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Chapter Three

TIME: THE PHILOSOPHICAL ACCOUNT

“Time like an ever-rolling stream bears all its sons away.” This is the common-sense view. Time is a river that sweeps on whether we are waking or sleeping, living or dead. It is a stream within which *events happen*, as space is a box within which *things exist*. This seems so obvious as to be self-evident. Time is uniform in its current, precisely measurable by clocks set by the sun, and everywhere the same throughout the universe in its rate of passage. It starts to the right of our screen of consciousness, passes dead centre in front of us as NOW, and is wound up on the left, to be preserved for always. Thus we divide time into past, present, future; each of which has a reality that is unquestionable.

The passage of time is at a fixed rate, and it becomes our standard of reference for the speed with which events succeed one another. Even if events should seem to happen more slowly sometimes and with bewildering speed at others, nevertheless we "know" that such fluctuations are apparent only, and that clocks everywhere in the universe never vary except in so far as they may be (in our world) mechanically imperfect. There is a real speed at which events happen, fixed in the mind of God whose time-piece regulates everything else. We would set our clocks by His if only we had the means, and then we would be correct in our estimate of the time taken for everything that has happened since the world began, and indeed even for events occurring before the sun and moon were set in the heavens to regulate time on earth. We assume that time was kept even before the creation came into being. This again is the common-sense view.³³

It is perfectly true that we each have private inner clocks that reflect our own personal sense of time, and by and large our personal clocks agree quite accurately

³³ Also see W. R. Thompson, *Science and Common Sense*, Albany (U.S.A.), Magi Books, 1937, p.96.

when compared with those of everyone else who shares our framework of reference. But what we now know is that *this only happens so long as we all share the same segment of space and move through it at the same velocity*. Anyone who happens to live in some other galaxy moving through space at a different speed with a different rate of acceleration in our supposedly expanding universe would experience a different rate of the passage of time. And this difference would not be the result of imagination: their clocks would actually confirm the difference. This is where a real problem arises. This is where the common-sense view breaks down.

As soon as we *move* we change the flow rate of our time. But because we and our private clocks move together, the change in rate is concealed from us. The first recognition of this real change in time rate was a philosophical one, but we can now verify it as a fact — only the change is so tiny that we require extraordinary devices to detect it. But there is little doubt that it is real.

The particular movement we happen to be involved in through space has the effect of modifying the rate at which time flows by us. Thus this flow rate of hours or minutes or seconds proves to be relative, relative to our speed through space — or more precisely, to our *change* of speed through space, our acceleration or deceleration. In terms of actual experience even our grossest movements (to the moon and back by space craft, for instance) are so tiny when compared with the distances involved in traversing the span of the universe, that we cannot detect the change in the flow of time except by using special instruments of quite fantastic sensitivity. So we are unaware of any change. The changes are far far smaller than the normal inaccuracies characteristic of man-made mechanical devices.

But certain experiments which have been performed in recent years have fully confirmed what Einstein predicted, namely, that time is relative to the rate of acceleration of the clock through space. It doesn't matter how little the change is: from the philosopher's point of view the classical and common-sense picture of time as an ever flowing stream with invariant speed of current has been shattered.

'Common sense' view of time shattered

Actual experimental verification of this shattering began with the experiments of Michelson-Morley (which we shall examine in the next chapter). Yet the concept itself of the relativity of time goes back a very long way, far beyond Einstein, to Augustine (354 — 430 A.D.) in fact — and before Augustine to Philo (c. 20 B.C. — c. 42 A.D.) and his contemporaries.³⁴ According to the Jewish

³⁴ Indeed, this doctrine dates back to Plato: “Time and the heavens came into being at the same instant, in order that, if they were ever to dissolve, they might be dissolved together. Such was the mind and thought of God in the creation of time.” (Plato quoted by Sir James Jeans, *Mysterious Universe*, Cambridge University Press, 1931, p.145).

commentators in the time of our Lord, God produced ten things on the first day of creation. He produced the heavens and the earth, Tohu and Bohu, light and darkness, wind and water, the duration of the day and the duration of the night.³⁵ The Jewish rabbis believed that the duration of the day and the duration of the night were actual creations and not merely the result of the creation of the heavens and the earth. They held specifically that "time" was created simultaneously with the world. Philo Judaeus was a Hellenized Jew who imbibed much of the spirit of Greek philosophy, and he argued strongly against an older view held by his contemporary Jewish brethren that the world had been created *in* time. He held that until creation, time did not exist. Time had just as much reality in its own right as the world did, though by no means independent of it. When Augustine proclaimed that God created the world *with* time and not *in* time, he may conceivably have arrived at the conclusion by the exercise of his own profound insight, but it is more probable that his wide reading had made him thoroughly acquainted with the arguments that had gone on between Philo and some of the older Jewish writers, since Philo's work, *De Opificio Mundi* ("Concerning the Fabrication of the World"), was quite widely known at the time. Here are his actual words, as translated from the Greek of his original by F. H. Colson and G. H. Whitaker.³⁶

Then (Moses) says that "in the beginning God made the heaven and the earth," taking "the beginning" not, as some think, in a chronological sense, for time there was not before there was a world. Time began either simultaneously *with* the world or *after* it. For since time is a measured space determined by the world's movement, and since movement could not be prior to the object moving, but must of necessity arise either after it or simultaneously with it, it follows of necessity that time also is either coeval with or later born than the world. . . .

And since the word "beginning" is not here taken as the chronological beginning, it would seem likely that [only] the numerical *order* is indicated, so that "in the beginning He made" is equivalent to "He made the heaven first." [My emphasis throughout.]

³⁵ Ginzberg, Louis, *Legends of the Jews*, Philadelphia, Pennsylvania, Jewish Publication Society, 1954, vol. 5, p. 6.

³⁶ Philo Judaeus, "On the Account of the World's Creation given by Moses" (*De Opificio Mundi*) in The Loeb Classical Library, *Philo*, translated by F.H. Colson and G.H. Whitaker, Cambridge (U.S.A.), Harvard University Press, 1971, vol. 1, p.21, 23.

Since Einstein was himself a Jew and undoubtedly acquainted with the literature of his forebears, it is not perhaps so surprising that such a thought as the coincidence of the creation of matter and the creation of time should have been in his mind when he formulated his special theory of relativity and made time part and parcel of the physical world.

Linear time vs. endless eternity

Now Einstein wrestled with the problem of time, with the nature of time as opposed to eternity, of *time* as an abstract reality. The problem arises from the fact that one cannot have a *span* of time. It won't stay still long enough for us to measure it. Eternity is not time stretched to infinity on either side. There is a very significant difference between eternity and some immense stretch of time, for the simple reason that no matter how long this span of *time* is, we can always shorten it by chopping some off. Whereas eternity remains as endless as ever no matter how much we "cut off it." At least we imagine we could do this, though in actual fact we don't know how one can reduce the length of something which has no extended existence. Only NOW exists, and it exists as a point, not a dimension. It has only location. The past is gone, and the future is not yet. We are therefore left with nothing to shorten; only with something which has no length. Ten days never exist at one time, nor even ten seconds, nor even ten millionths of a second! How then could we ever speak of reducing them? Time becomes a *position* in eternity, nothing more.

Thus while we do seem to reduce time by having spent some of it, we cannot ever seem to shorten eternity no matter how much we have spent of it. In the very nature of the case, eternity remains unaffected by what has already passed. The categories of time and eternity are clearly not the same. What is appropriately spoken of as shortening in the one case becomes meaningless in the other. If we have a very large number and we subtract something from it, what remains is less than it was. If we have an *infinite* number and subtract something from it, we still have infinity remaining. When something is forever, as much remains no matter how much has already been subtracted. Thus while we may speak of time which is passed, there is no such thing as eternity which has passed. Otherwise we would have to ask the absurd question, Is God older today than He was yesterday?

One of the earliest symbols for eternity was a circle. We walk around the circle through so many degrees of arc but we do not actually shorten the distance we yet have to journey to complete the circle. As much remains of it to walk around as ever. The circumference persists intact and unchanged. We can go on and on endlessly, like the marching column of caterpillars whose head has been induced to link up with the tail and so they journey on, each following the leader in front, until at last they starve themselves to exhaustion.

Eternity does not flow past us, for if it did some would already have been used up. The concept of an exhaustible resource can never be applied to the word *eternity*. Only if eternity was like a circle would it then escape this inevitable limitation: but circular movement imposes a no less undesirable limitation, namely, *repetition*. Some ancient philosophers viewed heaven as cyclical, but even then they saw it as ultimately having an end, as though the circling movement gradually slowed down and finally stopped.

It is not surprising that cultures which emphasize material things and reify (make a thing of) time, tend to view history as linear, as a long line of successive events with a firm beginning and a well defined ending. As we have already seen, cultures which attach more importance to the spiritual aspects of life have tended towards a view of history which has no beginnings or endings in the linear sense. Things just go on forever. Such is the Hindu view, and so are all reincarnational views.

Dilemma of beginnings and endings

But cosmologists of the Western world today are on the horns of a dilemma. Although it is very generally agreed that the universe is running down, scientists find it difficult to accept the idea that it will really come to an *end*. What can come to an end must have had a beginning; and this raises the question of who began it. So they speak about a heat death of the universe which is not a physical "end of the world" but only an end of it in its present configuration, as though its corpse would return to dust but the dust would remain. Yet one still has to ask, Who made the dust? A true beginning is as inconceivable in terms of physical laws as a true ending would be.

L. Susan Stebbing reported Eddington, one of the most notable of Britain's astronomer-physicists, as having said:³⁷

Philosophically the notion of an abrupt beginning of the present order of Nature is repugnant to me, as I think it must be to most; and even those who would welcome a proof of the intervention of a Creator would probably consider that a single winding-up at some remote epoch is not really the kind of relation between God and his world that brings satisfaction to the mind. But I can see no escape from our dilemma.

³⁷ Stebbing, L. Susan, *Philosophy and the Physicists*, London, Constable, 1959, p.258.

It is a problem, isn't it? Some years ago when the concept of an expanding universe first became a topic of popular discussion, the same Sir Arthur Eddington wrote:³⁸

The difficulty of an infinite past is appalling. It is inconceivable that we are the heirs of an infinite time of preparation; it is no less inconceivable that there was once a moment with no moment preceding it.

This dilemma of the beginning of time would worry us more were it not eclipsed by another overwhelming difficulty lying between us and the infinite past. We have been studying the running-down of the universe; if our views are right, somewhere between the beginning of time and the present day we must place the winding-up of the universe.

Travelling backwards into the past we find a world with more and more organization. If there is no barrier to stop us earlier, we reach a moment when the energy of the world was wholly organized with none of the random element in it. The organization we are concerned with is exactly definable, and there is a point at which it becomes perfect.

There is no doubt that the scheme of physics as it has stood for the last three-quarters of a century postulates a date at which either the entities of the universe were created in a state of high organization or pre-existing entities were endowed with that organization which they have been squandering ever since. Moreover, this organization is admittedly the antithesis of chance. It is something which could not occur fortuitously.

This has long been used as an argument against a too aggressive materialism. It has been quoted as scientific proof of the intervention of the Creator at a time not infinitely remote from today. . . .

It is one of those conclusions from which we can see no logical escape — only it suffers from the drawback that it is incredible.

So there it is: the incredible has to be the only account that is left to us. No other explanation of reality seems possible.

³⁸ Eddington, Sir Arthur, *The Nature of the Physical World*, Cambridge University Press, 1930, p.83 f., 85

Sir Theodore Fox, in the Harverian Oration for 1965 before the Royal College of Physicians in London under the title, "Purposes of Medicine," had this to say:³⁷

To contemplate the Universe is to stand even more abashed. For somehow at some time, all that we see and touch and hear must have emerged from NOTHING. To us this transformation of nothing into something is contrary to reason; and the creation of the Universe is a mystery that Man may never be able to understand. Yet the Universe seems to exist: and we must beware of making excessive claims for any system of thought [i.e., scientific materialism] that finds its origin impossible.

Years ago Lord Kelvin in a popular lecture entitled, "The Wave Theory of Light," reflected upon what would be one's reactions if the universe is limited in its size. He asked his audience: "What would you think of a Universe in which you could travel one, ten, or a thousand miles. . . and then find it came to an end? . . . Even if you were to go millions and millions of miles, the idea of coming to an end is incomprehensible."³⁸ What Lord Kelvin said of coming to an end of *space*, now has to be asked of coming to an end of *time*.

We have every reason in the light of present knowledge to suppose that time and space are integral parts of a single reality, so that the creation of things occupying space means the simultaneous creation of time when things began to happen. Neither time nor space existed *before* creation. Augustine asked a pertinent question relating to this. He argued thus: If we should wonder how God occupied Himself before He created the universe, we have to realize how meaningless such a question really is. The question springs out of our consciousness of the passage of time. Before the universe there was no time and therefore it is inappropriate to ask what God was doing then, "for there was no 'then' when there was no time."³⁹

³⁷ Fox, Theodore, "Purposes of Medicine," *Lancet*, 23 Oct. 1965, p.804.

³⁸ Kelvin, W. T., "The Wave Theory of Light", Lecture delivered under the auspices of the Franklin Institute, Philadelphia, U.S.A., Sept. 29, 1884, in *Popular Lectures and Addresses*, London, Macmillan, vol. 1, 1981, p.322.

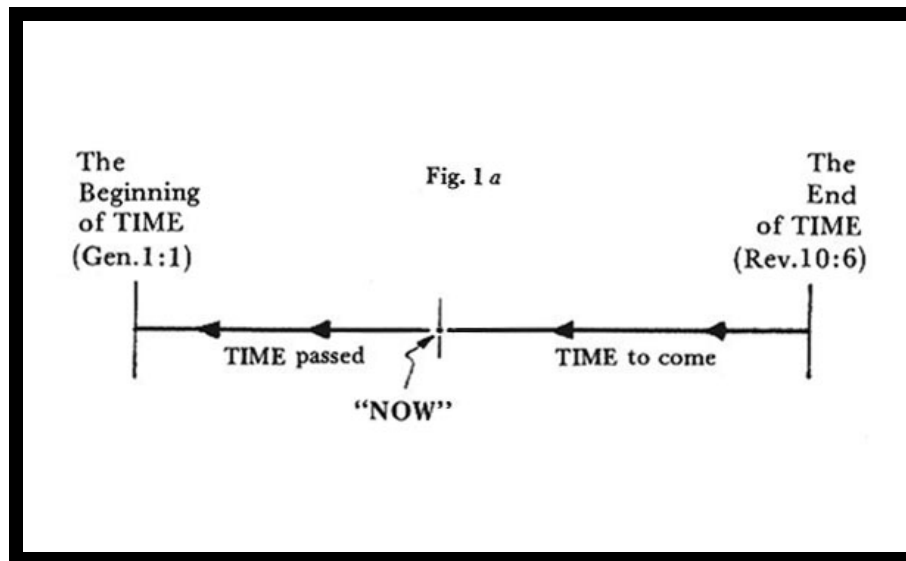
³⁹ Augustine, *Confessions*, XI.xiii.15.

Time and eternity: two different realities

Thus we find ourselves face-to-face with some profound philosophical problems. If we see *time* as a kind of linear property of events stretching out on either side of us, part of it already spent and the rest of it yet to pass by, we cannot conceive of such a tape as endless. But neither can we think of it as having two ends without at once wondering what was before it and what will be after it! Either way, our powers of conception fail us. Yet time is not eternity; for eternity is not merely an endless chain of fragments of time, since these fragments of time already past must then necessarily have shortened eternity, and eternity is thereby being exhausted little by little. Eternity would simply run out of time!

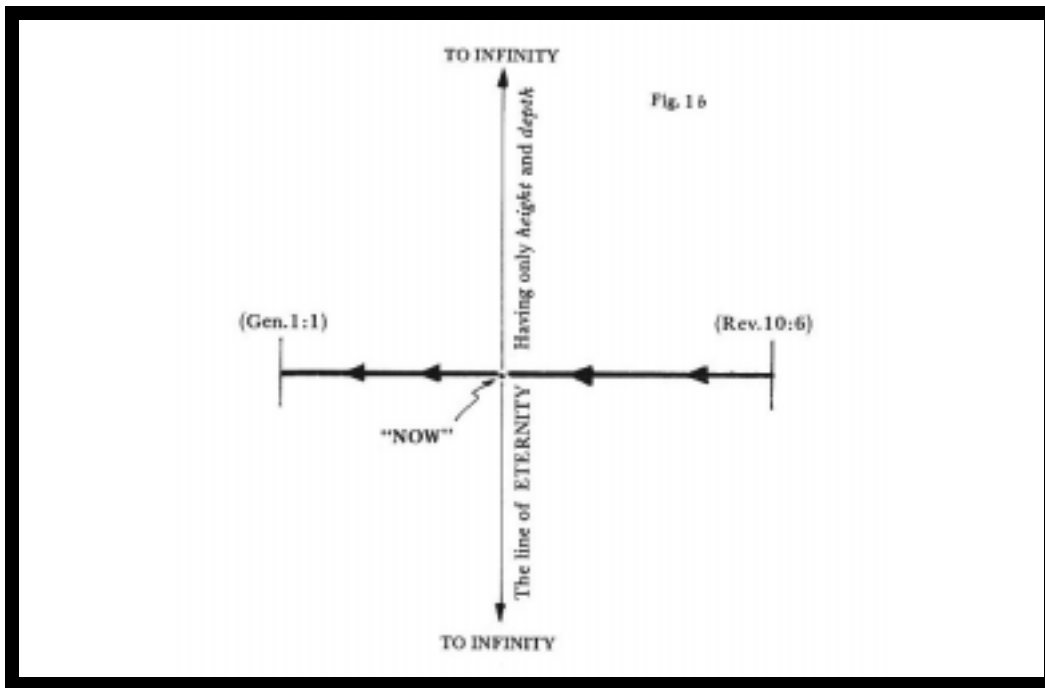
If it should be asked whether time is "within" eternity, I think the answer must still be, No. For this would make time merely a fragment of eternity which then becomes simply an extension of time at either end of the line. Time and eternity are not such that there can be this kind of overlap because the two realities are not in the same category of experience. The only "overlap" is that point of crossover at which the line representing time (which is horizontal) crosses the line representing eternity (which is vertical). Since neither line has any width, the place of intersection is not an area but merely a point, a point that can only be described as NOW. We can diagram this as shown in Fig. 1.

Since this figure when completed may look a little frightening, let us "build" it in two stages. In Fig. 1a we have a horizontal line which represents the passage of TIME.



The movement of TIME passes from right to left with respect to each of us personally. We stand at the point marked "NOW." The *beginning* of TIME has already gone by and moved off to our left. What yet remains to run by is to the right; and since it is limited, it will continue only until, one day, it comes to an end. Thus the short vertical line marking its *terminus* has yet to move past us. When it finally does, TIME will be no more (Revelation 10:6).⁴⁰

We then add a vertical line through the NOW-point to indicate that wherever our NOW happens to be, at that point ETERNITY impinges upon our consciousness. This is shown in Fig. 1b.

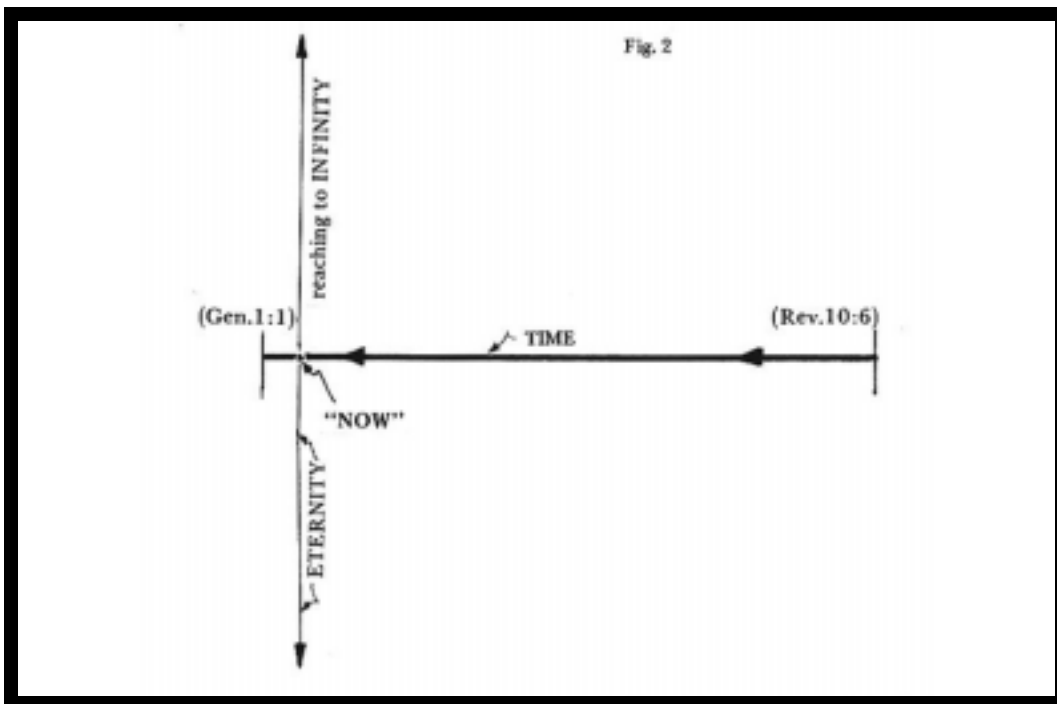


The pattern of two lines thus crossing, one representing the horizontal passage of TIME and the other the vertical NOW-ness of ETERNITY, allows us to carry the figure one step further in the service of setting forth the truth. The

⁴⁰ "And [the angel] swore by him that lives forever and ever, who created heaven, and the things that therein are, and the earth, and the things that therein are, and the sea, and the things that therein are, that there should be time no longer." Revelation 10:6.

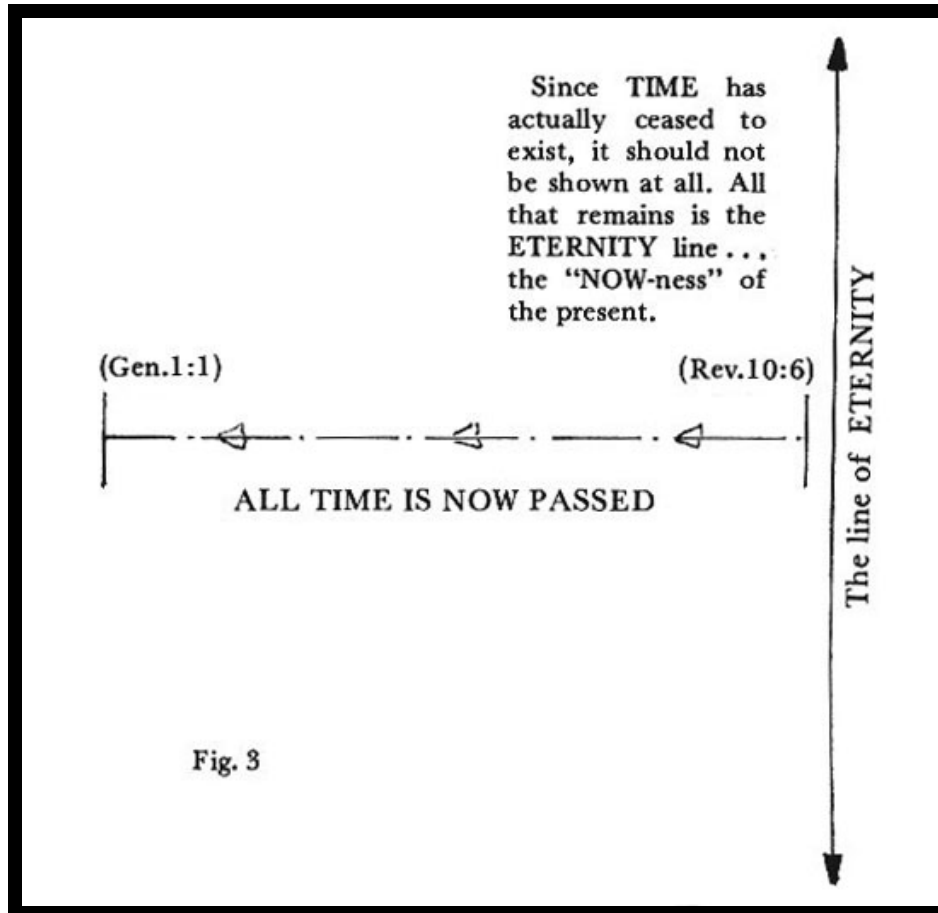
horizontal line moving through history continues to flow by us until, according to Scripture, it will one day come to an end. Time will then have entirely passed by, and the vertical line of ETERNITY will no longer intercept it. There will be no more time because this heaven and earth will pass away (Matthew 24:35).⁴¹ At the beginning — the beginning of time, that is to say — the line started its journey by intersecting the vertical ETERNITY line.

Thus we have this kind of analogy. Fig. 2 shows TIME a moment after "the creation" when only a short segment of it has elapsed.



⁴¹ "[Jesus said] Heaven and earth shall pass away, but my words shall not pass away." Matthew 24:35.

When this present universe comes to an end, the line of TIME will have completely moved across the vertical line and passed by it. Fig. 3 represents analogously that moment when TIME has only just run out.



Thus this vertical line of ETERNITY which stretches upward and downwards will be the only line remaining. It has no width, but its depth and height reach to infinity. The horizontal line representing the passage of TIME will have ceased to exist. *Intensity* of experience will replace *extensity*.

And so it appears that the only relation we can establish between time and eternity is at the point of intersection; and when time has passed by and is no more, we shall not be able to represent it in any way — except, perhaps, in our memory or by observing its effect upon the Lord's body in the marks of the nails and the wound

in his side. Everything else relating to time as we now experience it will have passed away.

The eternal as "now-ness"

It is necessary to say a further word about the sense of now-ness. We carry this with us as long as we have consciousness. It always has to do with conscious *being*, not with having been in the past or with hoping to be in the future. It amounts to this almost, that eternity is a kind of now-consciousness, an awareness of something which has no passing, but travels with us. So long as we *experience* time, it is like a single point that moves with us along the horizontal line of our time-frame. When that time-frame comes to an end and the horizontal line no longer intersects the vertical line to mark the point we experience as *now*, now-ness will cease to be a single point. We shall then experience it along the whole vertical line of eternity in a way that has nothing to do with *time* but has everything to do with depth and intensity.

This is where God is always 'present.' We shall in this experience presumably share something of his eternity. Our new kind of consciousness will of course be contingent upon his sustaining us, since it will always be true that "in Him we live and move and have our being" (Acts 17:28). It is He alone who is the great "I am," the One who lives in the present, He who "inhabits *eternity*" (Isaiah 57:15)⁴². The statement is an important one. We dwell in space and therefore in time, and both impose limitations upon us. God inhabits *eternity*, which involves neither time nor space as we experience them in the present world.

The essential quality of eternal life is depth (not length). The idea of permanence and enduringness is essential to it but it is not the prime quality which the New Testament emphasizes. What the Lord Himself emphasized was depth in the present rather than extension into the future: quality not quantity. The Old Testament saint was promised "*long* life" (Exodus 20:12);⁴³ the New Testament saint is promised "*life more abundant*" (John 10:10).⁴⁴

To think of length as the essence of eternal life is to suppose that the reality of it is to be measured by how long it lasts. But a little thought soon demonstrates that we are pursuing the wrong road to understanding when we follow this path.

⁴² "For thus says the high and lofty One that inhabits eternity, whose name is Holy; I dwell in the high and holy place." Isaiah 57:15a.

⁴³ "Honour your father and your mother: that your days may be long upon the land which the Lord your God gives you." Exodus 20:12.

⁴⁴ "I am come that they might have life, and that they might have it more abundantly." John 10:10b.

Physicists have recently discovered a particle that has independent existence of about one-fifteen billionths of a second!⁴⁵ Is this long enough to say that this particle, called an antiomega-minus baryon particle, is a reality? How long must a thing last to have real existence? Surely the reality of existence in eternity is not measured by "how long"?

The question is inappropriate because if the same question were asked of some creature that lived for only a fraction of a second (and there is no reason why such a creature may not exist somewhere), that creature would presumably view the even shorter-lived particle in the same light as we view something which has lived for a few hours or a tiny fraction of *our* life span. It is all a matter of viewpoint. It is tantamount to saying that reality depends upon timed existence; that is to say, existence over some *minimum* period. But then we have to ask, Did God not exist until He had created time in which to exist?

And what of angels? Angels do not have material bodies, although it seems they can sometimes assume them when fulfilling divinely appointed tasks such as the rescue of Lot and his wife from Sodom — "taking them by the hand" to hurry them out of the city (Genesis 19:16).⁴⁶ But if they do not have material bodies as normal to their existence, they do not normally occupy space either and therefore do not live *in time* as we do.

Moreover, they existed before the creation of the universe, since they were already present at its inception and rejoiced to see it (Job 38:4-7).⁴⁷ Did they therefore exist *before* time and thus *outside of it*? They were, however, created beings and therefore not "inhabitants of eternity" as God is.⁴⁸ What then was the nature of the framework of their existence if there was no time until the creation of

⁴⁵ On the discovery of these particles and on the problem of describing them, see Cyril Henshelwood, "Science and Scientists", *Nature*, Supplement, Sept. 4, 1965, p.1060; and also Allen Emerson, "A Disorienting View of God's Creation", *Christianity Today*, vol. 29, no. 2, Feb. 1, 1985, p.24.

⁴⁶ "And while he [Lot] lingered, the men laid hold upon his hand, and upon the hand of his wife, and upon the hand of his two daughters; the Lord being merciful unto him, and they brought him forth, and set him without the city." Genesis 19:16.

⁴⁷ "Where were you when I [God] laid the foundations of the earth? Declare, if you have understanding. Who has laid the measures thereof, if you know? Or who has stretched the line upon it? Whereupon are the foundations thereof fastened? Or who laid the corner stone thereof; when the morning stars sang together, and all the sons of God shouted for joy?" Job 38, 4-7.

⁴⁸ "For thus says the high and lofty One that inhabits eternity, whose name is holy; I dwell in the high and lofty place." Isaiah 57:15a.

the physical universe which came "later"? Can we speak of a *before* and an *after* in eternity while as yet there was no physical world in existence to constitute time in which to set events 'before' and 'after'? Is there a sense in which eternity does witness sequences of events that supply the ground for the terms *before* and *after* even though there is no actual passage of time involved? Is this the sense in which the Son of God said, "Before Abraham was, I am" (John 8:58)⁴⁹, re-asserting the NOW of his eternity by the words "I am," in spite of his use of the word "before"? Is there some kind of proto-time or pseudo-time in which the angels lived while awaiting the creation of the universe? Or are we to restate Augustine's insight by saying that *time* began with the creation, and read this to mean "with the creation of the spirit world" — this, then, being the first stage in the creation of the *physical* world?

To state this as simply as possible: Did *time* strictly begin with an act of creation *per se* — that is, the creation of the spirit world, this being only one kind of time? Was a second kind of time then initiated with the creation of the physical world? When this physical world comes to an end, will this second kind of time also terminate? But as to the first kind of time, appropriate to a created order that is spiritual, will it continue as long as created beings continue to give it meaning? It may indeed be beyond our comprehension — but it still bears thinking about.

If we limit the existence of time to the creation of the physical world we find ourselves called upon to explain how the creation of the angels, the bringing of something into being that was not there *before*, could occur when there was no time to accommodate this *before*. We therefore seem to be forced to conclude that the beginning of time was marked by creative activity *per se*, not merely with the creation of the material world as Augustine saw it. This makes the angels an essential part of the created universe in a way that we do not customarily think of them, but it does seem to be in accordance with Colossians 1:16 ff.⁵⁰ Here the creation of principalities and powers is linked with the creation of the material universe that constitutes the heavens and the earth, as though in a sense they all belong together. The creation of the spirit world and the creation of the physical world are thus lumped together without distinction.

⁴⁹ "Jesus said unto them, Verily, verily, I say unto you, 'Before Abraham was, I am.'" John 8:58.

⁵⁰ "For by him [Jesus] were all things created, that are in heaven, and that are in earth, visible and invisible, whether they be thrones, or dominions, or principalities, or powers: all things were created by him, and for him: and he is before all things, and by him all things consist." Colossians 1:16 & 17.

Two kinds of time?

Let me try to clarify what is involved here. Anything that is created must obviously have a beginning. We therefore have two kinds of beginnings. We have a beginning for the spirit world of angels: and we have a beginning for the physical world, the visible universe as we know it. Both came into being *de novo*. But the creation of the spirit world preceded by some unknown length of "time" the creation of the physical world. What kind of "time" was in this interval between these two "beginnings"? The present understanding of the nature of *time* is that it is coincident with the creation of space, and since only physical things occupy space we have to assume that one kind of space and one kind of time are coincident. Yet prior to the existence of this kind of space there was a created order of spirit beings who had not always existed since they clearly had a beginning. This interval must therefore also involve a kind of "time"-frame.

Do we not, then, have *two kinds of time*? The most familiar kind of *time* is that which the physicists associate with space occupied by a physical world. The other kind of "time" preceded the existence of space in the physical sense, but clearly represents something analogous to our spatial time. Was it *time* without space?

One might then perhaps hypothesize that this is the kind of "time" that will exist when the physical order has disappeared and when the new order will be composed of a heaven and an earth which do not grow old, and of creatures who are essentially spirit in nature and who also do not grow old. Thus if there is anything that will correspond to our present sense of the passage of time, it will involve some kind of "time"-frame such as the angels must have experienced after their creation, while they awaited the creation of the physical world. *It will be a time* that is agreeable to a form of existence that is completely real but is not spatial in the present sense.

If it is difficult to conceive of the transformation of a physical reality into a non-physical reality, a physical universe into a non-physical universe which is nevertheless just as real, one only has to remember that the Lord's body having been laid in the tomb was, in the resurrection, transformed into a not-altogether physical body that was just as real. This transformation in no way destroyed the recognizable identity of the Lord's body nor its patent tangibility to those still living in this present world.

Two kinds of creation?

One of our problems may be that we have without warrant separated between the spiritual creation and the physical creation of things. But the creation of the physical world may not in fact have been fundamentally different. Both worlds are almost certainly concentrations of energy in different form. Sir James Jeans

suggested that what we call light is really matter moving at its fastest possible speed, and that to move matter at this speed requires *infinite* power. As he pictured it, the moment this infinite energy is reduced and the speed of matter slows down, it ceases to be light and becomes "matter." He termed matter "bottled light" and he termed light "unbottled matter." Instead of *bottled*, he might have used the word *congealed*. For this is his basic meaning. Physicists are coming increasingly to the view that all the solid things about us are really "concentrates" of energy and that matter itself is basically spiritual in nature. Its solidity is to a large extent an illusion. The creation of angels was therefore the first step in the creation of a special form of matter, and accordingly the first step in the creation of a special form of space - and a special kind of time. The disappearance of energy in the congealed form which we experience as matter, will mark the disappearance of what we now experience as *spatial* time i.e., a time frame that demands a spatial frame also.

That the material order is by no means as substantial as it seems has been recognized for many years. In 1931 Sir James Jeans put the matter thus:⁵¹

The tendency of modern physics is to resolve the whole material universe into waves and nothing but waves, which we call radiation or light. If the annihilation of matter occurs, the process is merely that of unbottling imprisoned wave-energy and setting it free to travel through space. These concepts reduce the whole universe to a world of light, potential or existent.

Sir Richard Tute in 1946 said: "The modern scientist recognizes that physical reality is produced by superphysical agencies, which must be so designated because they can never be observed."⁵² And now, much more recently, Carl F. von Weizsacker, at a conference in 1969 in Switzerland, was quoted as having said:⁵³

The concept of the particle is in itself just a description of a connection which exists between phenomena, and if I may jump from a very cautious and

⁵¹ Jeans, Sir James, *The Mysterious Universe*, Cambridge University Press, 1931, p.77.

⁵² Tute, Sir Richard, in "Comments and Criticisms," *Scientific Monthly*, vol. 63, no. 4, Oct., 1946, p.322.

⁵³ Weizsacker, Carl F. von: quoted by W. H. Thorpe in his concluding remarks in *Beyond Reductionism*, edited by A. Koestler & J. R. Smythies, London, Hutchinson, 1969, p. 434.

skilled language into strict metaphysical expression, I see no reason why what we call matter should not be 'spirit.' If I put it in terms of traditional metaphysics, matter *is* spirit.

In short, as the writer of the Epistle to the Hebrews said long ago, "Through faith we understand that the worlds were framed by the Word of God, so that things which are seen were not made of things which do appear" (Hebrews 11:3). Paul, in writing to the Corinthians, said, "We look not at the things which are seen, but at the things which are not seen: for the things which are seen are temporal, but the things which are not seen are eternal" (2 Corinthians 4:18). And in Hebrews 10:34, the writer assures us that we have "in heaven a better and an enduring substance." In the English of the King James Version "substance" means *reality*, the kind of reality of which the chief quality is its permanence and unchangeable character. It is the material aspect of the present world that is wrapped up in its temporality. What is physical is temporal: that is why *space* (which physical things must occupy) and *time* are so intimately bound together and so impermanent. Time itself is fleeting.

We know from Scripture that this present physical order is to come to an end. Thus in Isaiah 65:17 the Lord said, "Behold, I create a new heavens and a new earth; and the former shall not be remembered nor come into mind." In prospect is a new universe and this new universe will be permanent. Isaiah 66:22 reveals: "The new heavens and the new earth which I will make *shall remain before Me*, says the Lord; so shall your seed and your name remain." Hebrews 1:10-12 seems to provide in more precise language the details of what is to happen to this present universe. "You, Lord, in the beginning have laid the foundations of the earth and the heavens are the works of Your hands: they shall perish; but You remain; and *they shall wax old* as does a garment and as a vesture shall You fold them up, *and they shall be changed.*"

That changed order is the subject matter of Revelation 21:1, "And I saw a new heaven and a new earth: for the first heaven and the first earth were passed away." The prospect is not a mere destruction of what now exists with nothing taking its place, but the creation of a new heavens and a new earth with at least one fundamental difference in it. It will never grow old. This qualifying statement is very important because it implies some kind of timelessness. The passage of time inevitably means growing old in our experience. It may be that in this new order some other kind of "time" remains which is compatible with the fact of creation. As we shall have new bodies and live in a new universe, so we may experience some entirely new order of "time," but it will not be something which is irreversibly expended as it is in this world in which we grow old and die. There will be no entropy, no "running down" of energy and no "running out" of time, no tiredness and no death.

Conclusion

Eternity, then, is not a mere extension of time. Nor is it to be confused with it. Time and eternity are clearly in different categories of experience. They involve two different universes which are currently co-existent. That the child of God should have a sense of "eternity" is only in keeping with the fact that in his new life he is "not of this world." In our present life, time and eternity are somehow interdependent, though it is difficult to see what form this interdependence takes. But it is reasonably clear that we can no longer merely add stretches of time together in order to build a concept of eternity. Experience on the other side of the grave will not be "an experience of inexhaustible *time*" but rather an experience of *timeless-ness*.

Such is the philosophical account — illuminated by revelation.

➡ PROCEED

