

Space, time and cause

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Summary table

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| <i>Body</i> | World of objects | Material structure, formed from parts | Space, made up of co-existing points |
| <i>Senses</i> | Dynamic flow of changing forms | Co-ordinated functioning of energetic activity | Space-time, made up from connected paths of happening |
| <i>Mind</i> | Succession of mental states | Evolving process of perceived and thought and felt appearances | Time, made up of replacing moments |
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| <i>Consciousness</i> | Continued knowing | Subjective background, where each appearance arises and gets taken in | Unchanging cause of all varying and differing appearances |

Objects in space

Seen through our bodies, a world appears to be made up of objects. Each object is a part of world, existing in a particular location. From its particular location, an object acts on other objects. Thus, objects act and interact, through forces that they exert upon each other.

Through this forceful interaction, smaller objects are related to each other, in larger structures and larger objects that are made up of smaller parts. Each object is a piece of matter, interacting with other such pieces of matter, in the formation of material structure in the world.

This world is seen distributed in space, which is made up of co-existing points. As objects act and interact, the world's material structures change, in the course of passing time. (See the first row of the summary table above.)

Here, the world and its objects are described as material structures, changing in the course of time. In this description, space and time are assumed to be objective measurements, found independent of the differing perspectives of different observers. Such an assumption is made in what's called 'Newtonian' mechanics.¹

¹ 'Newtonian' mechanics is so called because it was mathematically developed by Isaac Newton. But, as Newton thus developed it, he was aware of its limitations; and the advances

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Observation of space-time

When it is asked how objects are observed, it then turns out that space and time are relative measurements, which depend inherently on the observer. For space is known in the course of time. As differing observers move in relation to each other, they get different views of the world and its changing structures.

Each observer sees the world as a series of passing snapshots, with each snapshot showing a dynamic structure made of moving objects. The snapshots and the structures differ from observer to observer. What differing observers see in common are not any passing snapshots, nor any changing structures that are shown to be made up of objects. Instead, what's seen in common is a space-time continuum, made up from connected paths of events and happening.

That space-time continuum has long been conceived, as for example by the ancient names 'ether' and 'ākāsha'. In Einstein's theory of relativity, this conception is now used to replace a material mechanics of objective force by an immaterial geometry of connected happening.

At present, this theory works reasonably well at large scales of size, where the universe is viewed as a macrocosmic whole. In this macrocosmic view, gravitational phenomena have been explained as the result of a geometrical curvature in the space-time continuum. But microcosmically, where the world is viewed at smaller scales of size, there is a problem. In its present state of development, the theory of relativity has not been able to account with much success for microcosmic phenomena, in particular for electromagnetic and sub-atomic forces.

In trying to describe the world at small scales of size, modern physics has developed mechanical instruments like microscopes, which help us to observe what happens in smaller spaces and shorter times than our unaided senses can detect. As modern physics looks down into smaller and smaller scales of size, it shows us that matter is made up of tiny molecules, which account for a variety of solid and liquid and gaseous states of matter that our senses perceive.

On further investigation, these molecules are shown to be made of even smaller parts, called 'atoms'. Moreover, by describing how atoms are combined into molecules, we get an effective account of chemical substances, which react upon each other so as to form the solids and liquids and gases that show up in the material world.

But as we come down to the scale of atoms, and as we try to look at even tinier scales inside them, the mechanical approach of modern physics has come up against a rather tricky problem. Here, it turns out that our mechanical instruments are jerky and uncertain in their measurements, to a substantial degree that we cannot properly control.

The more accurately we measure space, the less accurately we can measure speed and momentum. The more accurately we measure time, the less accurately we can measure energy and mass. As a result, modern physicists have to concede that what seems to be empty space is not empty at all. It is filled with huge fluctuations of

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he achieved were made by questioning more deeply back, beneath its limiting assumptions. He was profoundly interested in alchemical and theological questions that go far beyond the restrictedly mechanical descriptions of modern physics.

momentum and energy; and the fluctuations get unlimitedly huge, as we consider smaller and smaller spaces or shorter and shorter times.

The world is thus shown to be more and more complex, unlimitedly so, at smaller and smaller scales of size and time. And our mechanical measurements are shown to be correspondingly uncertain and compromised. To manage this uncertainty, modern physicists adopt a rather strange and confusing approach, called ‘quantum mechanics’.

In this quantum mechanical approach, there is a double standard of consideration:

- On the one hand, the observing instruments are assumed to be fabricated mechanically, as material structures that have been made up from crude pieces of matter. These pieces of matter are inevitably crude, because of their coarse and their incomplete perception through our limited and partial senses.
- On the other hand, what’s observed is considered in a far more subtle and sophisticated way, as a conditioned field. The field is described by attributing a mathematical value to each point event of happening in space and time.

What’s thus considered is not just a material construction. It is not just a construction that has been made up materially: from pieces of matter that we have so crudely perceived through our partial senses, and through their gross extension by mechanical instruments.

Instead, what’s considered here – through this field description – is far subtler and far more essential, in a more deeply connected accounting of what is observed. What’s here considered is a pervasive conditioning of the space-time continuum, taken as a whole.

Accordingly, what quantum mechanics shows is the result of a mismatch: between a subtle field conditioning and much cruder instruments through which that conditioning is mechanically observed. The mismatch must of course produce uncertain and jerky measurements; but quantum physics works by acknowledging and thus partly allowing for the uncertainty and jerkiness.

Through a repeated application of this partial allowance, quantum theory and its instruments have been progressively developed – so as to improve our mechanical technology, in its achievement of particular results. The improvements have been obviously successful, but their particular results must be paid for by an inevitable cost – to the environment in which we live and practice such mechanical technology.

The cost is unavoidable, because its particular results are achieved by specifying them more narrowly. Thus narrowed down objectively, they require diverging specializations that must somehow be co-ordinated, to make them work together in a shared environment.

And the co-ordination then must multiply complexity, in order to accommodate an ever-growing diversity of specified requirements. Both theory and technology get here mind-boggling and opaque, to the intuitive understanding of our living faculties. It thus turns out that something more is needed than a merely mechanical approach, which does no more than calculate results.

Beyond the mechanical approach of modern physics, there is a further approach that may be called ‘organic’. Here, it is recognized that observation is not just mechanical. The world is observed through our sense-organs, which are alive. As they produce their observations, they are motivated by a living energy – which inherently expresses living purposes and meanings, from an underlying consciousness.

In Sanskrit, that living energy is called ‘prāṇa’. It is not an energy that acts mechanically, from one object to another, in some material structure observed in the external world. Instead, it is an energy which must arise organically – with an essential sense of purpose and meaning, from a subjective consciousness that underlies our observation of objects in the world.

As we observe the space-time world, our living senses display a dynamic flow of changing forms, in the microcosms of our observing personalities. And, through these microcosms, we observe a co-ordinated functioning of energetic activity, in a space-time world that is made up from connected paths of happening. (See the second row of the summary table on page 1.)

So, in order to improve our observations, we are not necessarily restricted to an outward extension of our senses, through mechanical instruments. We can also reflect back into our observing microcosms. Through that reflection, we develop their organic functioning, as purposeful and meaningful systems of a living activity whose energy originates in consciousness.

Such an organic approach is used in many old sciences – including various ritual and ceremonial disciplines, astrology, alchemy, traditional medicine, bodily training and breath control. These sciences are not applied restrictedly, through mechanical instruments, in the way that modern physics is. They are applied more essentially through living faculties, which they train and educate, in the senses and the minds of their scientific practitioners.

Here, in these sciences, a living body is not treated just as a material structure. It is treated more essentially as a dynamic system of energy, which keeps transforming through its flow of changing activity. And the world that body observes is treated correspondingly, as a living energy system corresponding macrocosmically to its microcosmic representation in the observing body.

In this organic approach, observation is a naturally inherent correspondence between each observing body and the world of which the body is a part. Thus, our observations may be improved reflectively – by cultivating them more deeply, from further back into the subjective depth of knowing.

Mind in the course of time

But how do we reflect back down, to underlying consciousness, beneath our superficial observations of a made-up world? We reflect by asking what our observations mean. As we thus ask for meaning, the questioning reflects back into mind, which we experience quite differently from the external world.

- The world is experienced as a structured space (or a structured space-time), where different objects (or events) can co-exist.
- But mind is experienced as a passing process, which occurs in time alone. In any mind, each moment brings a single state. As time passes, different moments do not ever co-exist. They only replace each other, in the course of time. So also, different states of mind replace each other, in a passing stream where co-existence is not found.

Thus, as we reflect back into mind, all co-existence disappears. In mind alone, no differently located parts are ever found to co-exist, in any structural relationship. No structured space of any differentiated world is ever found in any mind, at any moment of mind’s passing process.

Our minds conceive that they experience a structured world, made up of the many different objects to which they turn attention. But this conception is not actually correct. No mind in fact attends to more than one object at a time. What's actually experienced is thus always single, at each moment of mind's turning attention.

At any moment in each mind, there's never any more than one object of attention. Our minds imagine that they experience complex structures, combining different objects of attention. But this imagination is quite false. Our minds are here confused by a misleading trick of memory. Remembered objects that have passed from attention are misleadingly believed to be present at some later moment: as parts of some later, more complex object that replaces them.

But then, just what is it that we experience in our minds, as their singular attention keeps on turning here and there, through a bewildering variety of objects and events? What's thus experienced is not body's world of structured space. Nor is it senses' changing forms, produced by an observer's travel through the space-time structure of connected happening.

Each mind's experience is instead a succession of mental states, which keep displaying an evolving process of perceived and thought and felt appearances. Throughout this process, states of mind keep passing by, in the course of a time that is made up of replacing moments. (See the third row of the summary table on page 1.)

But what then is this evolving process that takes place in each mind? It is essentially a process of continued learning, through our perceptions, thoughts and feelings of a mind-imagined world.

Causality from consciousness

As learning thus proceeds through time, what is its continuity? What in this process carries on, so as to know that states of mind have changed? And what absorbs their changing show into some sort of continued understanding? Wherever learning is observed to carry on through changing mind, there is implied a knowing that stays somehow present, while passing states replace each other in the course of time. That knowing presence is called 'consciousness'.

In the process of each mind, consciousness is always present, knowing each perception, thought or feeling that appears and disappears. These differing perceptions, thoughts and feelings are mind's changing states, which come and go at the surface of mind's limited attention.

It's at this surface of attention that all differences appear. Beneath the surface, consciousness is shared in common, by all changing states of mind. It is mind's knowing principle, found underneath mind's changing states, at the common background of continuing experience.

At that common background, time and change do not apply. Nor do space and difference. There, it turns out that knowing is quite different from all changing acts, through which our bodies, senses and our minds produce a variety of differing appearances.

Each perception is an act, through which the perceiving body and its senses change, as they produce some sensation of an object. Through bodily and sensual acts, such sensations are produced, as perceptions that appear in mind. The mind in turn gets changed thereby. And it goes on to further change, as it interprets sense-perceptions through its mental activities of thought and feeling.

But, as our bodies and our senses and our minds get changed – by their perceiving and thinking and feeling activities – all that’s achieved is the production of appearances, which come and go in mind. This production is not knowledge. It only acts to produce a changing show, of perceived and thought and felt appearances, at the surface of each mind.

The show is not knowing in itself. What’s knowing is just consciousness, which is found always present, throughout whatever may appear or disappear. All changing acts and differing appearances are known by light of consciousness, whose very being is to know.

That consciousness does not do anything which changes it in any way. Its knowing is no changing act which gets put on or taken off. It knows by being what it is, so that its knowing and its being are identical. Its very being lights itself, thus shining with a knowing light by which all appearances get lit.

At the background of experience, consciousness is found alone, beneath all changing states of mind. There’s only knowing in itself, beneath all objects that appear and disappear. That background is thus purely subjective. All it contains is a purely knowing subject, utterly unmixed with any objects of perception, thought or feeling through our bodies or our senses or our minds.

As each object appears, its appearance is produced through perceptions, thoughts and feelings which express a sense of purpose and meaning and value from their underlying consciousness. Each perception, thought or feeling rises from that knowing background, which they all inherently express. As they produce appearances, of seeming objects in the world, that purely subjective background is the one reality that gets thereby expressed.

It is expressed in everyone’s experience, as each appearance rises from within. And there, beneath appearances, its knowing presence carries on, as the appearance then goes on to be interpreted and understood, thus taking it back in.

In short, consciousness continues knowing, at the subjective background of experience, where each appearance arises and gets taken in. And consciousness may be described accordingly, as an unchanging cause of all varying and differing appearances. (See the bottom row of the summary table on page 1.)

But in this use of the word ‘cause’, we are speaking of a *subjective* causation, which is quite different from the *objective* causation that we more often take for granted in our descriptions of the external world. So, to avoid confusion, it may help to distinguish these two kinds of causation and the ways of thought that are used to describe them.

- An objective causation acts from one object to another, in some structure that is made of co-existing objects. In this causation, objects act by exerting force upon one another: so that each object gets moved by a combination of external forces, exerted from elsewhere, in the structured space of world.

Objective structures thus get changed, as they form and transform through the movement of their parts, in a world that is driven by an interacting energy. The world is here mechanically described, as a machine made up of parts exerting force upon each other’s functioning.

Such a description works through a mechanical modelling. It builds a model made of parts, so as to represent some further structure that is thought to be observed in the world. The model works mechanically, as an artificially symbolic

machine. But it is meant to mimic the behaviour of a more natural structure that has been observed in the outside world.

The mimicking enables predictions to be made, so that plans and strategies may be devised, in order to achieve desired objects. The more successful the predictions are, and the more effective the resulting plans and strategies, the truer such mechanical descriptions must appear to be – in this objectively oriented approach.

- But, where experience is subjectively considered, causation does not act from any bodily or sensual or mental objects. All such objects are considered as apparent effects, produced by perceptions, thoughts and feelings that arise from underlying consciousness. A subjective causation acts essentially from there, from that knowing subject which stays present through all changing appearances.

Acting from that knowing subject, nature is not just a world made up of external objects. Instead, it includes all bodily and sensual and mental activities, producing all appearances that come and go before the light of consciousness in every changing mind.

No outside world, nor any object manifests itself. For any object to appear, bodily activities of sense-perception are required to produce an appearance of this object. And mental activities of thought and feeling are required to interpret the appearance in relation to other objects in the world.

But nature manifests itself, because it is the realm of all bodily and sensual and mental activities. When considered thus completely, nature includes all of the living faculties that make it appear, in everyone's experience.

That all-including nature acts of its own accord, motivated from inside. Its actions rise spontaneously, inspired to arise from their knowing background, which lights them each from its self-shining presence. Their energy is not motivated by any object, but only by that knowing subject which they each express.

Considered thus in all its completeness, nature is not taken to be driven artificially, by repelling or attracting forces that are exerted by a variety of partial objects. Instead, all nature's acts are considered to be done impartially. They are not done for objects, but only for the sake of consciousness that gets thereby expressed.

As nature acts from consciousness, the many acts of nature are inherently alive. They rise expressing consciousness, which knows them from within. From there, they rise spontaneously – completely of their own accord – inspired by the self-shining presence of consciousness, which is their one reality. And they arise just for the sake of expressing that reality – through a variety of changing appearances that shine by its reflected light, before its unaffected witnessing.

In everyone's experience, it is appearances that change, as they arise into their differing expressions of an underlying consciousness. Here, change is not driven by external force, exerted from some object outside of the appearance. Instead, as appearances arise expressing consciousness, they form and transform of their own accord. For they are inspired naturally from consciousness itself, which is their own subjective reality.

This is no mechanical description of a structured world, made up of differently located parts. Instead, it is an organic description of evolving nature, whose functioning is essentially alive. Nature's functioning is here described as motivated by a living energy, expressing an essential sense of purpose and meaning and value from underlying consciousness.

To use such an organic description, we have to reflect back into our living faculties of body, sense and mind. It's in these faculties that each of us finds living energy most close at hand, though personally expressed. The problem here is to reflect beneath our partial personalities, back into an unchanging consciousness that underlies all nature quite impartially.

Only then can our sciences be truly scientific: as they describe an outside world, or living nature, or human cultivation, or inwardly expanding mind, or underlying truth.

In any science, scientists must standardize their observations and their descriptions of what it is that they observe. In a mechanical approach, objective instruments and language are made standard, through institutions that get organized commercially, politically and socially.

But even this external organization must depend upon an inner standard of knowing that is shared by different individuals. As they communicate, they must refer back to a knowing ground that they somehow share in common. That common ground must be shared subjectively, as they engage across their differences.

Thus, learning and education must depend upon a common subjective standard, which is inherently impersonal and unconstructed, beneath all personal and cultural constructions. That is the natural basis on which we learn, in all our approaches to truer knowing. As these approaches question back more deeply, they return more directly there.

In the end, to return directly back, all written documents and instituted teaching must be left behind, for a reflective questioning that's taught by a living teacher:

Where *written documents* are read,
a reader must interpret words
and symbols that describe a world
made up of objects and events.

A cultural community
of readers thus gets trained to use
constructed forms of information
organized externally
by instituted schools of thought.

Where *spoken words* are heard alive,
a listener may there reflect
to knowing that is found expressed.

An individual student thus
is led to a discovery
of knowledge that a teacher shows.