place} it is also true
 that billions of the former vibrations go to one of the latter. ^{no less} What is the
 explanation? ^{of this discrepancy} It is that two levels of magnet are inspecting the object, &
 that the one is, relative to the other, well-nigh immortal, since it would
 take many thousands to realise that what is for one aspect of me a
 momentary flash of colour is for another many milleniums of ^{could well give} wave-
 motions, is to realise that I can have all the immortality I want by
 suitably relating my levels. Three-score years & ten is a very superficial
 estimate. And when I take into account the higher levels also, I am
 indeed well-off for time. A creature who finds himself equally at home
 with gamma-rays & nebulas is ~~not on the way to getting the better~~
 of time beginning to see time turn time the excruciating into time the moment.
 All this can be summed up by saying that the space-time texture of my
 field, ^(Borgson calls it the degree of tension or relaxation of different kinds of consciousness) is what I can make it.

* Borgson (in Matter & Memory, pp. 272, ff.) has pointed out that it would take
 25,000 years to experience as separate vibrations what is experienced in ^{one moment} $\frac{1}{2500}$
 second as a patch of red, assuming that each vibration were to last $\frac{1}{500}$ of
 second (which is the roughly the limits of discrimination). My point, however,
 is that we are aware of both the vibrations & the colour, & that there is
 a sum in which the 25,000 years is ours.
 O. p. cit., p. 275.

the but neither can we
decline that ~~seemingly~~ ^{very} ~~indisputable~~
which motives to the grounds
the proper cause of life

+ Cf. Dr. Inge's insistence ^{upon} the eternal life as a present possession rather than a future hope: "he is passed from death unto life". "The Evangelist", he writes of St. John, "is constantly trying to transport us into that timeless realm in which one day is as a thousand years, & a thousand years as one day." (Christian Mysticism, (1899) p. 52)

As we ride, as we rush in the Train,
The trees & the houses go wheeling back,
But the stars above the plain
Come flying on our track.

The stars, as ^{the poet} ~~observed~~ ^{observed}, are always companions of our flight, however swift, & we always carry the heavens with us. The reason is that, vis a vis the stars, it is our ~~stars~~ ^{stars} which counts. All our dealings with stars are stellar.

Alternatively, I have only to look out of the carriage window at the miracle as near notice — a fantastic army fantastically marching, objects of all sizes from a ~~hedge~~ ^{hedge} up creeping & sliding & tearing along at every spot — to see myself, tiny & slow over them in the tiny & slow ones, big & swift in the near ones.

How do I ^{How do I} ~~find~~ ^{find} the truth is, not that I can change the marks of the screen, but that I can ^{at last or close order} ~~find~~ ^{find} my way about the country. How do I find my way about the country? Not by going over it first at several thousand miles an hour — on the map? How do I learn history, but by condensing continents to inches & centuries to minutes, & then expanding them again? How do I do any job, or study any subject, but by ~~manipulating~~ ^{manipulating} ~~manipulating~~ ^{manipulating} the spatio-temporal scale of it? ^{I play the conventional with space-time.} The worm's-eye view & the bird's-eye view must alternate. What I cannot sometimes see as close I can never undulate. ^{As for philosophy, it is the art of making}

How can I ^{now} speak of a millennium, or of a billionth of a second, or of any other period, unless by taking it as existing all at once for me now?

A kind of ~~music~~ ^{music} of which time & space are ~~manifest~~ ^{manifest} ~~as instruments~~ ^{as instruments} to ~~yield~~ ^{yield} ~~there to~~ ^{there to}. To make this instrument, to make it yield its full range of beautiful & significant pattern, is his task — supremely difficult & supremely worth ~~all his efforts~~ ^{all his efforts} while.

§ 17. The futurity of ^{the} object in the field.

CS. The 'higher' fields (I mean one of which the space & the time are more abundant) has a serious defect that does much to neutralise its advantage in scope: its contents are necessarily vague and indeterminate, for they are ^{inherently} infected with futurity. What is future is still doubtful, & if half my specious present lies on the future side of the Now, then the objects which lie within that specious present are ^{(I am speaking} ~~(to speak loosely)~~ ^{loosely)} half future. I find this somewhat difficult to credit.

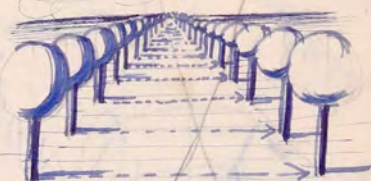
US. It is only what we discover right at the start of this Part of the book, on other grounds. In so far as my registration of the object is passive I have insight into its past; in so far as it is active I have insight into its future. All my correspondence, which is to say all my observations, is thus symmetrical in time, & the remoter my correspondent the further I see into his past & his future. What is then-from-here is also then-from-now. To say that I see a long way into a Star's past & future, & a little way into a man's, is much the same as saying that the grain of my temporal field is finer when it exhibits a Star than when it exhibits a man.

CS. But my point about the increasing vagueness....

US. I was coming to that. It is part of the essence of every individual in the

⊕ Thus his fast-motion film of a plant's ^{movements} ~~growth~~, or his slow-motion film of an animal's ~~movements~~ ^{movements}, as far from being fakes, are the genuine facts about the level concerned: that man can make & use such records of life as it goes on at other levels (not other tempos, note) is just another indication that he belongs to those levels.

x 'In the Train' by James Thomson ('B.V.')



There is, however, a 'level of awareness' at which we are very ^{James Thomson} ~~observed~~ ^{observed} of the phenomena of parallax movement: the apparent speed of an object when I move is one of the indications of its distance.

James Joyce's works

Some of J. B. Priestley's plays, & such novels as Aldous Huxley's *Eyeless in Gaza*, forsake the ~~fixed~~ ^{fixed} chronology for a free, creative chronology like that of memory. See also J. W. Dunne's *Time and the World*, pp 86 ff: *Prigmore* ~~view~~ ^{view}.

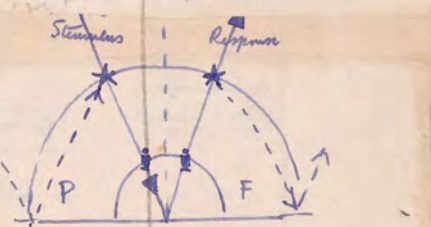
That the creative ringing of the changes which our brains make in the future I find now, would place now.

See J. H. Bordwell: *Appearance & Reality*, p 203.

• "However, writes I see the world truly, to rise above the ~~infinite~~ ^{infinite} of practical desires, must overcome the difference of attitude towards past & future & survey the whole of time in its comprehensive vision."

⊙ The difficulty of admitting mathematics -ally future time into the specious present is much reduced when it is realised that the mathematical present is an ideal abstraction from the real present of experience. The so-called 'future' element in this experience is not ~~really~~ ^{really} future at all, since the order of events in the specious present is not a future-present past & order. In this Section I am using the term future rather loosely, for lack of a more suitable term.

While I look out a star I am not only united to the past & future self, but as we observe our ~~best~~ ^{best} ~~capable~~ ^{capable} ~~of~~ ^{of} all these observations we are united with all these observations in the past & the future.



As Whitehead says, "For infinitesimal awareness, a moment is a vast period of time." *Modes of Thought*, p 215.

As Whitehead says, "For infinitesimal awareness, a moment is a vast period of time." *Modes of Thought*, p 215.

Indistinctive
 Folk
 August
 Calcutta
 Bengal

C.S. This is their guesswork.
 vs. On the contrary, it is at this point that science comes in to substantiate our conclusions. It has been shown by many thousands of tests (conducted under the strictest conditions) that some persons have information about events of the near future. It was found that the percipient in certain telepathy experiments tended to 'receive' what the agent was about to 'transmit' some two or three months later, & the possibility of the success being due to chance, one in many billions of billions. + Apart from ^{laboratory} evidence, there are many well-attested instances of foreknowledge in detail of happenings months, & even years, before the event. Now is this any matter for surprise. Seeing that our Now is, ideally, the container of all time, the wonder is rather how much of the future escapes us. Those who are sensitive to future events are those who, less than most of us, learn to express their knowledge. All the same, the expression is a necessary because without it the lower levels would cease to exist at all: this temporal limitation is what determines this grade.

Tyrell 124, 114
 + Proceedings S.P.R. Vol. xvi, pp 134 ft, Vol xlvii pp 21 ft.
 o The connexion between the variable opinions present & foreknowledge has not escaped those engaged in physical research: see G.N.M. Tyrell (Proceedings of Mass. A.S. 44), ~~in the Baltimore~~

Saurat 60 P 537
 o Milton (Treatise of Christian Doctrine, Book, iv, pp 27 ft.) makes God's foreknowledge arise out of (what we may now call) His all-embracing species present. And (note if we assume a god's species present to be longer than a man's) Plato was justified in regarding as the act of fellowship between gods & men.

Because the screen is only as screen, because (to use the mystical phrase) it is ^{simply} naked & devoid of all image, because it makes no claims for itself, it is because it holds nothing which the forces of destruction can attack. ~~it is because it is deliberately dead already,~~ because death cannot touch it. On the other hand, the screen does not try to compete with the image thrown upon it, the life of that image because the screen is ^{perfectly} receptive of the life of the image thrown upon it, & makes that life its own life. Or, as Edward Caird puts the matter it: "There is for the spiritual self no absolute death. Because it is capable of dying to itself, — because, indeed, ... it cannot live but by some kind of dying to self, — it cannot in any final sense die. As it can make that which most seems to limit it a part of its own life, it has no absolute limit; it takes up death into itself as an element, & does not therefore need to fear it as an enemy." + I am dead in myself, alive in my fellow, & immortal in my God.

x "The first property of the soul is a naked being, devoid of all image.... The second property might be called the higher understanding of the soul. It is a mirror of light, wherein we receive the Son of God, the Eternal Truth. By this light we are like unto Him; but in the act of receiving, we are one with Him." Ruspbrock: The Mirror of Eternal Salvation, Cap. VIII. Underhill: Ruspbrock, p. 67.

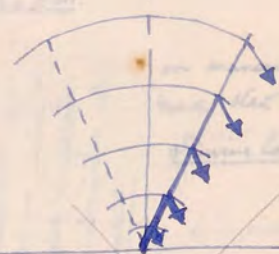
says Whitehead,

"Cut away the future," the present collapses, emptied of its proper content. Immediate existence requires the inclusion of the future in the crumple of the present."

Adventures of Ideas, p. 11, § 1.

Gerald Heard: Crucible of Christ, p. 185.

hierarchy of individuals that it exercises power over others ~~individuals~~ of the same level - a power ^{which} is, of course, limited by the exercise of similar powers by on the part of others. Without foresight, intention, striving (at least in ^{no effort is possible unless time is seen through} some redemptory form) no existence as an individual. Agreed that the future is not entirely determined - if it were, why the striving? And ^{no doubt} of course the future is determinable - if it were not, why the striving? At every level of my being I send out a determining process into the future, & the measure ^{of its effectiveness} of that determination is the measure of its agreement with the parallel activities of my equals. ^{I am powerful as I line up with what is principle.} This is a large subject, ^{to which I shall return later.} ~~but I will not go further into it in this course.~~ Meantime be sure ~~it is~~ that the vagueness of my object's future is my great opportunity. Bring to clearness all the nebulousness of my field, or cut out ^{all that is vague in it,} the nebulousness, & you destroy everything.



I am in correspondence with my grade of being. My action ^{my action} every letter I write (to speak) has an address at my level, ^{but} only that in which belongs to the higher level is detached ~~abstract~~ & sent on. The next

For Spinoza, ^{the love of finite objects brings sadness,} but the love of an eternal & finite object only joy, see his improvement of the intellect (Jew's Trans) II, pp 314

CS I think you exaggerate my grasp of the future. * Foreknowledge is exceptional, & being so, is inefficient.

US All depends upon level. The erratic behaviour of the middle grade is harder to foresee than the regular behaviour of the remote grades. Rotation means predictability, & it is no coincidence that, ~~as~~ as a celestial body, I am gifted with powers of prophecy that I lack as a man. But very remarkable powers of ~~prophecy~~ ^{foreknowledge} I do possess, even at the lower levels, if only I know how to use them.

CS But what it really comes to is that ~~for~~ the higher units do not yet exist. This infection with futurity means that ~~what I see~~ ^{the thing I observe} is only half there, so to speak; an essential part of it is missing.

"Man is, properly speaking, based upon Hope, he has no other possession..."

US It means that nothing - not even the electron - exists yet. My life is built, from the deepest foundation to the pinnacle, upon faith in what will be, in an active ^{Time is a challenge: it is up to me to make up the time of this.} reaching out to the future. Until I ~~have~~ ^{put my trust} faith in a man, until I count on him, he is no man for me. He is not even a machine, for machines demand faith also. Social intercourse at every level is a question of taking on trust ^{the thing} ~~what~~ does not yet exist, & ^{so acting upon} ~~that~~ trust as to bring ^{the thing itself} ~~it~~ into existence. Without such creative faith not even the physical world would be. And, of course, the higher units are not realized without a faith that is proportionately bold & far-reaching. That is one of the reasons why the living EARTH & SUN ^{the not} ~~are~~ are so easily doubted.

CS But so reasonably doubted.

EARTH & the

US Yes, indeed. The ~~sun~~ SUN are not yet facts, neither is the whole (or God). The atheist is in the right. One of the chapters of McTaggart's

is Many a Summer, p. 273.

Image: Eng. (Myst 228)
As McTaggart maintained, * love of a person in this imperfect world is love of him as he really is - that is, as he will be.

the spiritual