

## *Educating sciences of life and mind*

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### **Nature and consciousness**

In our current ideas of science, modern physics occupies a central place. We tend to think of it as the hard core of exact knowledge, where science is at its most scientific. And so we tend to think that other sciences must be made more like modern physics, to make them truer and more scientific.

But there is a problem here, because modern physics is a specially restricted science, with its own kind of limitation. It achieves its exactness at the cost of a special restriction in its method and its scope. The restriction is that modern physics is tested and applied through a technology of materially constructed instruments and machines, which are made accurate by material measurements and specifications carried out through our external bodies. Accordingly, in its field of observation and application, modern physics is inherently restricted to an external world of objects that we observe and interact with indirectly, through material instruments.

By this restriction, our experience is divided into two parts: objective and subjective.

- The objective part is an impersonal world, where modern physics is applied, through its technology of material instruments and machines.
- The subjective part consists in our sensual and mental personalities, through which the world is perceived.

Here, for every individual, the subjective part of experience is a knowing person, with personal faculties of body and mind. And the objective part is a known world. Thus, knowing is identified as personal. And a more impersonal knowledge is developed through material instruments that are used to achieve external objectives in the world. This is the modern physical approach, used by modern physics and the many branches of science that are based on it.

However, in this physical approach to science, subjective investigation is inherently ruled out. Since it is here identified as personal, no room is allowed for it to get past the partialities of personality and thus to get more scientific. Accordingly, a rather different approach is needed, in order to consider how a subjective knowing may become more impartial and more scientific.

In fact, there has long been such an approach, from much before the development of modern physics. And many old sciences are based on it. In that old approach, the objective part of experience is conceived more broadly. It includes not only the external world, but also our conceiving minds. It is thus the realm of all activity, both physical and mental. In English, we use the word 'nature' to describe this realm of functioning activity. In Sanskrit, it is called 'prakriti'.

When our minds conceive of an external world, it is an artificial construction, conceived by minds that it excludes. It does not show itself to us, but needs the addition of our senses and our minds in order to show up in our experience. By contrast, the idea of 'nature' points to a complete functioning which includes the world and the faculties of sense and mind that produce all the appearances in everyone's experience.

So, in this broader conception, nature shows itself, containing all the activities that make it function. It manifests itself, spontaneously, always of its own accord, motivated from within. This spontaneity is what makes nature natural. It is not interfered with or driven artificially, from the outside, by any instrument that is left out of its consideration.

When nature is conceived like this, all instruments and faculties of personality are taken into it. Here, they belong to the objective part of experience. They are part of what is known, quite distinct from that which knows.

Thus, with all physical and mental faculties included in objective nature, what's left is a pure consciousness entirely detached from personal activities. That consciousness is in the end impersonal and actionless. It has in it no trace of physical or mental personality, nor is it mixed with any physical or mental actions. All actions, carried out by any instrument, belong to objective nature, which gets illuminated by the knowing light of consciousness.

That light is not an act which consciousness puts on. Instead, to shine with knowing light is the very being of subjective consciousness. By its mere presence, always unengaged in any changing act, it illuminates all the appearances that nature shows, in everyone's experience.

Here, in this old conception of nature and consciousness, the objective part of experience is described as the *doing* of nature. And the subjective part is described as the *knowing* of consciousness. This is a division of experience into doing and knowing.

- *Doing* is the action of an instrument, which is itself an object of some other such action. Such actions occur in the realm of a completely objective nature, producing all phenomena, both physical and mental, throughout all space and time. Everything that appears – no matter in whose experience, nor where, nor when – is here conceived to be produced by the same objective nature, acting in the outside world and in each personality.
- *Knowing* is the actionless illumination of a purely subjective consciousness, which is not an instrument or an object of any action. That consciousness is self-illuminating in itself, in its own being. By its mere presence, as it is, in everyone's experience, it lights each one of the appearances that come and go. Its actionless illumination is thus conceived to light the show of changing happenings that nature manifests, no matter where or when perceived.

In this conception, knowing is inherently impersonal, at the inmost centre of personal experience. That centre is at once subjective and impersonal. But it is surrounded by mental and physical activities of personality, which obscure its impersonal and actionless illumination. It thus appears confused with personal activities, and it seems compromised by their partialities. This is our outward view of it, seen through our personalities.

In Sanskrit, the central essence of a person is called ‘purusha’. It is described in the Brihadāraṇyaka Upanishad (2.5.18).<sup>1</sup>

|                    |                                      |
|--------------------|--------------------------------------|
| sa vā ayam purusha | That which is within all bodies      |
| sarvāsu pūrshu     | is in truth, this purusha.           |
| purishayah...      | For, in the body, it abides at rest. |

Thus, purusha is that which lives in personality, at the centre of a person’s physical and mental activities. It lives there quite unmoved and undisturbed, as an unmixed consciousness whose knowing is quite unattached to anything that’s known. There is in it no mixture with our physical and mental personalities, whose actions it illuminates. Accordingly, it is an impersonal core of subjective knowing, found at the centre of our lives, as our minds and bodies carry out their actions in the world.

This conception opens up the use of subjective investigation, in scientific disciplines that seek to know things more impartially. By reflecting inward, a subjective questioning can get progressively detached from partialities of personal perspective; thus seeing things more deeply and more clearly, from a stand that has gone deeper back towards the inner core of personality. Here, knowledge is refined and deepened by a process of inward detachment, progressing towards a subjective centre where our knowing is essentially impersonal. Thus, by going deeper back into our lives and minds, we tap resources that enable us to see and do things better.

### **Energizing life**

However, an inward search for knowledge does of course present us with a tricky question. Having gone back in, how does one come out again? How does an inner knowing get applied, in the world that we perceive outside?

This question is answered by the idea of ‘life’. Very simply, life is how consciousness becomes expressed, through nature’s functioning. We experience that expression in our living bodies, particularly when we speak. Then, as we speak, breath flows and vibrates, so as to produce the meaningful appearances of spoken sound. Thus, through a vibrating flow, of breath that rises from within, consciousness becomes expressed in speech.

In many old conceptions, the flow of breath producing speech is used as a metaphor for the expression of consciousness in nature. In Sanskrit, the energy of that expression is called ‘prāṇa’, which means both ‘breath’ and ‘energy’. The energy of prāṇa is conceived as flowing and vibrating in a subtle way, like breath, so as to show us meaningful expressions of consciousness, appearing in the outside world.

In this idea of ‘prāṇa’, energy is treated as essentially alive. But its life is not just personal. For the consciousness expressed by it is not a personal activity, confined to the personalities of any living creatures. Instead, that consciousness is actually found present everywhere. For it illuminates each one of the appearances that nature manifests, in all experience of the manifested world. As actually experienced, by anyone, wherever nature manifests, consciousness is present there, illuminating what appears. It thus extends throughout all nature’s manifesting of the world.

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<sup>1</sup> The translations in this essay are rather free, each giving only one of many possible ways in which the old texts may be translated.

This provides a comprehensive description of experience, as a process with two aspects complementing one another. Nature is the manifesting aspect, producing all appearances through physical and mental action in the world. Consciousness is the illuminating aspect, lighting each appearance by its presence through them all. And prāṇa is the energy that drives the whole process of manifestation, by expressing consciousness in the appearances that nature manifests.

In the minds and bodies of living creatures, consciousness is personally expressed, by personal activities of our limited and partial faculties. But, in nature as a whole, the expression is impersonal, through universal principles of nature's ordered and intelligible functioning. Thus nature has a universal life, expressed through natural principles of purpose, meaning and value that we understand reflectively. We understand them by reflecting back into our own experience, where they are found as well.

In that reflective understanding, we go beneath all physical and mental faculties, to an inmost depth of experience where no personality remains. It is from there that the living energy of prāṇa rises, expressing consciousness in all of nature's functioning, both in our personalities and in the outside world.

Thus prāṇa is an energy that acts from underlying consciousness. It does not act from any object or from any faculty of personality. All faculties and objects are its instruments, which it produces as it rises from beneath them, expressing consciousness through their activities in nature's functioning.

In the external world, prāṇa is conceived to behave in a way that has some similarity with the energy of modern physics. Here, material objects are conceived as concentrated or coagulated patterns of dynamic energy. Through our crude, unaided senses, we see these patterns as gross objects, with boundaries separating them in space and time. But, beneath their gross appearance of bounded separation, they are essentially interconnected, by subtle vibrations and radiations of fluctuating energy. All objects are conceived to be made up of subtle particles, described by the Sanskrit word 'aṇu'. Somewhat like quantum particles, aṇus are not just small pieces of gross matter. Instead, they are tiny elements of dynamic energy, organized in interconnected patterns of vibrating and radiating fluctuation. As it is said in the Kaṭha Upaniṣhad (6.2):

|                 |   |
|-----------------|---|
| yad idam kin ca | The universe of changing things –         |
| jagat sarvam    | whatever may be issued forth –            |
| prāṇa ejati     | it is all found in living energy, whereby |
| nihsritam...    | it moves and oscillates and shines.       |

But, beneath the similarity with modern physics, there is of course a crucial difference. The energy of prāṇa is alive. Both in our bodies and the world outside, it is a natural energy whose functioning expresses living purpose and meaning, from underlying consciousness. This living energy cannot be accurately known by looking out at its external forms and thereby controlling them, through our material bodies and their external instruments. To know it properly, it must be approached reflectively, through a reflective listening that harmonizes our living faculties with what they see outside themselves.

From the viewpoint of prāṇa (and other such notions in different traditions), the energy of modern physics is rather crudely objective. For, in modern physics, energy is measured through material instruments and described by mathematical calculations. Thus measured and described, it is controlled, again through material instruments,

towards the achievement of external objectives. The trouble here is that a subtle energy is being measured and controlled by material instruments which are essentially cruder and more gross.

As quantum physics admits very explicitly, such crude material instruments interfere indelicately with what we know through them. So they can only give us an uncertain and discontinuous knowledge of the world. Thus, on the one hand, quantum systems are mathematically described as evolving in a perfectly definite and continuous way, when we do not measure them or interact with them through our instruments. But, on the other hand, this mathematically ordered certainty and continuity cannot be known properly through our crudely interfering and disturbing instruments, which can only measure and control things doubtfully and jerkily.

The calculations of quantum physics are of course extremely complex and sophisticated, and they can be very successful in a specialized kind of way. But to quite an extent, the mathematical sophistication is a convoluted way of managing an admitted crudity of our material instruments; and such convolution can only work partially, achieving some particular results here and there. It cannot properly make up for the underlying crudity that always undermines it.

For the problem comes inherently from leaving the measuring and controlling instruments out of a more subtle consideration that is applied to what they measure and control. The instruments of modern physics are not quantum specified. They are constructed and specified in a gross material way that is far cruder than the subtle mathematical precision which is used to describe undisturbed quantum systems. Thus left more crudely specified, such gross material instruments must have an inherently uncertain and jerky effect, in both reporting and disturbing the more subtle energy that they are meant to measure and control.

In the idea of 'prāṇa', as 'living energy', the same problem of accuracy is differently approached. When energy is thus conceived, as essentially alive, its observation and control is essentially reflective, quite unlike the external observations and controls attempted through the material instruments of modern physics.

In order to observe the living energy of prāṇa, looking through material instruments is insufficient. There has to be a reflection back into the living energy in one's own personality. It's only by returning back into one's own living faculties that prāṇa can be seen and controlled, expressing consciousness in personality and world.

For prāṇa is an energy of inspiration, essentially including purposes and meanings and values that we perceive in persons, objects and events. It's only through some inwardly inspired sense of purpose, meaning and value that persons, objects and events are seen expressing consciousness. The energy of prāṇa is an inner inspiration that arises from underlying consciousness, found always present underneath each object and event, in everyone's experience. From there, each object and each happening spontaneously expresses consciousness, through the purpose and the meaning and the value that we see in it, as part of nature's functioning.

In this conception, nature's actions are all animated from within, by the inner inspiration of prāṇa's living energy. Nature does not function like a partial person, driven by limited and changeable desires for some partial objects of external perception. Instead, the functioning of nature is inspired only for the sake of expressing an inner consciousness: which in itself remains unmoved and unaffected, through all of nature's changing acts. As the *Sāṅkhya-kārikā* puts it (in stanza 60):

nānā-vidhair  
 upāyair upakāriṇy  
 anupakāriṇaḥ pumsah,  
 guṇavaty agunasya  
 satas tasy' ārtham  
 apārthakan carati.

All qualities belong to nature,  
 as she acts in many ways:  
 not for the sake of objects gained,  
 but serving only for the sake  
 of that true inner principle  
 which has no qualities itself  
 and is not moved by any act.

The inner principle is what Aristotle called the 'unmoved mover'.<sup>2</sup> It is the unmoved ground of knowing, present everywhere, beneath all experiences of personality and world. At that unmoved ground, there is no movement or activity; but all movement and activity arises up from there. And it arises naturally, not driven by any mental or physical instrument, but motivated by an inner inspiration that spontaneously expresses consciousness in everyone's experience.

That inner inspiration is the living energy of *prāṇa*. As it arises from the impersonal ground of consciousness, it functions naturally through the living purpose, meaning and value that we find expressed in nature's ordered and intelligible functioning.

And this natural functioning is not personal. It does not act partially, in order to achieve the limited objectives of some partial personality. Instead, the functioning of nature is essentially impartial, though an impersonal order and intelligibility whose purposes, meanings and values are in essence quite impartial and impersonal.

The trouble is that we see nature partially and personally, from our partial faculties of limited personality. That produces an appearance of living purposes and meanings and values which seem to be personal and partial. But this appearance is a misunderstanding of nature, according to the old idea of '*prāṇa*', as 'living energy'.

In order to correct the misunderstanding, there must be a reflection all the way back into the inmost ground of consciousness. From there, the living energy of *prāṇa* functions naturally in what we feel and think and do and see, as attention goes out towards the world.

So, when an inward search for knowledge reaches fully back into the unmoved ground, there's nothing further to be done. There, at the inmost ground, it is meaningless to ask for some technology of action that is needed to apply what has been

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<sup>2</sup> In *De Anima* (408b), Aristotle describes the unmoved mover as an inner principle of soul, of which we cannot rightly say that it 'feels anger' or 'thinks' or 'weaves' or 'builds' or is thus engaged in any personal act.

'Nor is it correct to say that the soul is itself moved, as in anger. It is even scarcely correct to speak of the soul as feeling anger. For this would be like saying that the soul weaves or builds. We should rather not say that the soul pities or learns or thinks, but that a person does so in virtue of the soul. And by this we would not mean that movement is ever *in* the soul. But rather, we should mean that movement is sometimes *from*, and sometimes *towards*, the soul.'

(Translation adapted from two sources: *Brett's History of Psychology*, edited and abridged by R.S. Peters, George Allen and Unwin, London and Macmillan, New York, 1962; and *Aristotle: De Anima (On the Soul)*, translated by Hugh Lawson-Tancred, Penguin Classics, London, 1986.)

found. For, from there, all application is completely natural, in the spontaneous rising of prāṇa from its inmost ground.

However, if an inward search stops short, at some faculty of seeing, thinking or feeling, the situation is quite different. For then, we are at an intermediate level of experience, through which the external world is known. Here, our minds are engaged in a cultural and personal activity of taking information into our constructed pictures of the world.

This picturing activity of mind is inevitably partial and incomplete. Its constructed pictures do not naturally apply themselves. Instead, they need some further deliberation to apply them usefully. Their interpretation requires a deeper reflection back to underlying consciousness; and their application requires further technologies of partial action, narrowly restricted to prescribed objectives.

### **Mediating mind**

In the process of experience, as our minds construct their pictures of the world, prāṇa is the energy that animates the pictures. It makes them move and change, dynamically expressing the consciousness that continues underneath their moving elements and changing qualities.

Thus, consciousness is like a background screen, upon which changing pictures form. That screen is both self-animating and self-luminous. From it come both the energy that motivates its pictures and the light that shines through them. As the pictures form, they appear at the changing forefront of experience. But their motivation and illumination comes from the knowing light of underlying consciousness, which continues in the background.

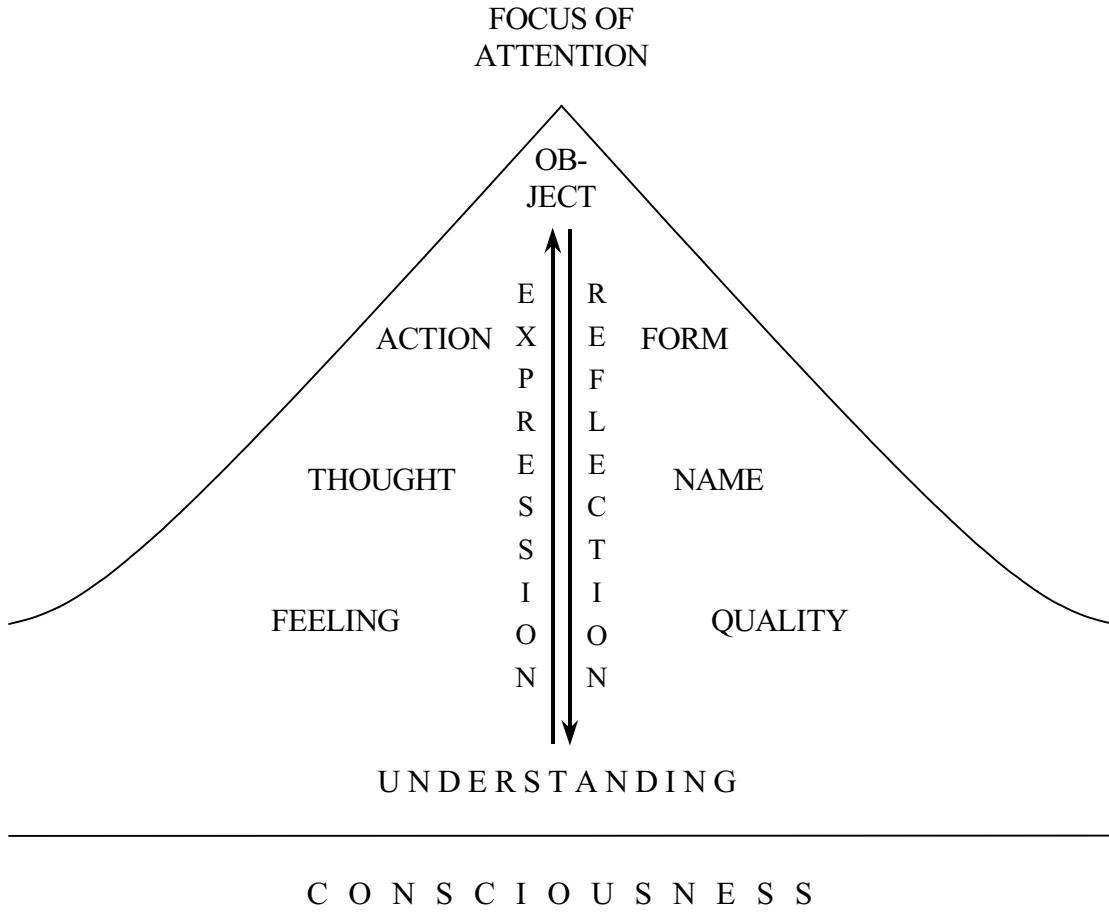
Each object that appears is a pictured element, in some larger picture of the world. Because our minds are partial, they don't see everything at once. Instead, their attention focuses on limited objects, which appear and disappear. When an object appears, it is then at the forefront of a narrowing attention. But this attention draws upon a background understanding of the world, in which the object is a part. It's at the tip of mind's attention that each object appears, in particular. But, beneath these particular appearances, the world as a whole is understood, at the background of experience.

As time proceeds, our minds go through a succession of passing states. In each state, a current understanding gets expressed, through feeling, thought and action that take attention out to some particular object. The object then appears perceived; and its perception carries meaning that next gets to be interpreted. So, each expression outwards gets followed by a reflection back in. As each object is conceived and interpreted, there is a reflection back – through the object's form, its name and its quality – to underlying consciousness.

This cycle of expression and reflection is illustrated in figure 1 (next page). The illustration shows our minds as expressing consciousness and reflecting back to it: through a series of intervening levels that rise from a broad base of subjective understanding to a narrow tip of objective attention. The knowing ground of consciousness is shown at the bottom of the diagram, below the horizontal line. Above the line are the activities of nature, including our minds and the objective world that they conceive. The world is shown appearing object by object, at the front tip of mind's attention.

In the course of experience, the cycle of expression and reflection keeps repeating, through the various objects that we see. Each object is perceived through the attention

Figure 1



that turns to it, thus expressing a current state of understanding in the perception that appears. Then, the perception is interpreted, thus taking it back to underlying consciousness, where a new state of understanding results from the assimilated perception. From there, attention turns to other objects, making them appear perceived and assimilating their perceptions into background understanding. Through this repeating cycle of expression and reflection, our perceptions come into experience and get assimilated into knowledge, thus enabling us to learn.

In the process of learning, the world is conceived by relating objects together, into larger pictures. And objects are pictured in more detail by analysing their perception into smaller pieces, so as to construct more elaborated pictures of the world. The elaboration takes place at the objective level of meaningful experience. Here, an external world is seen to be constructed from elaborated picturing that shows and puts together various objects and events.

In Sanskrit, this objective level is called 'vaikhari', which means 'elaborated'. At this level, there is an outward articulation of words and symbols, describing the world's elaboration in each individual's experience. And it describes a changing world of perceived objects, in the macrocosm of the external universe. This is illustrated in figure 2 (next page), at the top row beneath the column titles.

However, as symbols are formed and their meanings are interpreted, each individual experiences the world through a succession of mental states, which keep on pass-



Figure 2

| <i>Level of expression</i> | <i>Microcosm of individual experience</i>  | <i>Macrocosm of the external universe</i>                               |
|----------------------------|--|---|
| Vaikhari<br>(‘elaborated’) | Personal articulation of words and symbols   | Changing world of perceived objects                                     |
| Madhyamā<br>(‘in between’) | Succession of mental states, through which symbols are formed and meanings are interpreted | Flow of happenings, through which objects take shape and convey meaning |
| Pashyantī<br>(‘seeing’)    | Quiet insight and latent potentiality, continuing at the depth of mind                     | Subtly intelligible order and causation of nature’s functioning         |
| Parā (‘beyond’)            | Ultimate identity of knowing and being   |   |

ing by, in a flowing stream of perceptions, thoughts and feelings. From this microcosmic flow of individual mind, we experience a corresponding macrocosmic flow of happenings, through which objects take shape and convey meaning in the external universe. Here, nature is experienced as a manifesting flow, conveying meaning in the course of time. In Sanskrit, this manifesting level of experience is called ‘madhyamā’, which literally means ‘in between’. In figure 2, this manifesting level is illustrated in the second row, beneath the objective level of vaikhari.

Going further down, there is a third level, illustrated in the third row. It is what gets manifested, by the manifesting flow of mental states and nature’s happenings. In Sanskrit, it is called ‘pashyantī’, which literally means ‘seeing’. The seeing here is quiet. It is a pure insight at the depth of mind, detached from the noisy clamouring of competing perceptions at the surface. In the microcosm of individual experience, it is the silent insight of background understanding, stored quietly in the latent potentiality of assimilated attitude and character. In the macrocosm of the external universe, this latent store is the underlying regulation and harmony of nature, connecting different things together. Here, nature functions through a subtly intelligible order and causation, which we reflect upon intuitively, at the depth of understanding.

Finally, beneath the third level of pure insight, there is the ground of consciousness, where knowing and being are identical. In Sanskrit, that ground is called ‘parā’ or ‘beyond’. All appearances of mind and world arise from it; and then return to it, where they are utterly dissolved. In this sense, it is the ground reality of all experience, underlying every individual and the entire world.

But such a ground reality is not an object in the world. It cannot be identified objectively, as any pictured element or region in some objective picture of the world. It is always the subjective ground beneath the picturing. So it is not an object that any theory can describe. Nor can it be prescribed, as an object for achievement by some technology of application. It is beyond both theory and technology.

### Calculation and education

How then can such a ground reality be relevant to science? Its relevance must in the end be educational, beneath both scientific theories and their application through technology. In fact, technology is not the only way in which our theories and descriptions are applied. There is a more fundamental way, through education.

For example, consider the use of a map, which pictures some territory where people may travel and go about the business of their lives. Such a map has two, rather different kinds of use.

- One kind of use is objective and calculating. Here, the map identifies particular objects and enables a calculation of their locations. Thus it is used to specify objective destinations and to calculate effective instructions for travelling to them. ‘Go  $n$  miles in  $x$  direction and then  $m$  miles in  $y$  direction’, and so on.

This calculating use is essentially specialized and technical. Its instructions are effective only for the achievement of specifically limited objectives, through specialized instruments and techniques. For example, a map may be digitized and fed into a computer, for the purpose of guiding a missile to some military target; but this requires a highly technical specification of the target and the use of very specialized systems of instrumentation and delivery.

- The other way of using a map is subjective and educational. Here, the map expresses how a territory is viewed. And that enables an educational reflection upon the territory as a whole. For example, as one looks at a map, one may reflect upon the way that roads have to cross obstacles like hills and rivers and railway tracks; and such a reflection may lead to a better understanding of the overall lay of the land and how to negotiate one’s way through it.

This educational use is essentially integrating and intuitive. It puts things together by assimilating them inward, into an educated understanding. From there, future judgements may be called out intuitively, in response to particular situations. Such a response, of living judgement, is essentially less narrow and more flexible than any technical prescription calculated from some objective picture.

These same two aspects, of calculation and education, are found as well in scientific theories and descriptions. The calculating aspect is made scientific by externalizing it, in formal rules and standard instruments that work outside our personalities. This achieves an external impartiality, in the calculation of narrowly objective results that may be tested and applied by specially constructed machines.

However, for the educational aspect, there has to be a different approach to scientific impartiality. For education essentially requires an inner understanding that must somehow be detached from personal partiality. And that detachment is achieved by reflecting in, subjectively, beneath the outward surface of objective pictures. Such pictures are conceived through personality; and thus contain a personal element, which may be clarified through a reflective questioning. That questioning of current views, to clarify what may be false in them, is quite essential for scientific education. It’s a reflective questioning, which enquires deeper back into subjective experience, to look for truer knowledge and better understanding.

Each of these two aspects has its own kind of reasoning. The reasoning of calculation is deductive. Through a conceived picture, it deduces observed results, from implicitly believed assumptions that the picture takes for granted. By contrast, the reasoning of education is inductive. It keeps reflecting back inductively: from particular

results explicitly perceived, to more general principles implicitly interpreted in them. How we interpret what we see is thus open to repeated questioning, which can progressively keep re-examining and clarifying our living faculties of observation and interpretation.

In modern physics, scientific theories are tested and applied through their calculation of results, which are observed and utilized by material instruments. Accordingly, the role of education is confined to the conception and understanding of theories. The educated faculties of physicists do not directly apply their theories, but must calculate results for observation and application through material instruments. This is so because such educated faculties are not physically measured and controlled, as are the material instruments of modern physics. Our living faculties require a more subtle examination and regulation, which puts them outside the jurisdiction of modern physics and thus rules out their direct use in its properly restricted application.

But sciences of life and mind don't have to be restricted in this way. They can and do develop subtler ways of reflective enquiry and living management, which educate our living faculties as instruments of application. For example, in biology and psychology, medical and psychotherapeutic theories can clearly be applied through their living education of a doctor's diagnostic judgement and therapeutic ability.

From long before the use of modern physics, much older sciences have been applied primarily through educated faculties that they are used to cultivate in their practitioners. For, unlike modern physics, such sciences include within their scope a consideration of life and mind, conceived as expressing an underlying consciousness. Accordingly, they are able to consider a living and mental correspondence between each individual's microcosm of perceiving experience and the universal macrocosm of the world perceived at large.

Such a correspondence has often been mystically approached, through mystic states in which the powers of mind and personality are abnormally expanded. But that approach, of mystically expanded power, is not essential. There is a more direct approach, which is quite simply educational. The essence of the microcosm-macrocosm correspondence is just one of knowing.

In everyone's experience, the macrocosm of the world is always known microcosmically, through a perceiving microcosm of living and mental faculties. The world at large is never known directly, but only through its correspondence with a perceiving world of inner faculties. This is a normal fact of everyone's experience. All knowledge of the world essentially implies this microcosm-macrocosm correspondence. It's on this normal, ordinary fact that the old sciences are based, in their educating use of our living faculties.

### **Levels of experience**

By reflecting further in, the old sciences are meant to uncover deeper levels of experience, at which the world is more directly and accurately known. An illustration can be seen in the traditional five elements: called 'earth', 'water', 'fire', 'air' and 'ether'.

This is a very old conception, going back some thousands of years, in Indo-European traditions. Like many old conceptions, this one is somewhat metaphorical. And its meaning is open to a reflective questioning; so that it can be rather differently interpreted, in different contexts. But in general, it represents a division of experience into five levels of increasing subtlety, in our experience of the world. Each level is perceived through a corresponding layer of personality, progressing deeper in towards

the subjective ground. In Sanskrit, these layers of personality are called the ‘pancha-koshas’ or the ‘five coverings’. They provide a particular way of interpreting the five elements.

- The first element, ‘*earth*’, is perceived through the ‘annamaya kosha’ or the ‘covering of food’. This is the outermost layer of personality. It is the external body, made of matter, like other objects seen outside by our gross senses. Here, ‘matter’ is called ‘food’, thus conceiving it organically. It is what gets consumed, as the body takes it in and uses it, in organic processes of living functioning. These processes are studied in old sciences of medicine, like Āyurveda.

As the body functions in the world, it takes in perception, as a kind of food. And this intake of perception is in particular morsels or pieces, through which material objects are identified. Thus perceived, through the external body, the element called ‘earth’ appears. It is the ‘solid’ element, found at the level of gross matter that is separated into different objects.

- The second element, ‘*water*’, is observed through the ‘prāṇamaya kosha’ or the ‘covering of energy’. Here, the energy of prāṇa flows in resonating pathways of activity. In Sanskrit, these pathways are called ‘nāḍis’ or ‘channels’. But their energy is not channelled nor activated by matter. It is not an energy of artificial force, exerted by one object upon another. Instead, it is a living energy that rises naturally from underlying consciousness. Thus by its very nature it expresses consciousness, through an intelligibly ordered functioning, in fluid patterns of transforming activity.<sup>3</sup>

As the energy of prāṇa flows through personality, its patterns resonate in sympathy with each other and with the world outside, in a complex reciprocation of subtle influences and effects. That sympathetic resonance enables our living faculties to observe and interact with the world.

Thus observed, through living faculties, the element called ‘water’ is made manifest. It is the ‘fluid’ element, found at the level of dynamic flow, in changing patterns of energetic happening. This dynamic functioning of subtly influential energy is studied in old sciences of ritual evocation, of astrology, and of ‘prāṇāyāma’ or ‘living energy control’.

- The third element, ‘*fire*’, is investigated through the ‘manomaya kosha’ or the ‘covering of mind’. At this level, mind is the conceiving intellect, made up of thoughts which interpret the patterns of activity that our senses perceive. Thus interpreted, these patterns are conceived as meaningful information, telling us about an intelligible world.

Here, as information is meaningfully represented, modern physics is confined to quantitative measurements and calculations of mathematical variables like distance, time, speed, mass, momentum and energy. But older sciences, like classical

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<sup>3</sup> See the previous section, ‘Energizing life’ (pages 3 to 7), for more on ‘prāṇa’ and its relationship with ‘energy’ in modern physics.

linguistics and aesthetics, go on to a broader and fuller investigation of language, thought and meaningful experience<sup>4</sup>.

As changing patterns are observed, we find in them a meaning that shows us something further in the world. They are then representing information; whose meaning burns it up for us, in order to illuminate what's represented. Through that burning illumination of meaning, we interpret more of the world, beyond the narrowness of partial circumstances that our senses have perceived. Thus interpreted, through conceiving intellect, the element called 'fire' is made manifest. It is the 'burning' and 'illuminating' element, found at the level of meaningful information, which gives itself up to a further perception of represented things.

- The fourth element, '*air*', is appreciated through the 'vijnyānamaya kosha' or the 'covering of discernment'. This is our discernment of qualities and values, which we compare and contrast in the information that we perceive and interpret and describe.

In modern physics, the comparison is strictly quantitative, ascribing a mathematical value to each point of space and time, and thus formally describing a mathematically abstracted 'field'. By contrast, the older sciences consider quality and value in a much fuller way, as a conditioning that we discern and judge intuitively, through inner feelings. There, the use of discerning reason is reflected back from formal and quantitative descriptions, externally applied.

Thus, older sciences, like those of meditative psychology and ethics, are more essentially concerned with a systematic and reasoned clarification of our qualitative discernments. The application then is from within, from an inner sense of value that is inherently implied by motivating judgements of felt quality.

As qualities are thus discerned, the element called 'air' comes to be manifest, as a surrounding atmosphere of subtly felt and delicately judged conditioning. It is the 'qualitative' element, found at the level of conditioned character that gets contrasted and compared in different and changing things.

- The fifth element, '*ether*', is quietly witnessed at the background of experience, through the 'ānandamaya kosha' or the 'covering of happiness'. This is the co-ordinating layer of personality, with the word 'ānanda' or 'happiness' implying harmony and integration. The co-ordination takes place through assimilated understanding. Through it we comprehend the continuity of underlying principles, beneath the contrasts of discerning judgement and the variety of superficial appearances.

In Sanskrit, the word for 'ether' is 'ākāsha', which means 'pervading space' and also 'clear shining'. This word describes the continuity of space and time, pervading through all experience of the physical and mental world. The continuity is both objective and subjective. Objectively, ākāsha continues as the background of external space and time, seen in the world outside. Subjectively, it continues through each individual's experience, as the knowing background which persists through differing appearances that come and go. It thus enables an understanding of com-

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<sup>4</sup> As for example in the levels of meaning analysed in Sanskrit grammar (already illustrated in the preceding figure 2 on page 9), and in the bhāva and rasa analyses of Sanskrit poetics.

Figure 3

| <i>Traditional element</i> | <i>Appearance of reality</i> | <i>Perceiving instrument</i> | <i>Examining disciplines</i> |
|----------------------------|------------------------------|------------------------------|------------------------------|
| 'Earth'                    | Pieces of matter             | Physical body                | Physical sciences            |
| 'Water'                    | Patterns of energy           | Living organism              | Biological sciences          |
| 'Fire'                     | Meaningful information       | Conceiving intellect         | Cultural sciences            |
| 'Air'                      | Conditioned character        | Intuitive judgement          | Psychological sciences       |
| 'Ether'                    | Continuing existence         | Assimilated understanding    | Philosophical enquiry        |

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### Unchanging consciousness

mon principles, in the differing phenomena that nature manifests. That understanding is investigated by sciences of philosophical enquiry.

As common principles are understood, the element called 'ether' or 'ākāsha' is experienced. It is the 'pervading' element, found at the level of underlying continuity that is implied by all difference and change.

Beneath these five levels is their underlying ground, which is at once their inmost knowing principle and their uncompromised reality. On that is overlaid all of their seeming show. All levels and appearances arise from it. They all depend on its support. But it does not depend on them. For it shines by its own knowing light, while all else gets manifested by its self-illumination.

Such a conception of the old five elements is shown in figure 3. The illustration is meant only to suggest that old sciences and ways of thought may be more deeply reasoned than appears at first, from the outside. And hence we may have something to learn from their reflective questioning, for a broadening and deepening of education that is so badly needed in the modern world.