Chapter III

SURVEY AND ANALYSIS OF CONCEPTUAL LITERATURE IN PHILOSOPHY

[Note: The treatment in this chapter deviates at many points from the condensed conceptual discourse of formal philosophic presentation, and goes one step below with profuse illustration from science, art, architecture to illustrate how philosophy takes off from or gets applied in issues of deep concern and the limits of science and art. Some of this material will be recycled in episodes conducted with groups of students (see Chapter VII)]

Much of the discourse in philosophy of education as discussed in the regular classes, in texts and in the texts used by the students are in the formal, condensed form, presenting the product of philosophy, further abbreviated for the examination purpose. This is obviously determined by the constraints of time and the system of evaluation. (Though internal evaluation is now given a high weightage, teachers have yet to acquire the full competencies to draw out higher objectives using this facility). It will be see that the Review of Related Studies (Chapter II) also revealed the condensed product form. Even in Read's Philosophy of Art studied by Ramesh Ghanta, one of the most eminent professors who has specialised in aesthetics, the abstract of the study available does not reveal the functional, procedural, and enjoyment dimensions which the full thesis might have expressed.

Hence in this chapter and the next some concepts are surveyed in a detailed, 'thick description' model preferred in qualitative research where the scientific and practical/ experiential phase also is brought out so that philosophy in process may be seen more clearly. For this form of presentation the popular modes used by Will Durant, (the humanist) Bertrand Russell (Russell's philosophy of mathematical logic can be unintelligible to most), (the later) Wittgenstein, many writers on philosophy of art and music were taken as model. Some dimensions that will form part
of episodes on exploration of application of philosophy done with student groups are presented in Chapter VII (as in counselling and emotional education) along with the practical episode. The following dimensions are presented here - some in elaborate form:

A. Philosophical study: the formal scholastic mode
B. Philosophic Discourse, taking off from Metaphysics
C. The Constraints of Condensed Texts illustrated
D. Science and Philosophy
E. The Philosophy of Love
F. Theory of Beauty
G. Philosophy of architecture
H. Philosophy of Music

A. PHILOSOPHICAL STUDY: THE FORMAL SCHOLASTIC MODE

The proportion of philosophy-related content is heavily reduced in the B.Ed. Course in recent years. The intention seems to be that the course should be functional. Still many university systems find it convenient to introduce the basic elements in a systematic manner though the unit-wise weightage for it in the syllabus is very low.

[In the 1966 Revision Philosophical Foundations of Education occupied one half of a full Theory Paper, the other half being given to the Sociological Foundations of Education. In the syllabus which reigned from 1986 June to 2004 March, a paper III of the 1966 scheme entitled Indian Education was displaced by 'School Management' comprising (a) Measurement and evaluation (b) Educational Technology (c) Guidance and Counselling and (d) School Organisation. So the old Indian Education components and certain other related items were squeezed into General Theory Paper I, and the time for Philosophy of Education was reduced. This paper was now entitled Teacher and Education in Indian Society. Out of the four major units the third unit 'Education' had eight sub-units, of which sub-unit (d) had all the four school compressed into it. sub-unit (l) was shared between philosophy and sociology. Thus [ (1+½) / 8 ] + 4, i.e., 3 / 64 of a theory paper alone]
was earmarked for philosophy in Paper I. This works out to 3/320 of the total theory weightage and 3/640 or 1/213 of the total weightage in the B.Ed. course. But the weight of the textbooks or Guidebooks used by the students for this dimension did not seem to be reduced. It may be recalled that in addition to the three general papers two optional papers under a single optional opted by each student were also included in the theory segment.

In the revision effective from 2004-05 an Elective segment was also added in General Theory equal to one theory paper's weightage. All the theory items (including internal and external weightage) together carried 750 marks and all the practical work items together carried 450 marks. Under this scheme one theory paper gets about one-eighth weightage within the theory segment and just one-tenth of the total marks including Practical.

Under this set-up Philosophy gets one full unit out of seven units one-seventh weightage within a paper, one-thirty-fifth within theory papers and one-seventieth within the total work to be done in the course. This may appear to be quantitatively much higher than the 1/213 weightage for philosophy in the 1986-2004 model. The weightage seems to have been trebled. Qualitatively also present syllabus (2004- model) seems to have been slightly enriched. But then the 1986 model was entitled 'Teacher and Education in Indian Society'. In the 2004 model 'philosophical/sociological bases' comes into the title, comparable to the 1966 model of Philosophical and Sociological Foundations in which philosophy content accounted for 50% of a paper, one-tenth of theory portion and one-twentieth of the total course content. Compared to this the one-seventieth weightage for philosophy is very low.]

Though Philosophical Foundations of Education was designed to be a full paper along with Sociological Foundations in the 1966 Revision of the B.Ed. syllabus, its weightage was very much reduced in the 1986 Revision under the Teacher and Education in Indian Society Framework. In 2004 The
Philosophical Basis was reintroduced in the title of the paper and the explicit spelling out of the syllabus was expanded, the time dimension is still too small. [For details regarding this analysis see Chapter V]

The usual practice adopted to meet the shortage of time allotted is to cut the content areas explicitly presented in the syllabus, but the nature of philosophy is such that even portions shown the way out through the door can be got back through the window in the way they are treated in the textbooks and guidebooks and dealt with in the lectures.

But from the present application research point of view it seems more expedient to have a total vision of the broad field of philosophy and how it is treated so that some view of the essentials and some ideas about the application potential too may emerge. If philosophy is read as a field not limited to the philosophy class but to all the college activities the possibilities of extracting philosophy from its applications (conscious or unconscious) may become visible. Then the limitations of the restricted scope of ‘putting into’ the curriculum of the needed items in the syllabus could be transcended. Hence a fairly wide net is set to capture the conceptual field in the present chapter.

Philosophic inquiry can be made into any subject because philosophy deals with everything in the world and all of knowledge. For the purpose of study, philosophy is primarily divided into three branches: (i) Metaphysics (ii) Epistemology (iii) Axiology, each organized around certain distinctive questions. It is often found convenient to branch out axiology (theory of values) into (a) ethics (theory of good and bad, right and wrong etc) and (b) aesthetics (theory of beauty). When social interactions and the factors of dominance and equality come into considerations political philosophy also emerges.

Formal treatment of these subcomponents can be dry and meaningless to beginning students especially when compressed within the framework of about two short units devoted to philosophy in the B.Ed. course. However, it would be worth analysing briefly the way in which some
of these components are analysed even in the clearer presentations by great writers. All the dimensions are not covered as if they were water-tight compartments, but the puzzling and even enchanting discourse which takes off from metaphysics seen in the clash and the limits of the best minds may be surveyed as an example.

B. PHILOSOPHIC DISCOURSE TAKING OFF FROM METAPHYSICS

Aristotle covered a wide range of studies, one of which was the study of nature (φυσική - physis); much of it could be subjected to observation and reasonable inference; some go beyond the testable level and is therefore assigned to metaphysics. What is the nature of the world? What are its constituents and structure, matter and form, ultimate substances and laws? Are both the external world which we see in perception, and the internal world which we feel in consciousness, subject to mechanical or deterministic laws? - These are the questions that Will Durant raised in his 'agnostic preface' to metaphysics.

Life and the world are too complex and subtle for our imprisoned minds. The more we learn the less we know, every advance reveals new mysteries and uncertainties; the molecule discloses the atom, the atom discloses the electron, the electron discloses the quantum, and the quantum defies and overlaps all our categories and all our laws. Education is a moulding of dogmas, a progress in the art of doubt. Our instruments, we perceive, are bound up with matter, and our senses are bound up with mind; it is though these mists that we "flakes on the water" would comprehend the sea.

Even a scholarly writer like Durant finally admits to approaching these problems like a priest mounting the altar to perform for the first time the mystery of the mass. We shall not solve those problems; at best we shall merely bare to one another the secret preferences of our hearts. Some thinkers 'solve' the problem quickly through too great a belief an religion: others go to the other extreme land in bold materialism, like the reckless and atheist Shelley. In India too we can find such wide diversity of points of view ranging from the Lokayata and varieties of Buddhism and Jainism to the orthodox schools, which too range from extreme idealism to extreme realism.
Materialism: Its Limits: Idealism: Bridge Forms

Materialism is the first philosophy to be adopted by a mind that has thrown off supernatural belief. It is the first conception of the world that appears in a nation (Greece) whose official theology had begun to die. They attempted to locate the ultimate principle in some element of external nature. Thales, Anaximander and Anaximenes interpreted the universe as a derivative of Water, fire or air; and Lucippus and Democritus developed a kind of atomic theory which satisfied all "orthodox heretics" until the atom burst into pieces under the impact of modern physics and chemistry.

For many generations this simplest of philosophies maintained itself against the scepticism that belies that the ultimate principle cannot be known (Zeno) and the dualism of Anaxagoras. The sophists and then Socrates "turned round" from the external world, and explored a self so different from matter that it was thought that it (self) might be immune to death. Plato called matter "nothing" and placed mind above all things; the outer world was seen as subject to mind in perception, and to Ideas in structure and operation; all the world seemed to him a copy of a perfect model conceived by some creative spirit.

Aristotle, who took a middle path between the naive materialism of early Greek thinkers and the mentalism of Plato, was a biologist and found the world a changing and striving thing, and could not quite reduce it to "atoms and void"; its essence was entelechy - in every substance some potency was hidden that left no result until it was realized; every "form" was the "matter" of a higher form, and all reality was pregnant with development; materialism could not adequately describe this burgeoning vitality. Durant suggests that he had his avatar and revenge in Epicurus, who almost anticipated Planck and Bohr and the curies by finding in the atom a principle of liberty and uncertainty, and yet a symbol of exhaustion and decay. All things were free, and all things would die. Lucretius, sickened with life, was glad to hear of this certain and endless death. It would be interesting to recall the half-life period of the disintegrating radioactive elements.
Then Christianity came and for fifteen hundred years matter was considered an outcaste in philosophy. But for the most part, "matter was a fallen angel, the Lucifer of philosophy, a tribulation and a dungeon for the spirit. But Thomas Aquinas gave matter a high place; it was made potentially as old as time, and it became the "principle of "individuation" But the main concern of Aquinas in his *Summa Theologica* is about logical discourse on the existence of God.

Descartes' investigations led him first to the certainty that he himself exists. The very process of doubting everything landed him at the inference that in order to doubt, then doubter at least should exist. Only from that standpoint could he arrive logically at the certainty that the external world exists. But he conceived the external world as a mechanism and the proudest animals as somnolent machines; everything but the soul of man obeyed the principles of physics.

Durant summarises the developments that fellow thence. There are two large movements in modern thought, the thesis and antithesis, as Hegel would say, of a synthesis, which our own generation must begin to make. The first starts with the external world - with matter, physics, mechanics and mathematics; it represents, as in the rebellion of the disillusioned individual, the first and extreme reaction against a supernatural reading of the universe; it formulates the laws of reality from the observation of matter, and then interprets mind in terms of these objective laws; inevitably its conclusions are materialism, mechanism, determinism, and a behaviourism that prides itself on its natural inability to pass from matter consciousness; its heroes are Galileo, Descartes, Hobbes, Newton, Spencer, Russell and Watson. The equal and opposite movement begins with consciousness, and finds itself unable to pass from it to matter; it takes its stand within the internal world - with mind, psychology, epistemology and ethics; it represents an extreme universe, it sees all things as sensations and ideas, and therefore reduces matter to a state of mind.

The influential movement dominated the philosophic thought of Europe in the 17th and 18th centuries. Spinoza stood aside from this development,
and offered the world panpsychism as a solution: matter and mind are the outside and inside of one complex reality and "all things, in however different degrees, are filled with life".

Newton analysed the external world into simple and orderly laws of motion; logic-loving philosophers in France 'could not resist the temptation to apply these laws to everything from the fall of an apple to a maiden's prayer'.

An idealistic solution to the problem of existence was formulated by Bishop Berkeley. After all, said the Bishop, this matter of yours is known to you only through sensation and perception; its existence is (nothing more than) perception - esse est percipi - If it could not be perceived by some mind, it would not (so far as we could ever tell) exist at all. Thus the Bishop reduced the material world and all its contents to states of consciousness. He had his counterpart in India more than a millennium ago in vignānavādi Buddhism. This was absorbed into Hinduism in the doctrine of māya by Śāṅkara's guru Gaudapada.

Hume added a twist to Berkeley by saying that he could not 'catch' his mind except as a series of perception. Thus mind itself is robbed of stable existence. This aroused Kant from his slumber.

Kant agreed that sensations are in themselves a jumble without meaning; it is the "transcendental unity of apperception" that weaves the chaotic reports of many senses into the world of ordered thought; the order and the unity, it may be, are contributed by the mind, and the "thing" is half created by our perceiving it.

The pessimistic German philosopher Arthur Schopenhauer agreed that what we directly and intimately observe are our own introspected selves. We cannot reduce it to a "matter" which is known to us only as an idea in our thought. Schopenhauer goes further and adds that the 'will' is even more basic and intellect. Nietzsche inherited this view of matter along with that "will-to-power" an off-shoot of Schopenhauer's thinking. This scorch of priests and theologies goes farther than priests and pietists in his
uncompromising program of refuting materialism. Matter, he thinks is a delusion, a mental construct which we make to explain our sensations. An atom according to Nietzsche, is merely a quantum of the will to power.

Bertrand Russell, who is often classified among realist philosophers, clearly refutes the materialist position: "The belief that matter alone is real will not survive the sceptical argument derived from the physiological mechanism of sensation." Historically we may regard materialism as a system of dogmas set up to combat orthodox dogmas. Accordingly we find that as ancient orthodoxies disintegrate, materialism more and more gives way to scepticism. Russell’s realism is not materialism, but one that hold that these are stable laws that could describe the behaviour of the bodies in the external world.

Developments in biology also played a role in metaphysical explorations. The debate between the proponents of matter and mind takes a new turn when life and its forms enter the picture. Darwin’s study of the Origin of Species questions the beliefs about the story of creation in the Genesis. His theory of Evolution was interpreted in a way that could support a mechanical, materialistic metaphysics.

The problem of “What is matter?” is still racking the minds of philosophers. In any case the old concept that inert matter is the ultimate reality that dominated in the 19th century has been shattered as a result of developments in physics itself in 20th century. With the greatest ease Bergson showed that so inert a substance could never explain motion, much less produce life and mind.

But even as Bergson wrote, physicists were abandoning the conception of matter as inert, and were discovering in it an unsuspected vitality. Electricity is utterly inexplicable in terms of inertia and atoms. What was this mystical force which, added to mass, increased its energy, but added nothing to its dimensions and its weight? How did an electric charge travel along a wire, or through the wireless air?
Ostwald describes matter as merely a form of energy. Rutherford reduces the atom to units of positive and negative electricity. Lodge believes that the electron does not contain a material nucleus in addition to its charge. Haldane regarded matter as "merely a special type of undulatory disturbance". The physicist Le Bon simply says, "Matter is a variety of energy". He adds: Matter which dissociates dematerializes itself by passing through successive phases which gradually deprive it of its material qualities, until it finally returns to the imponderable ether whence it seems to have issued.

The hypothesis of 'ether' is advanced. But as Lord Salisbury says, ether is only a noun for the verb 'to undulate' it is a fiction created to conceal the learned ignorance of modern science. Professor Eddington says the ether 'is not a kind of matter'; it is non-material.

But the Newtonian world with its fixed inalienable laws describe the cosmos is no longer a matter of 'attraction', no more a simple and neat gravitation system; the "laws" of motion have been wrenched in every direction by the theory of relativity. At a time when the common man is led to abandon his belief in religion on the basis of scientific advances of the 19th century, the top scientists like Eddington admit that "scientific investigation does not lead to knowledge of the intrinsic nature of thing".

Many historians and social scientists are now willing to go the materialist way initiated by 19th century science, Spengler alone has the courage to call this what it is: "every atomic theory is a myth, and not an experience". Probably matter continues to exist despite our shifty omniscience. Durant reflects:

What that matter is, we do not get know; and let us say so unmistakably. But one thing is certain - that this attenuated matter is not the old inert matter of 19th century science; it is the form and vehicle of incalculable energies. It is alive with cohesions affinities, repulsion, electrolytic and osmotic processes, heat and electricity and leaping light, and the restless dance of electrons. Movement, energy, vitality are everywhere; we no longer dare call anything lifeless.

The Concept of Life intrudes in the Mind-Matter Debate

Modern physicists like Le Bon have noted that Sir Jagadish Chandra Bose, has shown "fatigue" in metal – their inability to continue their normal
reactions to certain agents beyond a certain time — and the disappearance of this fatigue after rest; and he has demonstrated the sensitivity of metals to excitants, depressants, and poisons, these experiments have been repeated and verified on three continents. The expression, “the life of matter” meaningless twenty-five years ago, has come into common use. Physicists and chemists are now groping after biological ideas. “The extension of biological concepts to the whole of nature may be much nearer than seemed conceivable even a few years ago” [Haldane], we hear of the “evolution of matter”, the atom it seems, it born, develops, loses it vitality, and dies.

Durant clinches the issue thus:

This modern physics of energy invites us to reformulate the old problem of materialism vs. spiritualism. Which aspect of the external would is more fundamental — the spatial, extended aspect which physics once described as “matter”, or the activating, moving aspect which we name energy? The answer must be energy; this is the “unknowable”, the “Thing-in-Itself”, the “Absolute”. Is this energy itself a spatial and extended thing, a material substance?

It may be interesting to note that the names of the important Hindu gods Śiva and Śakti have these fundamental principles of matter and energy embedded in them. In a conference conducted at Poone two decades ago on why the three major religions — Christianity, Hinduism and Islam have given a low place to women, Lakshmana Sastri pointed out that if the ideas in Hindu mythology are fully decoded it would be seen that Hinduism really accords a high place to the feminine principle. There is even an epigram: Śiva without Śakti is Śava. Thus a deep metaphysics is so beautifully embedded in Hindu mythology. This vital element, this activating energy, is not as most vitalists think, a separate entity, divorceable from matter; it is inextricably bounded up with it, as mind is with body, and forms with matter the inward and outward aspects of one indivisible whole.

This can be read as exalting matter, or as expression of the faith that there is no break in the continuity of development from the simplest atom to the profoundest philosophers. But we cannot believe this unless we also believe that within the apparently inert body of matter there is a principle of life, a power compelling evolution. We bridge the gap between matter and mind not by reducing mind but by raising matter.
If this continuity involves ‘a-biogenesis’ – the development of life from non-living things – then the evidence of biology is against it. Pasteur’s experiments are believed to have disproved it – forever. But the new conception of matter as “alive” softens the contrast between organic and inorganic, and reduces the difficulty of conceiving continuous evolution. Life is a product, not of that outward aspect of reality which gives us weight, solidity, and extension, but of that inner aspect which gives of the “ether”, and the grouping vitality of the cell. The simple conception of 19th century physics and chemistry made the gap between living and non-living things impassible. Even Spencer, though eager to make evolution complete, was compelled to shirk the problem, and to write: “We are obliged to confess that Life in its essence cannot be conceived in physico-chemical terms”.

Bose’s experiments indicate a certain sensitivity in matter: a thin rod of platinum in the bolometer responds to a rise of one one-hundred-millionth degree in temperature. This sensitivity is no doubt of a different kind than that which we find in organisms; it does not lead to an adaptive reaction increasing the power of the subject over its environment; but it offers us some suggestion of the way in which nature bridged the chasm between “matter” and “mind”.

Evolution and the Beginnings of Mind

The next stage in the evolution of mind is visible in the sensitive reaction of plants to position, contact, temperature, moisture, and light. Yerkes believes that the chief power and characteristic of mind - the ability to learn, to respond differently as the result of experience - is a mark of even the lowest protoplasm. It is a mark of even the lowest protoplasm. It was Bose (August 6, 1923) who thrilled the British Association for the Advancement of Science by demonstrating before them the detailed resemblance between the circulatory systems in plant and man, and the susceptibility of the flowing sap to stimulants, depressants, and poisons. Edward Tangl discovered delicate threads of protoplasm, passing from cell to cell of the
plant, which most botanists consider analogous to the nerve fibrils in animals. Certain plants are so sensitive to light that they have been turned into “floral clocks”.

Sensitiveness increased with mobility. And yet in the lowest animals there is no nervous system. Sensitivity - or irritability, as some nervous biologist christened it - is generalized, and appears impartially in all the tissues of the organism. But even in those lowly realms a certain specialization begins. The specialization of sensibility increases as one goes upward in the scale. In the Jelly-fish certain nerve cells projecting from the periphery of the organism are connected by a “nerve-net” ring of conductive cells running around the edge of the “umbrella”. Here specialization has differentiated the nerve cells into two classes - sensitive “end-organs”, and conductive neural tissue. This is the first appearance of a nervous system, the potential instrument of mind.

In the flatworm two of the nerve-cells are of unusual size, and serve as “central ganglia” or brain for the other cells of the system. In the earthworm the nerve-line knots itself into ganglia in every segment of the body, and from this stage to man the nervous system is “segmented”- i.e., it is divided into ganglia corresponding, in the chordates, to the vertebrae of the spine. With the mounting complexity of structure and function in the higher species, the necessity for connection and coordination grew; and though the spinal ganglia continued to serve as centres for local reflexes, the number of fibres passing form these centres to the cerebral ganglia in the head increased; and “Central nervous system” appeared, able to feel and govern the body as a whole. The integration is not complete even in man; many functions remain outside cerebral control, subject only to that “sympathetic nervous system” which is our relic from the nerve-net stage. But what we call the “mind” operates apparently through the central or “cerebro-spinal” system; and the prime and primitive function of the mind is the integration of behaviour, the subjection of motor responses to central guidance and control. It is obviously through the nervous system that thought became a reality.
If we may judge from embryology, the brain grew out of the enlargement of the olfactory nerve. It was a modest adjunct to the nose, and intelligence for some aeons operating through the sense of smell then other nerves bound themselves up with the cerebral ganglia: nerves form the eyes, the face, the ears, the throat, the tongue, the neck, and the viscera. Bit by bit the spinal nerves were brought into the cerebral system, the head ruled the body more and more, and coordination, adaptation and control grew in action and reaction with the growing brain.

Thus the most complex mind is a natural development from the unspecialized irritability of the simplest protoplasm in the lowest life. The growth from generalized sensitivity to local ganglia to cerebrum is accompanied by the advance for tropism to reflex to learned response.

*The Debate on Self and Mind around Biological Investigations*

It is argued that as for the self or soul, it is merely the sum-total of the hereditary character and the acquired experience of the organism. As experience changes, the self too changes.

Thought is incipient action. Attention is a tension, aversion and averting, appetite, a seeking, emotion, a motion. And idea is the first stage of a response; we call it an idea because some other action-tendency has intercepted it before its external fulfilment. Emotions, as Cannon showed, are conditions of the blood, produced by glandular secretion. Without adrenals we would not be angry; without proper thyroids we become idiots. All action and all thought are determined by desire, which is a condition of the body. Hunger is an emptiness of certain cells, love is the repletion of others; erotic imagery is aroused by physiological maturity.

The Idealist interprets the facts from his point of view. He argues that even the lowest forms of mind are unintelligible in material terms: How, for example, could matter feel pain? If mind is brain, then we should find lesions in the brain for every gap in the memory; but we do not. [Bergson, *Matter and Memory*, London 1911, p.316]
The more often we think of a thing, the less imagery we need to use. The image is important only when it is the rehearsal of an action, the brain picture of an intended motion. Where there is no action, thought goes on with a minimum of imagery, and becomes obviously a process beyond any material category or metaphor.

Huxley admitted with characteristic honesty that materialism could not explain consciousness, that it was compelled by its own logic and premises to take the position that consciousness is an “epiphenomenon” - a useless addition to the brain and nerves, like the heat in a lamp, or the light in a fire. It is true that many useless structures survive in evolution, but presumably because they were harmless, as are the relics of once useful things. The materialist, however, is forbidden to believe that consciousness was ever useful, or even that it is even injurious; though shy intellectuals may admit that self-consciousness can be a handicap and a nuisance.

The Trilogy of Mind-Matter-Life

Finally Durant attempts to draw these threads together, and weave these half-truths into a unity. First he draws from Leibniz the German philosopher who had proposed the concept of monads; everything from the lowest atom to the highest organized Being is a monad of increasing complexity - with a unity, organisation and even mind. Regarding the body-mind problem Leibniz proposes the theory of psycho-physical parallelism - mind and body were parallel but independent without touching or influencing each other. Their apparent accord at every moment was a proof of divine providence. Thus there is a “pré-established harmony” between body and mind which help them to work together as if they were one unity. Durant comments that the sole advantage of this theory is that it is not more foolish than most. There are also “neutral monists” like Bertrand Russell: physics has reduced matter to a system of relationships and events; psychology has reduced mind to a system of relationship and events; and perception is the transient crossing of these kindred worlds.
Durant insists that he will continue to believe that the "events" which constitute our knowledge of the external world reveal a tangible and impressive reality quite worthy to be called matter, and regrettably independent of our wishes and our feelings.

Mind is not matter, and matter is not mind; there is a mind-matter. Mind is not a distinct entity within matter, any more than life is a thing that resides in the body like a man in a house; mind is an abstract noun, a collective name which we give to the operations of living substance when it thinks.

If, then, we speak of thought as one function of the body, this body must be conceived not as "matter", but as life, in even the simplest cell. The vitality is central, and the material shape, to use a deceptive metaphor once more, is but a shell. The life is not a function of the form, the form is product of the life. Life is first, and 'within'; matter, coeval with it in time and inextricable from it in space, is second to it in essence, in logic, and in significance; matter is the form and visibility of life.

This is vitalism, but monistic vitalism; it accepts life as the fundamental reality of which matter (i.e., extension) is the outward dress; but it does not admit, with Bergson, that matter and life can ever be apart; everywhere the two are one.

Materialist mechanism was an attack against religion; and subjective idealism was an attack against irreligion. We may reject them both. And yet in this approach, the various unifying trends such as psychophysical monism, materialism, idealism and spiritualism are not rejected, they meet and fuse. Materialism (in so far as it conceives all reality as bounded together in one unbroken evolution and unity), idealism (in so far as it confines all knowable reality to experience) and spiritualism (because it conceives the essence of reality to lie not in extension, solidity and weight, but in an activating power which is at once the life of the atom, and the energy and secret of genius). A motion and a spirit impels all thinking things, and all objects of all thoughts and rolls though all things. Durant claims that science has verified this poetry.
It may be recalled that Indian philosophy also several dualistic models ranging from predominantly ideal to predominantly realist schools. Lokāyata represents an attempt to resolve it in a 'monism' centred in the body and matter; Vijñānavāda Buddhism and extreme Hindu idealistic schools such as those of Gaudapada. We may understand the essence of the Upanishads as a kind of monism embracing all, including matter, mind and soul.

It will be seen that this kind of discourse presenting the struggle of man to understand phenomena and taking it to the limits brings out the mighty tasks which philosophy undertakes, but in the B.Ed. course we simply do not have the time.

C. THE CONSTRAINTS OF CONDENSED TEXTS ILLUSTRATED

The texts used by the students manage to cover the entire area indicated in the syllabus and even some of the carry-over from earlier syllabi. Most of the books are content to present summarised statements of the main points from the examination point of view. A few examples are presented below starting from the different branches of philosophy:

(i) **Metaphysics** is the study of the fundamental nature of reality and existence and of the essences of things. Metaphysics is often divided into two areas Ontology and Cosmology. Ontology is the study of being. Cosmology is the study of the physical universe, or the cosmos taken as a whole. Metaphysics deals with such questions as "what is real? "What is the difference between appearance and reality?" Does mind have the same sort of being as physical object? Does God have the same kind of being as do molecules and electrons? Is there an unchangeable being as well as a changeable one? Metaphysics considers all these and tries to answer all these.

(ii) **Epistemology** is the philosophical problem that deals with the nature of knowledge and nature of knowing. It asks the questions: What is true? How do we know the truth? How do we know that we know? etc. This branch of philosophy studies the structure, methods and validity of knowledge. It deals with beliefs about beliefs.

(iii) **Logic** is the study of the principles and methods of reasoning. Or this is the study of the rules and techniques of reasoning. It explores how we distinguish between good reasoning and bad reasoning. An instance of reasoning is called an argument or an inference.

(iv) **Axiology** is the branch of philosophy that deals with the problem of value. It poses the question: what is good? What should man prefer? What is really desirable? Every moment of our lives is up with valuing. Axiological questions
customarily are divided into two main categories: Ethics and aesthetics. Both these have a direct bearing on curriculum...

(v) Ethics concerns human conduct, character and values. It studies the nature of right and wrong and the distinction between good and evil. Ethics explores the nature of justice and of a just society, and also one's obligation to oneself, to others and to society. Ethics asks such questions as "what makes right actions right and wrong actions wrong"? What is good and what is bad? and "What are the proper values of life?" Problems arise in ethics because we often have difficulty in knowing exactly what is the right thing to do. The central question posed by ethical inquiry is, what should I do? What is right or good? This is referred as moral philosophy (which) deals with judgements of approval and disapproval, rightness and wrongness, goodness and badness, virtue and vice.

(vi) Aesthetics deals with the relation and principles of art and beauty. It also studies our thoughts, feelings and attitudes when we see hear or read something beautiful. Something beautiful may be a work of art, such as painting, symphony, or poem or it may be a sunset or other natural phenomenon. In addition aesthetics investigates the experience of engaging in such activities as painting, dancing, acting and playing.

Aesthetics is sometimes identified with the philosophy of art, the process of artistic creation, the nature of the aesthetic experiences and the principles of criticism. But Aesthetics has wider application. It involves both works of art created by human beings and beauty found in nature.

The central questions posed by aesthetics is, what should I like? What is beautiful? Certain aesthetic experiences are to be preferred over others because they yield "higher order" enjoyment. The elusive basis of the "higher" order enjoyment is the standard used to determine what we ought to like and constitutes the focus of inquiry in aesthetics.

The textbooks studied by students contained condensed statements such as the ones presented above. These are found useful for preparing for the examination. Most of them are of the type of declarative knowledge needed for the examination. Philosophical statements are super-generalisation and are not easily understood by students without sufficient illustrations. They may no lead to procedural knowledge unless students are invited to apply them. Even the statements about applications have a declarative stance: e.g.,

Can philosophy be applied?

Philosophy helps us to take decisions and to act consistently or meaningfully. Philosophy is a philosophical process of solving some characteristic problems through characteristic methods, from characteristic attitude and arriving at characteristic conclusions and results. Only philosophy can tell us when to heal and when to kill. To criticize and to co-ordinate is the duty of philosophy. Science can give us knowledge, but only philosophy can give us wisdom. Philosophy helps one to clarify what he believes may be stimulated to think about his own day to day problems.
Philosophy has enormous influence on our everyday lives. The system of education followed in a society is shaped by its philosophy; or the values and skills taught by the educational system reflects the society's philosophical ideas. It can very well be applied in all the spheres of life. Philosophy deals with everything in the world and all form of knowledge. So philosophic inquiry can be made into any subject.

The major functions of philosophy include the following:

1. **Synoptic function**: The philosopher attempts to get a total view of things, "to see life steadily and see it whole", to combine the fragments of knowledge given by daily experience into a totality.

2. **Normative function**: Philosophy, and more particularly the normative sciences of logic, aesthetics and ethics, is expected to provide guidance about aims, norms, standards and values.

3. **Practical effects**: Sometimes jokes appear setting out philosophy as useless and impractical theorization. This may happen in the transactions of inferior philosophers, or due to the absent-mindedness of even the great thinkers. But some schools make practicality the acid test of philosophy. Dewey says that "theory is in the end the most practical of all things" and argues this thesis out. Even distant ideals set out by philosophers are often realized in course of time. Napoleon said that without Rousseau, the French Revolution could not have happened. Explosive ideas have revolutionized education, politics and other aspects of life more than is commonly realized. It is because philosophy is a way of life and not mere theory that it contributes to wisdom.

4. **Critical function**: Philosophy criticizes our basic assumptions; it questions commonsense; it criticizes its own method and that of science; it criticises the way we use basic terms and concepts. Socratic questioning of statements which everyone seemed to take for granted is one of the earliest examples. Kant's Critique of Pure Reason has raised the critical function to new heights. Dewey has pointed out that the criticism of philosophy is not transcendental, but arises from ordinary experience. It criticizes just the familiar things like our ordinary beliefs, knowledge, action, enjoyment and suffering. "It differs from other criticism only in trying to carry it farther and in pursuing it methodically."

5. **Limiting function**: The limiting function is an offshoot of the critical function. It arises when the territory of knowledge and possibility of knowledge is stretched to its utmost through critical questioning. Kant's drawing of the limits of perception is a major landmark in the theory of knowledge. Wittgenstein's Tractatus is an attempt to draw a limit to thinking, or rather to the expression of our thoughts. "In order to draw a limit to thinking we should have to be able to think both sides of the limit (we should therefore have to be able to think what cannot be thought). The limit can, therefore only be drawn in language, and what lies on the other side of the limit will simply be nonsense (that which can be neither proved nor disproved.)"

In the statement of functions cited above illustrations are found feasible only in the last three - practical, critical and limiting functions. The students may be able to understand these only if the illustrations fall within the student's' experience of their capacity to understand the English
language and imaginatively reconstruct them. In view of these limitations we continue the more clearly illustrated forms of presentation of some select philosophical conceptualisations, first from the Durant style and later from other models.

If we examine some of the statements on applications we find typical confident statements: "Only philosophy can tell us when to heal and when to kill. ... Science can give us knowledge, but only philosophy can give us wisdom". What is meant by philosophy telling? Is it the voice of a great seer? Is it the general ethos of a community of philosophers who have a record of collective wisdom in certain cultures at certain times? Is it anyone who is qualified with university degrees in philosophy? In the matter of healing or (mercy) killing is it the philosophy (the professional wisdom) of a doctor who will be the best judge of whether it is worth maintaining the life of a person with terminal ailment who would also be suffering acute pain without pain-killers? Or should it be the judges in the Supreme Court? Or should it be the priests interpreting the commandment 'Thou shalt not kill?' At the point where the advanced and refined knowledge of science that passes on to wisdom will a philosopher without scientific knowledge be able to interpret the issue properly? In the next chapter the case of a high level scientist cum technologist who has also revealed the philosophic wisdom to apply it in complex social settings and is trying to ignite several ten thousands of young minds in order to help to build a forward-looking and confident nation is described. It may appear that some kinds of wisdom require a special kind of knowledge base which all philosophers do not possess.

After recording the above limitations and raising the above questions, let us resume the 'live' style of philosophical survey based on some animated philosophic presentations, a sample of which has already been presented in Section B.
D. SCIENCE AND PHILOSOPHY

Though many books on Philosophy of Education confidently assert that science can give us knowledge but philosophy alone can give us wisdom, the reality is that philosophy as it now stands appears to be a weak discipline, lacking in relevant knowledge and wisdom.

Durant attempts to recapture the power and prestige that philosophy once had throughout the world. He asks:

Why is philosophy no longer loved to day? Why have her children, the sciences, divided her inheritance, and turned her out of doors?

Once the strongest men were willing to die for her: Socrates chose to be her master rather than live in flight before her enemies, Plato risked himself twice to win a kingdom for her; Marcus Aurelius loved her more passionately than his throne, and Bruno burned at the stake for loyalty to her. Once thrones and papacies feared philosophy and imprisoned her votaries lest dynasties should fail. Athens exiled Protagoras, and Alexandria trembled before Hypatia; a great pope courted timidly the friendship of Erasmus. Regents and kings hounded Voltaire from their lands, and fretted in jealousy when at last all the civilized world bowed before the sceptre of his pen. Dionysius and Dionysius's son offered Plato the mystery of Syracuse; Alexander's royal aid made Aristotle the most learned in history. A scholar-king lifted Francis Bacon almost to the leadership of England, and protested him from his enemies; and the great Frederick, at midnight when all his pompous generals had gone to sleep, held high revelry with poets and philosophers, envious of their boundless realms and their timeless sway.

Those were great days for philosophy when bravely she took all knowledge for her province, and threw herself at every turn into the forefront of the mind's adventure. Men honoured her then, nothing was held nobler than the love of truth.

Durant notes certain exceptions like Bergson, who fascinated great audiences with his eloquence, and Bertrand Russell, who has had the honour of frightening a government. We must hasten to add our own case of the philosopher-president Dr. S. Radhakrishnan, most of whose speeches after taking over as president, reflected a high and clear philosophy needed to build the citizens of a young nation, and some of whose speeches were addressed to the world, drawn from the wisdom of an old nation. We are also proud of the gentle but effective messages sent by K. R. Narayanan, hailing from the most depressed background rose to the highest position communicating the message of Pakkanar and Thiruvalluvar in the modern social context. President A.P.J. Abdul Kalam too rose from a very disadvantaged background and can be counted as a unique case of a scientist-turned-social philosopher.
In any case if the earlier philosophers cited by Durant and the modern exceptional cases noted by him and added by us are the norm for philosophy, the statement 'Philosophy can give wisdom' is true. Among the modern philosophers noted above one is a scientist-technologist, and the other is a philosopher of science (Bergson's outstanding work is *Creative Evolution*).

Durant explains the relatively powerless and unattractive position of philosophy today as follows in *The Pleasures*:

Philosophy is not loved today because she has lost the spirit of adventure. The sudden uprising of the sciences has stolen from her, one by one, her ancient spacious realms. "Cosmology" has become astronomy and geology; "natural philosophy" has become biology and physics; and in our own day the "philosophy of mind" has budded into psychology. All the real and crucial problems have escaped from her: no longer does she concern herself with the nature of matter and the secret of vitality and growth; the "will" whose "freedom" she debated in a hundred wars of thought has been crushed in the mechanism of modern life; the state, whose problems were once her own, is the happy bunting ground of petty souls, and less than ever honours the counsels of philosophy. Nothing remains to her except the cold peaks of metaphysics, the childish puzzles of epistemology, and the academic disputes of an ethics that has lost all influence on mankind. Even these wastes will be taken from her; new sciences will rise and centre these territories with compass and microscope and rule.

In *The Story*, Durant seeks to answer the question why science always seems to advance, while philosophy always seems to lose ground:

... this is only because philosophy accepts the hard and hazardous task of dealing with problems not yet open to the method of science – problems like good and evil, beauty and uginess, order and freedom, life and death; so soon as a field of inquiry yields knowledge susceptible of exact formulation it is called science. Every science begins as philosophy and ends as art; it arises in hypothesis and ends in achievement. Philosophy is a hypothetical interpretation of the unknown (as in metaphysics), or the inexacty known (as in ethics or political philosophy); it is the front trench in the siege of truth. Science is the captured territory; and behind it are those secure regions which knowledge and art build our imperfect and marvellous world. Philosophy seems to stand still, perplexed; but only because she leaves the fruits of victory to her daughters the sciences, and herself passes on, divinely discontent, to the uncertain and unexplored.

Durant proceeds to state the point in more technical language.

... Science is analytic description. Philosophy is synthetic interpretation. Science wishes to resolve the whole into parts; the organism into organs, the obscure into the known. It does not inquire into the values and ideal possibilities of things, nor into the total and final significance; it is content to show their present actuality and operation, it narrows its gaze resolutely to the nature and proceeds of things as they are ... But the philosopher is not content to describe the fact; he wishes to
ascertain its relation to experience in general, and thereby to get at its meaning and its worth; he combines things in interpretative synthesis; he tries to put together, better than before, that great universe-watch which the inquisitive scientist has analytically taken apart. Science without philosophy, facts without perspective and valuation, cannot save us from havoc and despair. Science gives us knowledge but only philosophy gives us wisdom.

Durant's presents the crucial sentence 'Science gives us knowledge but only philosophy gives us wisdom' as the climax in a clear discourse which brings out its significance clearly. Shorn of its context, it can be an empty phrase to be memorised. We know that there are cases of scientists like Raman and Kalam, who have risen to levels of philosophers to place scientific findings in their social significance. A poet-philosopher like Goethe has come down to play the scientist role and investigate specific facts (in light, crystals, plants etc.)

After placing philosophy in the perspective of its relation to science, which could pave the way for philosophy to play a meaningful role, Durant bluntly states that the way philosophy has been written these last two hundred years, it may well deserve this dishonour and oblivion. His first attack is on the epistemologists, especially the subjective idealists. It was a highly dangerous thing to make being dependent so much upon thought. To erect an exposition of the world upon the fact that one man thinks is to create a mess of difficulties. Durant comments: "From this pretty impasse came the marvels of materialism, idealism, and psychophysical parallelism. "So the merry war began; and now there is war only, but no merriment; occasionally an epistemologist is found who is capable of smiling, like Bradley or William James."

The 'theologians' were another group who weakened philosophy. Philosophy was considered as the chambermaid of theology. And though the Great fathers of modern philosophy Bacon, Descartes and Spinoza protested against this, their grandchildren of our day have largely surrendered to the old tradition. In the end it is this initial dishonesty that breeds the sterile intellectualism of contemporary speculation. Durant adds:

A man who is not certain of his mental integrity shuns the vital problems of human existence. So he builds himself an ivory tower of esoteric tomes and professionally
philosophical periodicals. He retreats fearfully into a little corner, and insulates himself from the world under layer after layer of technical terminology. He ceases to be a philosopher, and becomes an epistemologist.

In Greece, philosophers professed less, and undertook more. The pre-Socratics kept their eyes with fair consistency upon the firm earth, and sought to ferret out its secrets by observation and experience, rather than to create it by exuding dialectic.

In Aristotle Philosophy was honoured in all her boundless scope and majesty; all her mansions were explored and made beautiful with order; here every problem found a place and every science brought its toll to wisdom. These men knew that the function of philosophy was not to bury herself in the obscure retreats of epistemology, but to come forth bravely into every realm of inquiry, and gather up all knowledge for the coordination and illumination of human character and human life.

If philosophy is to capture its former glory it must relive that spirit.

We now proceed in analyse some other dimensions of philosophy, in a way in which the scientific facts and the philosophic interpretations à la Will Durant.

**E. PHILOSOPHY OF LOVE**

Philosophers seeking to probe as far and as deep as possible into the ultimate components of existence land in aspects of nature. The first efforts were with the physical nature, resulting in the emergence of the sciences of matter and energy. But when man probed into the domain of life, the biological sciences emerged. The mystery of the perpetuation of life and varieties of perpetuation leads us to the simplest form of reproduction of a unicellular organism into two and then each of them growing into a full organism. As the organism becomes more complex, the form of reproduction also becomes more complex with differentiation of sex and mechanisms developed to enable a wide variety of recombination in forming the progeny. Genuine love seems to be manifested in the birds and higher animals. When we come to man we find all varieties ranging from brutish and even sub-brutish erotics to the most tender forms of love that give insights to the theory of beauty, theory of existence, theory of mind and emotion, poetry, literature an arts, and the highest forms or spiritual domain.
Love is acclaimed to be the most interesting of all forms of human experience, yet so few have cared to study its origin and development. A majestic stream of literature has poured forth about it in every language, as epics, dramas, fiction, and passionate and endless poetry. But science has not sufficiently scrutinized the wonder objectively, to find its source in nature, and the causes of its marvellous growth form the simple merging of the protozoa to the devotion of Dante, the ecstasy of Petrarch, and the loyalty of Heloise to Abelard.

There is nothing in human affairs so strange as the readiness of men to pursue women – unless it be the readiness of women to be pursued. There is nothing in human conduct so persistent as the measuring glance of male upon female at every moment of the day.

Durant attempts to bring together some relevant scientific analysis from Stendhal, Ellis, Moll, Bölsche, De Gourmont, Freud, and Stanley Hall, and see if it can make a composite picture in which love will reveal its function and its significance.

First the problem is approached from the biological angle. In the simplest cell, apparently, it is growth that compels that bursting apart, which is the lowliest form of reproduction. The mass of the cell grows faster than the surface through which it feeds; to restore the proportion it divides in two; and the surface, spreading down through the division is again made adequate to the mass.

Bacteria - the smallest organisms that we know - multiply themselves by tireless division and re-division. The central mass or nucleus of the Amoeba undergoes a strange separation of elements into two nuclei, and then the entire animalcule divides and forms two men Amoebae. Here is parentage, but as yet no differentiation of the sexes, and presumably no love.

Though she develops the formula into a thousand complications, she never quite abandons it. Among the protozoa (or single-celled animals) this generation by division prevails; budding is only a variation on the theme. A
baby *hydra* buds from the stalk of the older one, and grows by feeding on
the life-stream of its parent; as it matures it reaches out pugnaciously for
food in competition with the very organism from which it buds; at last it tears
itself loose, finds new rootage somewhere, and sets up its own
establishment.

Sometimes the divided cells of a protozoon, as in the case of *volvox*,
remain embedded in a gelatinous matrix and form a "colony". There a
startling differentiation of function arises: the external cells specialize in
nutrition, and the internal cells in reproduction; the colony becomes a social
organism with interdependent and cooperative parts. At the very beginning
of its panorama life offers us an example of that isolation of the "germ
plasm" upon which Weismann based the prevailing theory of heredity in
man.

At this point a new phenomenon appears. Low weakened protozoa of
the same species coalesce, and each pours out from its nucleus a stream of
protoplasm which passes into the substance of the other. Then they
separate, and seem strangely strengthened by this "rejuvenating
conjugation"; for soon each of the two divides with pristine vigour, and for
many generations division serves again the purposes of continuity. It is with
the protozoa here as with our human selves and groups: when a man
marries he is made stronger; when races mingle they are renewed. Yet
there is in it no analogue to that mating of dissimilar individuals which is the
root of the flower of love.

We find such an analogue in the low organism, *pandorina*, a
protozoan colony of sixteen cells. Each of the cells divides not into two
independent cells, but into many infinitesimal bits or "spores" apparently all
alike; and a new organism arises only when the spores unite. When we
pass to another colonial protozoon, *eudorina*, we find what we seek. Here
each cell breaks into dissimilar spores, some larger and quiet, some active
and small; and not till a smaller spore merges with a large one is a new
organism formed. In *eudorina* nature began to discover sex.
For a time she hesitated; and in volvox we have the older method of reproduction alternating queerly with the new. In one generation the cells of the colony multiply by the traditional division; but the cells of the second generation, so produced, break up like eudorina into unlike spores; and two dissimilar spores must unite to form the cells of the third generation. New things are seldom established except by insinuating themselves into the old—a lesson which youth learns when youth is gone.

In more complex organisms, certain portions of the body, like stamens and pistils of plants, are specialized for the production spores. The two kinds of spores themselves are more highly differentiated, and become, in the later stages of life's development, ova and sperms. But these two opposite elements are still in many species, produced in the same body, by the same parent. The earthworm, for example, produces in one of its segments ova, and in another segment, at another season, sperms. It is the same with the oyster and other molluscs, certain tunicates, the perch, and even the ancient and honourable herring. Nature, having hesitated at differentiating the generative elements, hesitated again before differentiating into male and female the organism that produced them.

Now we come to the sea-worm bonellia. The female of the species is half a foot long, and prosperous in diameter; the male is a sorry speck one-sixteenth of an inch length—i.e., almost a hundred times smaller than his wife. Each female supports some twenty such modest mates; they enter her digestive tract, pass down into her body, and there meet and fertilize the ova which she holds with her. Among insects the female is almost always larger and stronger than the male. Only among birds and mammals is the male superior; and here he owes his power to the fact that the female, having taken over most of the burdens of reproduction, is physically handicapped in the eternal war of love.

This subordination of younger sex comes to a point in the actual sacrifice of the male in the act of fertilization. In many species the female eats the male immediately after union.
In the *epirus* spider the male lives apart from the female for safety's sake, till a certain restlessness comes over him. Then like some timid Dante approaching Beatrice, he attaches himself to the outer threads of the female's web and builds a careful strand of exit from it as an avenue of retreat, and advances diffidently. Often the female eats him at once, without letting the poor fellow know any of the luxuries of love; perhaps she mistakes him for an assailant, or possibly she is a sophisticated person who prefers a meal to an amour. If she is in a mood for love she goes through the ritual of modesty; she retreats coyly, though she is larger and stronger than the male; she slides down one thread and up another, while the male excitedly pursues her; at last she lets herself be caught, and gives the male the delightful delusion of mastery. Their emotions are at this stage romantic and refined; they pat each other gently with their feelers, and declare their intentions delicately. Scarcely is the mating over, when the female leaps upon the male and consumes him with all the cynicism of completed love. Sometimes she begins to eat him before his task is finished. Occasionally he is alert enough to escape her destructive mandible, and slides down his thread of refuge for clear life. After that he becomes a philosopher, till restlessness returns.

According to the account given by Fabre, the female mantis eats her suitor with a like ferocity, and superior appetite. Other insects refuse the male when they have been fecundated; but the lady mantis accommodates from two to seven mates, accepts their ultimate gallantry, and then eats them one after another at her leisure. In many cases, unable to wait for her male, she turns her head and eats the forward part of the male while he is engrossed in his racial task. Poiret tells of a case in which the female bit off the head of a male as soon as he appeared; but the decapitated gallant went through with his productive function as if nothing had happened, and a head was of no use in love.

In the little plant-louse aphid male and female mate normally in the fall, and the female lays a large "Winter egg" which survives till spring, while all the rest of the species die. In spring this super-egg hatches into wingless females, which, though never having seen a male of their species, beget offspring – all female – to the summer's end. Then, suddenly, males appear among the larvae, some of these males mature, and fertilize the females of their generation, who then produce large winter egg. It may be that such cases of "parthenogenesis" (literally, virgin-birth) are due to the transmission, by the matching females in the fall, of part of their store of fertilized eggs to the subsequent mateless generations: of these things there is as yet no certainty. But the actual possibility of dispensing with the male has been demonstrated in many laboratories.
Evidently the male does not owe his appearance in nature to the needs of fertilization. It is very probably due to the necessity for cross-fertilization. The separation of the sexes made it possible to unite in the offspring the hereditary qualities and capacities of two distinct lines of ancestry. The advantages of such double heredity are so obvious that some arrangement is developed to avoid self-fertilization. Flowers (which are the reproductive organs of plants) are so constructed that it is seldom possible for the pollen of a plant to enter the pistil of that plant. Even in the snail, where both sexes exist in the same body, the parts are so arranged that self-fertilization is impossible.

Having divided organism into two sexes, the next problem was to ensure their cooperation, through the meeting of the generative elements. Here the wastefulness of nature is astounding. It is most lavish among the flowering plants, especially in those depending on wind to carry the fertilizing seed from one plant to another; and billions of such particles are used to bridge a distance of five yards between two nettles.

The same profusion of material survives, concealed, in our own race: out of billions of sperms produced by one normal male, only a few (in these days only one or two) will be used in reproduction. Bölsche believes that this abundance is not mere waste; that it provides the material out of which natural selection weeds the weaker ova and sperms, and chooses the stronger.

This wastefulness is corrected in the higher animals partly by the provision of structures for the guidance and union of ovum and sperm, and partly by the development of parental care. The star fish keeps her arms over her fertilized eggs and her hatched young. The male stickle back brings the female into his pit to lay her eggs; then she goes away and the male takes care of the offspring himself, like a modern husband. In the sea-horse hippocampus hudsonius the female lays her eggs into a pouch on the body of the male, who cares for them until they hatch. In the thousands of fish that merely lay eggs and depart, the yearly average is over a million to each couple; in the zoo species that show some parental care the average
is only 56 eggs per couple per year. Birds that make no nests give twelve eggs per year; those that make rude nests, eight; those that make careful nests, five. So, bit by bit parental love replaces and atones for nature's waste. In mammals, known for maternal care, the average couple produces three young per year; and this decreases with the higher species. Slowly the family develops as an external womb to care for offspring through an ever longer time. And as adolescence lengthens, civilization, rises to loftier levels than before.

What is love? It would assume a highly philosophical consciousness in the lowliest protozoan spore. Presumably, when the male function was first specialized in a separate organism, very few of those aboriginal males sought or found union with their "better halves"; and only those who sought and found became the parents of next generation. And so in each generation it was the lovers – the individuals that achieved completeness by merging themselves with their complements – who transmitted in the stream of life their passion for unity. Those that felt no such strange urge, or felt it slightly, died without offspring or with few, and their nonchalance was weeded out.

Now we move into the psychological foundation of love. Is there anything in children that corresponds to the later passion of love? Freud answered the question confidently in the affirmative, and built an astonishing castle of psychiatry out of the erotic possibilities of thumb-sucking and nursing at the breast. But when the facts here are separated from theory they become microscopically small. Watson and his assistants kept several hundred infants under observation for a considerable time, and found no sexual behaviour of my kind.

Very soon however, the child shows consciousness of the other sex. A certain anatomical curiosity appears, which is encouraged by concealment and evasion. Each sex becomes a mystery to the other, and evokes a reaction of mingled shyness and attraction. There is hardly more than that; and if love comes before puberty it is likely to be in the form of the "Oedipus complex": the boy forms an attachment for his mother, and the girl
for her father. But this is not the terrible thing that Freud made it ought to be; it is not a complex, because it is neither unconscious nor abnormal; it is nature's way of preparing the child for wholesome love.

It is at puberty that love sings its first dear song. This sudden foliage, along with the deepening of the voice, is among the "secondary sexual characters" that come to the male at puberty; while to the blossoming girl nature brings the softened contours that will lure the eye, the widened pelvis that will facilitate maternity, and the filled-out breast that will be used to nurse the child.

The causes of secondary characters are explained thus:

When puberty comes, the reproductive cells begin to produce not merely ova and sperms, but certain "hormones" which pass into the blood and cause a physical transformation. It is not only the body that is now endowed with new powers; the mind and character are affected in a thousand ways. New feelings flood the body and the soul; curiosity drives the mind forward, and modesty holds it back; the young man becomes awkward in the presence of the other sex, and the girl learns how to blush. Children stupid before may suddenly become bright; those obedient before may show now an unreasoning recalcitrance. Spells of introspection come, strange Russian moods of brooding and reverie. Imagination flowers, and poetry has its day; at this age all the literate world is an author, and dreams of deathless renown. Every power of the mind quickens, and reason makes a fresh assault of questions upon the universe. If the reasoning continues long, the individual becomes a scientist or a philosopher; if it is soon abandoned, he becomes a successful man, and may rise to the highest office.

It is at this time that the overflow of love waters the roots of art and social devotion. Love imagines beauty, seeks beauty, and may create beauty; seeks goodness, and goes out resolute to make it. If religion presents itself now as theological dogma it may rouse the youthful passion for debate, and suffer dismemberment; if it presents itself as the pursuit of the good it touches the idealism of the changing soul, and becomes an ineradicable part of the personality.

All in all this period of puberty is our marvellous age. It is the age of Reason and yet the epoch of emotion. Never does the world seem so strange and yet so beautiful, so inaccessible and yet so conquerable, as in these moulting years; every later age looks back to them with longing. It is
the springing of every power, the seed-time of every growth; in it all noble passions find their nourishment. It is life’s Renaissance.

The spiritual development is one from this sound and natural basis rises the love that is spirit and poetry. From this passion of life for perpetuation comes the loyally of mate to mate; from this hunger of the flesh comes the fairest devotion of soul to soul; from the lust of the savage in the cave comes at last the poet’s adoration. This is the gamut of man.

Primitive peoples seem to have known very little of love; they hardly had a word for it; when they married they were actuated by nothing more akin to romance than a desire for children and regular meals.

Nietzsche thought that “romantic love” was the invention of the provencal troubadours; but doubtless a “spiritual” element developed in the reproductive impulse wherever civilization arouse. The Greeks knew romance, though in their own inverted way; and the Arabian Nights witness that love did not wait for medieval song.

After listing the weakness and exercises of the male and female genders, De Musset adds: “but there is in the world one thing holy and sublime, and that is the union of these two imperfect beings”.

That which we seek and do not find becomes more precious though our not finding it; the beauty of the object, as we shall see, in the strength of the object, as we shall see, is in the strength of desire, and desire, which is weekend by fulfilment, is made richer by denial. Therefore love is most spiritual in the youth of the individual the maturity of civilization, for it is then that repression is at its height, and restraint tempers the flesh into poetry.

The psychological development of love tends to lead to the spiritual. It begins, most often, with a special tenderness of the girl towards her father, and of the boy towards his mother. The physical elements do not here enter consciously at all. “The first propensities to love in an uncorrupted youth” says Goethe, “take altogether a spiritual direction”.
From these early manifestations, coming soon after the fullness of puberty, love passes on through various stages. As temporary phases, they are normal, but they become abnormal if retained permanently.

Now come courtship days, the fairest part of human destiny. The elements of courtship can be traced in many games played in childhood; even a girl of five can flirt with skill. Courtship serves vital purposes: it stimulates love to greater fullness, and gives time for that selection of the best which slowly raises the quality of life. In adults the ritual of courtship is acquisitive advance by the male and seductive retreat by the female. There are exceptions here and there; in New Guinea the girls court the men, and bestow on them lavish presents; but this admirable custom has not yet developed in our land. "With them the season of war is also the season of love". In men war becomes one of commercial competition and display; we fight with bank-book rather than with teeth, and all our laws are hidden behind the courtesies of trade.

Women, if they are wise, fight with flight and modesty. Modesty is a strategic retreat, born of fear and cleanliness, and developed by gentleness and subtlety. It is not peculiar to the human species; for it has an obvious analogue and source in the reluctance of the female animal to make love out of season or out of bounds. Man, said Beaumarchais, differs from the animals in that he drinks without being thirsty, and makes love at all seasons.

From these varied sources, modesty grew into one of the subtlest charms of woman. Immodest women are not attractive, except passingly, to male men. The young man is drawn to lowered eyes; he feels, without thinking of it, that this delicate reserve promises a tenderness which is an excellent thing in woman.

When the infant comes, love in the parents is renewed, but it is strongly different from the flame that burned before and the child itself is likely to take from both parental hearts some of the affection which made them; transiently distractions lose their charm, and fresh bonds are forged to weld the mates again.
It is time that makes at last the complete marriage of two souls. For in those years of parentage many trials must come, many vicissitudes of fortune, many tortures of the body and terrors of the heart may come; sickness brings to the fickle fancy a certain depth and soberness, and love takes on new life in the imminence of death.

It was love's philosopher, Plato, who said: "He whom love touches not, walks in darkness".

All things must die, but love alone eludes mortality. It overleaps the tombs, and bridges the chasm of death with generation. Our wealth is a weariness, and our wisdom is a little light that chills: but love warms the heart with unspeakable solace, even more when it is given than when it is received.

F. THEORY OF BEAUTY

The theory of beauty seems to be closely related to the philosophy of love, at least in its origins, and is therefore anticipated even in the previous section. The love between the sexes could be one on the foundations of aesthetics, but there are other themes and paths to the approach of beauty. Every heart hears the call of the beautiful but few minds wonder why. The savage sees beauty in thick lips and livid scars; the Greek found it in youth, or in sculptured symmetry and calm; the Roman found it in order, sublimity and power; the Renaissance found it in colour; and the modern soul finds it in music and the dance; everywhere, and at all times, people have been moved by beauty of some sort, and have spent many lives in seeking it. But only philosophers have been anxious to understand its nature and to discover the secret of its power.

The question belongs to psychology, but the psychologists have left it to philosophy as every science leaves to philosophy the problems it cannot solve. Baumgarten, the first thinker to recognize the nature of beauty as a distinct realm of inquiry and the first to give it the name of aesthetics,
apologized for including so undignified a subject matter among the mansions of philosophy.

Even where beauty was most honoured and most produced - in ancient Greece - philosophers were helpless to pierce the secret of its lure. Pythagoras began the game of aesthetics by reducing music to a mathematical relation, and ascribing a subtle harmony to the spheres. The pre-Socratic Greeks, being, like pre-Darwinian scientists, under the domination of physics and mathematics, sought to define beauty in spatial and quantitative forms; music was a regularity of sounds, and plastic beauty was a regularity of proportions.

Plato went to another extreme and merged the beautiful in a sublime identity with the good. Art was to be a part of ethics; and except for the pedagogical uses of music there was to be a minimum of art in Plato's Utopian Republic. In Aristotle we find the typical Greek answer to our question; beauty is symmetry, proportion, and an organic order of parts, in united whole. It is a conception that pleasantly accords with that "Cooperation of the part with the whole".

A new note sounds in Kant and Schopenhauer: beauty becomes that quality whereby an object pleases us regardless of its use, stirring in us a will-less contemplation, a disinterested happiness. According to Schopenhauer, aesthetic appreciation and artistic genius lie in this objective and impartial perception; the intellect is for a moment emancipated from desire, and realizes those eternal forms, or platonic ideas, which constitute the outward aspects of the universal will. But in Hegel we are back once more with the Greeks: beauty is again unity in variety, the conquest of matter by form, the sensous manifestation of some metaphysical ideal.

**The sense of beauty in Animals:** perhaps beauty is a function of life, and not of matter and form. Perhaps biology can help us here, where physics and mathematics cannot. Many animals are more beautiful than man - the featherless biped that transiently rules the earth.
We often think of beauty in terms of visual perception. But the sense of hearing may also have aesthetic value for the beasts. Some animals are notoriously susceptible to music. The experiments conducted by Ellis among a variety of animals in the zoological gardens with performances on various instruments showed that with the exception of some seals none were indifferent, and all felt a discord as offensive.

Animals are sensitive to visual beauty too. Darwin noted that certain birds adorn their nests with gaily coloured leaves and shells, with stones and feathers and bits of cloth or ribbon found in the haunts of men. The bower bird builds a special nest for his mate, covered with brush-wood and carpeted with gathered grass; he brings white pebbles from the nearest brook and places them artist-wise on either side; he adorns the walls with bright feathers, red berries, and any pretty object he may find; at last he dignifies the entrance and the exit with mussel shells and gleaming stones. this is the place the bower-bird builds for his love.

Beauty is analyzed in terms of primary, secondary and tertiary.

**Primary Beauty: Persons**

Many philosophers are of the view that we desire nothing originally because it is beautiful but we consider it beautiful because we desire it. The beautiful and the ugly, says Nietzsche, are biological; whatever has proved locally harmful seems ugly. Beauty, says Santayana, is pleasure objectified or, as Stendhal phrased it, "beauty is a promise of pleasure".

So clearly is beauty bound up with love that it depends, in the human species, on those parts of the organism that are secondary sexual characters, formed at puberty by the hormones of the interstitial cells: breasts, hair, hips, rounded contours, and softened voice.

Clothing (like modesty) enhances beauty because it is a form of resistance, and resistance increases desires.
**Secondary Beauty: Nature**

Love, then, is the mother of beauty, and not of its child.

Our notion of what is beautiful in sound comes originally from the song or speech of the desired mate. "A gentle voice is an excellent thing in woman". Woman, on the other hand, like what Ellis calls "a bearded male voice", because in general she prefers strength to beauty, and those sonorous tones in the male which have been developed, presumably, through the sexual selection of vigour as a promise of protection and abundance.

It may be that the voice itself arose as a sex call. Out of the voice grew song, which is almost inseparably bound up with love (though religion and war have stolen some of it away); out of the song came dance which is a portion of love’s ritual; and out of the song and dance came music.

Music has spread out far and wide from its origin in love; but it is still bound to it, and no lass can love without it. Many girls who have had years of training in music and dance stop the practice of the art after marriage.

But love alone does not explain enough in these derivative fields of auditory beauty; the pleasure of rhythm enters as an independent element. Inspiration and expiration, the systole and diastole of the heart, and even the bilateral symmetry of the body, dispose us to the rhythmic rise and fall of sounds; and not love only but all the soul is pleased. We make a rhythm from the impartial ticking of the clock and even the stamp of marching feet; we like rocking, dancing verse, antistrophes, antitheses and extremes. Music soothes us with its rhythm and lifts us on its lullaby to world less brutal than the earth. It may relieve pain, improve digestion, stimulate love and help to capture escaped lunatics.

Appreciation of visual beauty in man has its biological origins. When erect stature came, smell lost its potency and sight soon grew to dominate the aesthetic sense. The beauty of things seen is like that of things heard, far removed from the beauty of a woman loved; and we are flung again upon the crux of the aesthetic problem: The question arises whether curved
lines, symmetrical proportions and organic beauty are the cause or the effect of personal beauty? Are they primary, or derived?

Art seems to have its origin in the deliberate imitation, by animal or man, of the colours which nature develops on bird and beast in the mating season, and flaunts before the eyes of the selecting mate. The bird ornaments its nest with bright objects, as we have seen; and man adorns his body with vivid colours that fan desire. When clothing came, the colours passed from the body to the raiment, but with the same purpose of attracting the eye; and red was kept as the colour that most stirred the blood. So song and dance, music and poetry and many forms of sculpture flower out of love. Durant comments that architecture alone seems to be independent; but only because the secret of its power lies not in the beautiful but in the sublime.

Durant also sees the relation between sublimity and beauty as that between male to female; its delight comes not from the desired loveliness of woman, but from the admired strength of man. Woman is probably more susceptible to the sublime than man, and man is more susceptible to beauty – Keener to use it, more passionate in desiring it, more persistent in creating it.

**Tertiary Beauty: Art**

This overflow of love, which spreads from persons to things, and beautifies the very soil we tread on, reaches at last to the creative fury of art. Biologically, art arises in the song and dance of mating animals, and in their efforts to enhance with artifice that efflorescence of colour and form with which nature marks the season of love but soon passes into higher levels.

The first use of clothing, apparently, was artistic rather than utilitarian. Having sufficiently decorated his body, primitive man passed to the decoration of objects. Palaeolithic man adorned the walls of his caves with
admirable representations of the animals which he hoped to capture in the hunt, or which he worshipped as totems of his tribe.

Religion, though not the source of beauty, has contributed immensely to the development of the arts. Sculpture is conjectured to have arisen from rude pillars placed to mark a grave; as artistry improved, the top of the pillar was carved into some semblance of a head; later the whole pillar was cut roughly into the shape of a man.

Architecture began with tombs that housed the dead; the most ancient architectural monuments in the world – the pyramid – are tombs. Churches began as shrines to the dead, and places for worshipping them. Gradually the burial place was taken out into the neighbouring ground; but still, in Westminster Abbey and in many Catholic churches in the European continent, the graves of great ancestors are within the church.

Drama seems to have come from religious ritual and festal processions to the days of the sceptical Euripides it remained a sacred thing at Athens; and the modern drama, the most secular of contemporary arts, began in the Mass and in the pious parades which pictured for the medieval mind the life and death of Christ. Sculpture found a new splendour in the adornment of the cathedrals; and painting reached its zenith under the inspiration of Christianity.

A pagan element of splendid was flesh introduced into the holiest pictures of the Renaissance. The Madonna became plump Venuses, the St. Johns were tender Adonises, and the St. Sebastians were candid studies in the nude.

Even religious art drinks at the fount of Eros to sustain itself. Rhythm enters, but at once associates itself with love to generate the song, the dance, the poetry. Imitation enters, and helps to beget sculpture and painting; but very soon it is love, filial or sexual, that determines the object which imitation makes combine rhythm and imitation with the love-motif and you have nine-tenths of literature; even the divine song of Dante, though designed as an allegory of human life, becomes in the end a lyric of love. It
is thus subterranean river of erotic energy that feeds the creative passion of the artist.

The investigator would like to interrupt the discourse with a reference to *Indian models of erotic art and its sublimation*. We can see this trend in the development of religious music, dance and drama in India, especially in South India, for which the relevant historical evidence is more carefully preserved. As we can reconstruct the picture in the extreme south (Tamil Nadu and Kerala) in the first three centuries AD, we find cultural diffusion conducted by wandering poets (*pulavar*), minstrels (*pâɲar*) and dance-drama artists (*Kûtta*, *viraliyar*) spreading culture through popular literary presentations, songs and music and dance-drama. These artists had themselves probably conducted participant observation in various local and even primitive social groups and absorbed the art forms and their origins in their pristine forms. Later (fourth to sixth centuries) during the period of Jain domination it was thought that these wandering artists might be spreading loose moral, and they were suppressed.

During the seventh and eighth centuries Saivism and Vaishnavism had a popular revival in the extreme south using the very same artists whom Jainism had suppressed. Now the hiding artists were traced and reinstituted in temples and their adjuncts to spread the messages of the orthodox Hinduism in its revival phases. The dancing women were called *deva dâsis* (women devotees of the Lord), and they were expected to perform the stories of Siva and Vishnu and other Hindu lore in the *mandapas* and even in exterior precincts. Some of these themes at the surface level might seem erotic, but deep spiritual ideas and feelings appear to have been coded into them, and the decoding exercises too have been by sages, saints as well as art theorists. Ananda Coomaraswami's *Dance of Siva* is a work in philosophy rather than in dance.

Apart from the *devadasis* instituted in temples to propagate Hinduism, there were also wandering *bhakti* singers and dance troupes (corresponding to the earlier *pulavar*, *pânar* and *kûtta*). The Saivite poet-singers were called *Nâyanmar* and the Vaishnavite poet-
singers were called Āzhwars (literally 'those who were immersed – in divine love). Later similar wandering groups developed further north – in Andhra Pradesh etc – performing song, dance and drama called Bhāgavatha Mēla – originally associated to Vaishnavism, but later extended in scope.

In Bengal this cult of wandering vaishnavite singer-dancer troupes have persisted even up to the present. The Baul beggars whose themes of divine love is extremely spiritual and even universal have inspired Tagore’s enchanting, inspiring and educative works. Recently there was a performance of a Baul troupe in Vylapalli auditorium at Trivandrum, sponsored by Alliance Française.

In temples of Orissa, especially in Khaja Raho the erotic sculptures dances in the external platforms of the temples are very famous. Some of the sculptures in gather temples are extremely erotic, and are inferred to be expositions of verbal aphorisms given in Vatsyayana’s Kama Sutra. But then there are poems and treatises which give the symbolic meanings of these nude figures. Even in the Italian cathedrals Renaissance artists have sculpted nude figures even within the cathedral with the best intention of diffusing spiritual ideas. Thus one tourist guide book on Art and History of Pisa presents four nude figures sculpted in Giovanni Pisano’s pulpit. They are expected to be read as representing Justice, Temperance, Fortitude and Prudence, supporting the church. Where there has been opposition from pietistic church-goers, such art pieces have been transferred to the Cathedral museum.

Now let us revert back to the discourse of subterranean river of erotic energy that feeds the creative passion of the artist. In some artists the flood of sex is damned, and channelled almost wholly into creation. Love loses its power, emotion is controlled, reason flourishes, and intellect dominates everything. Durant lists some men of genius who emerge out of this immense sublimation: Socrates, Sophocles, Aristotle, Archimedes, Caesar, Galileo, Giotto, Leonardo, Titian, Bacon, Milton, Newton, Hobes, Bach, Kant, Goethe, Hegel, Turgenev, Flaubert, Renan, and Anatole France.
These are calm men, who have mastered desire and lifted their chaos into a dancing star. They work slowly with resolution and patience, rather than with “inspiration” and passion, they speak and act with measure and restraint, they develop slowly, create better after thirty than before, achieve a tardy fame, and live for the most part to a great old age. They do not excel the romantic type in that found of superior energy which is the common dominator and source of all genius; but from that fund they draw little for sex and nearly all for art. Michelangelo, Beethoven and Napoleon were supreme because in them both types of genius were fused into an almost super human unity.

It must be noted that some of the generalisations noted above by Durant may not apply to the artist-sages observed in India. They seem to have acquired both inspiration and serenity, often in youth or even in childhood, through pūrva puṇya or by divine grace, though there are cases of some who seem to have got it late through hard work.

**Objective Beauty**

Ellis believes that beauty is independent of the observer; and rests his case upon what seems to him the substantial similarity of aesthetic preferences in most of the races of the world.

**G. PHILOSOPHY OF ARCHITECTURE**

The ideas about architectural aesthetics and related trends in art were drawn largely from C.V. Ananda Bose (*Habitat: Dynamic and Static Modes* – CETED computer storage (2005) – to be edited and published.) Among several dimension of architectural aesthetics, those that have a close bearing to education are focused.

The interest in this subsection for this application-oriented study in education is that many architects have clear-cut philosophies and have demonstrated their applications in their buildings. Thus we may be able to get ideas for ‘grounding’ philosophical ideas in educational practice. Many of the buildings that we commonly see have an underlying theory of art and architecture, which those who understand the relevant theory in context can ‘read’. This can be seen most clearly in religious edifices, but even many secular buildings are constructed on a philosophy-based design. There
have been certain phases in history in which artistic theory, architectural theory and practice, and social educational philosophy needed to nurture a young nation have been attempted to be applied in concert. This was the case in the early years of the Soviet Union and in the Weimar Republic (in the centre called Bauhaus). The courses of these attempts are described below.

Many architects have explicitly claimed that through their ways of building physical edifices new values, attitudes and living habits can be inculcated in the citizens, and even a new society can be formed. Such ideas have been questioned by other schools; out of this debate seminal ideas for education, both in the formal and in the nonformal sense, have grown. The 'post-modern' thinkers are credulous about the view that rationally designed architecture will be able to influence a society towards more rational ways of behaviour.

A famous modern American architect, Frank Lloyd Wright, attempted what we would now call constructivism, followed a method of training his apprentices through methods that would delight Gandhiji and Dewey. He put them to work on projects related to buildings and building designs, and drew out theory from practice. He did not insist on systematic instruction in theory to precede practice.

Wright's master Sullivan and 'grand-master' Richardson, had introduced something of the expressionism in art and architecture from Europe into America. Each one of them had a distinct style of his own. But all three of them believed that they could express the democratic and egalitarian values of the United States through their architecture, and many of their architectural experiments were directed towards this end.

Wright's Unity Temple carries the aim further. Wright, the Unitarian, appeared to imbue his vision of a new life with a universal sense for the sacred, running from the sacrament of the family hearth through to the sacrament of work and to the house of religious assembly. He seems to have an obsessive exaltation of the hearth as the moral and spiritual centre to be projected, with the aid of well-placed inscriptions, into the more public
realms of worship and work. His goal, like that of many of his European contemporaries, was the achievement of a total environment, embracing and affecting the whole of society.

**Bauhaus** (1919-32) was a major creative centre in architecture developed in the German Weimar republic which was expected to become the centre of egalitarian, democratic, progressive and even mystical ideas in art and architecture. But its life was short; it was forced to close by the fascists. But it stands as an example of providing a forum where creative ideas from different schools could confront each other and get resolved.

In the transactions conducted in this centre, work-based and art-based educational thinkers of the highest class — John Dewey, Kerschensteiner, Paul Klee, Cizek, Kandinsky, the constructionists and a host of others - entered its directly or indirectly. Bruno Taut (1918) of the Glass chain fame had anticipated the Bauhaus Proclamation of 1919. He argued that a new cultural unity could be attained only through a new art of building, wherein each separate discipline would contribute to the final form. 'At this point,' he wrote, 'there will be no boundaries between the crafts, sculpture and painting; all will be one: Architecture.

In Germany a holistic art philosophy called Gesamtkunstwerk (Total art work) had been developed. These ideals were elaborated and reworked in an anarchistic way (with almost no controls) by Gropius in his Bauhaus Proclamation — calling on all fine artists to reject salon art and to return to the crafts in the service of a metaphorical cathedral of the future - 'to go into buildings, endow them with fairy tales ... and build in fantasy without regard for technical difficulty'. In another paper he exhorted the members of the Bauhaus 'to create a new guild of craftsmen, without the class distinctions which raise an arrogant barrier between craftsman and artist'.

Among the several brilliant personalities who joined Bauhaus, the most controversial one was the Swiss painter and teacher, Johannes Itten (1919). Three years earlier he had started his own art school in Vienna, under the influence of Franz Cizek. In a highly charged milieu, coloured by the anarchic anti-Seccessionist activities of the painter Oskar Kokoschka
and the architect Adolf Loos, Cizek had developed a unique system of instruction based on stimulating individual creativity through the making of collages of different materials and textures. His methods had matured in a cultural climate impregnated with progressive educational theory, from the systems of Froebel and Montessori to the 'learning-through-doing' movement, initiated by the American John Dewey and vigorously propagated in Germany after 1908 by the educational reformer Georg Kerschensteiner.

Itten's position was anti-authoritarian and even mystical. It was reinforced in 1921 by his extended stay in the Mazdaznan centre near Zurich. He returned in the middle of the year to convert his pupils and his colleagues to the rigours of a mystic way of life which demanded an austere life style, periodic fasting and a vegetarian diet flavoured with cheese and garlic. The physical and spiritual well-being deemed to be essential to creativity was further assured by breathing and relaxation exercises. Itten had been deeply affected by the horrible events of World War I; a close study of Spengler's *Decline of the West* made him realise the limitations of our scientific technological civilisation. It was not enough to embrace the slogans 'return to craft' or 'art and technology, hand in hand'. He studied Eastern philosophy, delved into Persian Mazdaism and Indian yoga teachings, and compared them with early Christianity. He reached the conclusion that we must counterbalance our externally-orientated scientific research and technological speculation with inner-directed thought and practice and seek a new way of life. Itten could not continue in Bauhaus and left.

The Dutch *De Stijl* artist Theo van Doesburg (1921), and the Russian painter Wassily Kandinsky (1922) joined Bauhaus. Whereas the former postulated a rational, anti-individualist aesthetic, the latter taught an emotive and ultimately mystical approach to art. Van Doesburg's extramural *De Stijl* polemic instantly appealed to many Bauhaus students. His teaching not only had an immediate impact on the production of the workshops, but also
directly challenged the open-ended precepts of the original Bauhaus programme.

The Hungarian artist and social radical Laszlo Moholy-Nagy was appointed later. Moholy-Nagy had come into contact with the Russian designer El Lissitzky of the Russian Suprematist school. This encounter encouraged him to pursue his own Constructivist leanings, and add Suprematist elements in his paintings.

This spectacular demonstration of programmed art production seems to have impressed Gropius. Next year he requested Moholy-Nagy to take over both the preliminary course and the metal workshop. Moholy-Nagy's leadership led to an orientation towards a 'Constructivist Elementarism' in the workshop. After 1923 the Bauhaus approach became extremely 'objective', in the sense of being closely affiliated to the German *Neue Sachlichkeit* (new objectivity) movement. When the fascists forced the closure of Bauhaus, the artists fled to various countries and enriched art and architecture in those countries.

But the Bauhaus remains as a unique experiment where widely differing schools of art and of life could confront each other and produce conflicts as well as resolutions. The conflicting artists could demonstrate in practice what their philosophy stands for and these practical forms could help one to take a decision about choosing one or the other or a mixed form based on a resolution. This experiment sends out an invitation to educational 'philosophers' to shed empty talk, spell out what they mean by their school so that one can decide based on understanding what they talk about. Each artist in Bauhaus had a clear philosophy of his own – which was not merely a philosophy of art, but also of education – in a deeper sense.

The Swiss-French architect Le Corbusier is the person who is most closely identified with what has come to be called modern architecture and criticised most for the perceived defects of modern architecture. His statement, "The house is a machine to live in," has been quoted most
frequently to give the impression that he holds a mechanistic point of view. But his views were really very broad:

You employ stone, wood and concrete, and with these materials you build houses and palaces; that is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, I am happy and I say: 'This is beautiful.' That is Architecture. Art enters in. My house is practical. By the use of inert materials and starting from conditions more or less utilitarian, you have established certain relationships which have aroused my emotions: This is Architecture. - [Le Corbusier Vers une architecture (Towards a New Architecture), 1923]

In 1916 Le Corbusier met the painter Amedee Ozenfant in Paris, with whom he was to evolve the all-embracing machine aesthetic of Purism. Grounded in Neo-Platonic philosophy, Purism extended its discourse to cover all forms of plastic expression from salon painting to product design and architecture. It was nothing less than a comprehensive theory of civilisation which strenuously advocated the conscious refinement of all existing types. Le Corbusier and Ozenfant together wrote articles presenting the case of purism as opposed to the unwarranted distortions of Cubism in painting.

Le Corbusier's *Towards a Modern Architecture* articulated the conceptual duality around which the rest of his work was to revolve - on the one hand the imperative need to satisfy functional requirements through empirical form, and on the other the impulse to use abstract elements to affect the senses and nourish the intellect. The dialectical view of form was exemplified by some of the most advanced engineering structures of the period.

The other aspect of the Engineer's Aesthetic - product design - was represented by the ships, automobiles and aircraft which were featured as separate sub-sections under the general heading 'Des Yeux qui ne voient pas' (The eyes that see not). The third section returned the reader to the antithesis of Classical architecture, to the lucid poetry of the Athenian Acropolis, which was appraised as 'Architecture, pure creation of the Spirit'. Le Corbusier admired the engineering exactitude that the profiles of the Parthenon and presented them as being analogous to those now wrought by machine tools.
The pilgrimage chapel at Ronchamp and the Dominican monastery of La Tourette, built represent the two principal building types - the sacred building and the retreat - that preoccupied Le Corbusier throughout the 1950s and reveal him as transcending the machine aesthetic. The monastery is a typical example of the paradigm of 'solitude and communion'. The rapport established between building and site seems to be perfect at Ronchamp, where the crustacean forms which make up the whole - the shell roof with its giant gargoyle, the side chapels and the altar - were all precisely tuned to respond to the 'visual acoustics' of an undulating landscape.

The recurrence of this profile in the Chandigarh Capitol and elsewhere in his later work makes it seem that Le Corbusier was trying to establish this form as the 20th-century equivalent of the Renaissance dome, i.e. as a sign for the sacred. For Chandigarh was more than the capital of the Punjab: it was the symbol of the New India. It epitomised the idea of a modern industrial state, the utopian destiny which Nehru had envisaged for India; the political aspirations of India at the time of its independence.

Architects, Art Theorists and Popular Educators in the Soviet Union played an important role right from 1918. The first phase covering up to 1931 focuses the evolution of various aspects of art and architectural education, lifting up the cultural level of the mass of people, the nurturing of creativity, debate among multiple schools for the cause of solving the problems of the new state as well as developing progressivist images for the nation. The Progressive architects, artists and 'enlighteners' in the Soviet Union had two roles. On the one hand they had the task of 'educating' the people in the new ethos, ways of thinking and feeling. On the one hand they were trying to educate people towards modern approaches as against obscure traditionalism. At the same time they were trying to establish an identity distinct from the Western models – by searching for indigenous Russian and pan-Slavic models.
One such model was the Russian Pan-Slavic cultural movement that came into being after the liberation of the serfs in 1861. It manifested itself in a widespread Slavophile arts and crafts revival. Some members of the group had established a retreat for the Populist or Narodniki painters, who, calling themselves 'The Wanderers', had seceded from the Petersburg Academy in 1863 in order to become itinerant artists carrying their 'art' to the people.

After October 1917, the revolutionary reality of the newly formed Soviet state tended to bring these two positions - the 'apocalyptic' and the 'synthetic' - into conflict, leading to hybrid forms of socialist culture; e.g., Lissitzky's adaptation of Malevich's 'apocalyptic' and highly abstract art to the utilitarian ends of his self-styled Suprematist-Elementarism.

In 1920 the Institute for Artistic Culture (Inkhuk) and Higher Artistic and Technical Studios (Vkhutemas) were founded in Moscow as institutes for comprehensive education in art, architecture and design. Both these institutions were to serve as arenas for public debate, wherein mystical idealists such as Malevich and Wassily Kandinsky and objective artists such as the brothers Pevsner found themselves equally opposed by the so-called Productivists (Vladimir Tatlin, Alexander Rodchenko and Alexei Gan).

In the meantime, a specifically proletarian culture had spontaneously emerged from the communicational needs of the Revolution, imparting vitality to cultural forms which might otherwise have remained remote from the actual conditions of the period and from the real needs of a population which was still basically ill-housed, ill-fed, and above all illiterate. Graphic art came to play a salient role in spreading the message of the Revolution. It took the form of large-scale street art, displayed in the Agit-Prop propaganda trains and boats designed by Proletkult artists.

Finally the Party took the Social Realist line in 1932. Lunacharsky's over-elaborate apologia for Social Realism acknowledged the remoteness of Hellenic culture, but insisted that 'this cradle of civilisation and art' could still serve as a model for architecture in the Soviet Union. This state culture was maintained as a consistent policy for more than forty years.
The constructivist 'social condenser' was premised on the belief in the inevitable and necessary transformation of daily life. Social condenser encouraged a new cooperative way of life and in particular sought to liberate women from the burden of domestic labour. Such a theory stressed the transformative and educational possibilities of architecture; collective laundries, child care establishments, housing communes and workers’ clubs were all social condensers. This model of education in communal living and socialist virtues seems to have been efficient for decades and has helped a people very low in formal education and culture to catch up with modern technology very fast. But it has also been severely criticised.

In the thirties the stabilising trends in administration gave rulings in favour of social realism in art theory, with the result that the more creative schools and even the extreme left thinkers did not find an adequate life space.

Charles Jencks, a very modern architect cum philosopher, in his Jumping Universe attempts to share his views about a complex and evolving universe, and to change readers' views about architecture and the evolving universe itself.

Jencks attempts to sensitise the architectural profession and even intelligent consumers of the art to the first Post-Christian synthesis of a new world view. He claims that an emergent consensus is uniting scientists, theologians, architects, artists, and much of the general public. This world view is illuminated by what are called the new 'sciences of complexity', which includes Complexity Theory itself, chaos science, self-organising systems, and nonlinear dynamics. This view reveals the universe as a single, unfolding, creative event that is always reaching new levels of self-organisation. This has spiritual as well as architectural implications.

This new world view brings in a new aesthetic in architecture growing out of a language of building and design close to nature, of twists and folds and undulations; of crystalline forms and fractured planes. Often it is a form-language based on the wave motion that underlies the quantum
world and perhaps, with Superstrings - those miniscule vibrating units of substance - the universe itself.

Architecture has gone beyond reflecting a static, eternal universe, a perfected cosmos in which scientists once believed and has started embodying the truth of emergence. Cosmogenesis, our new Genesis story, fundamentally concerns a sudden coming forth of the unexpected, a new level of organisation that reflects back on and influences its parent. Jencks calls this 'cosmogenic' architecture - to suggest that it is generative, emergent and not a static cosmology. It has been inspired by biology, nature, and the organic tradition.

In this model, machines are beginning to resemble organisms and evolve with us and towards us - the cyborg or cybernetic organism is typical of this trend. We are much more at home in this model of the universe than modern philosophers have thought. This shift in thinking is partly due to the writings and work of the many writers on Complexity Theory, particularly those at the Santa Fe Institute, a centre of the new thinking. Some edifices constructed on this world view are stated.

Kipnis et al developed their first model of urbanism from a beautiful computer graphic - part pointillist painting, part randomised land-use interaction. Eisenman is the theorist who has developed the genre of superposition furthest. The garden designed by him with the Deconstructionist philosopher Jacques Derrida, which is an extreme version of the genre. Their 'Choral Works' for the Parc de la Villette in Paris, master planned in the end by Bernard Tschumi

Gehry's Disney Hall for concerts in Los Angeles, takes acoustic forms and amplifies them on the exterior. The metaphor of music and dance, inherent in the bouncing of sound and light waves, is thus a natural expression for a cultural centre, which should make an enjoyable art from forms that seem to grow and move. This building, now under construction, has been damned as 'broken crockery', 'deconstructionist trash' and 'earthquake architecture', as well as being praised as a 'Gallen in full sail', a 'hatbox', and 'growing plant'.
The work of some other schools also seem to converge to the world view of Jencks. A **Czech Cubist, Janak**, goes on to defend the priority of 'space and plastic form' over materialism and practicality. He defends the new form-language being evolved by him and other Czech Cubists at the time: the crystalline, oblique form-language of spikes, angles, facets - or all those instruments that he says have evolved from 'the third force': wedges, arrows, posts, knives, and levers.... Under the theme of "The Return to a Different Nature" Jencks traverses the Freudian view of human nature driven by instinctual forces that overpower reason, grace, and sensitivity. He follows it up by a cognisance of the Evolution of Second Nature. With the new sciences of complexity we now know the universe is more like the self-repairing, self-transforming butterfly than the nineteenth-century machine.

Even the Modern Movement, for a short period after the First World War, sought to ground its buildings in the science of the day. A group of Expressionists produced an abundance of creative responses to the cosmos as revealed in mystical, religious, and scientific writings - all three. In his magazine *Frühlicht* ('Early Light') and in his building projects of the early 1920s, Bruno Taut explored the metaphysics of light as revealed by medieval mystics and contemporary research into crystals. A crystalline architecture was proposed for a short period before the machine age ground it again; A crystalline repetition of glass elements with multiple facets facing different directions, and light bursting through like an explosion of sunlight, became the visual metaphor for his metaphysics, Others, such as Hermann Finsterlin and Rudolph Steiner, followed a more anthropomorphic direction and produced an undulating architecture with sexual and viscous metaphors.

It is gratifying that an **Indian architect, Charles Correa** is included in the group highlighted by Jencks. Correa's recent architecture in India continues this heroic tradition, but brings it into the late twentieth century by incorporating such things as black holes, fractals, and the plenum vacuum (the mystery at the heart of things; how something comes from 'nothing'). He has just completed five cosmic projects, the most relevant being an actual...
science centre, the Inter-University Centre for Astronomy and Astrophysics in Pune, India. Expanding universe concept built in.

We are aware of the environmental conservationists who plead that the rate at which we consume energy, use up fossil fuel, pollute the environment and degrade the environment have serious consequences for life in the planet. Ananda Bose, as the founder of the Nirmithi movement in Keala developed a model of **CEEF (Cost-Effective Environment-Friendly) technology**.

Now the concept of **green architecture** is spreading in many parts of the world. But Jencks notes that even after thirty years of designing ecological houses and emphasising responses to environmental problems, individual architects achieved relatively little. The reasons include: priority to economic imperatives over the social agenda (ecological house); architects’ lack of real power to change important aspects of the problem; good ecological building may mean bad expressive architecture.

Hence it is deemed essential to ‘cultivate a tradition of sensuous, creative Green Architecture’ - one based on the new sciences of complexity. Otherwise there is the danger of architectural and psychological burn-out, as young architects and environmentalists see their work overwhelmed by much larger economic forces.

**Philosophy of architecture in Egypt and Western culture:**

The *Egyptian architecture* was preoccupied with death and the desire for at least the rulers to 'live' after death. Some of the majestic edifices, tombs, temples and the acme of ancient Egypt's building genius, the pyramids, were constructed as monumental structures meant to remain for ever. The pyramids also represent the *geometry of immortality*.

*Greek philosophy* looked outwards whereas many others looked inwards. The society used and saw architecture not as interior rooms, but from the outside. Both the temple and the other buildings of the agora or market-place were *exterior architecture*. They put all the fun and refinement
on the outside. For it was not in the dark and inaccessible interior that things happened; the interaction between men and gods happened in the open air.

While temples were not required to cater for public worship, theatres were. They were associated with the frenzied rituals in honour of Dionysus and had to be large enough to include a circular or semicircular stage, or orchestra, for the chorus and dancing involved in the rituals, an altar for the libations with which performances commenced, and space for a vast seated audience. Here the great Greek dramatists like Aeschylus, Sophocles, Euripides and Aristophanes presented their plays. This served as the pattern for Western drama and theatre.

Delphi was the most sacred of the sacred sites of ancient Greece. It was the sanctuary of Apollo and the place of the oracle. It was a magnet for pilgrims. It is here that the Greek genius for bringing man, nature and the gods together in an awe-inspiring unity is materialised at its most dramatically intense form.

But the amphitheatre known as Colosseum was distinctly Roman. For such amphitheatres both inside and outside architecture was required. It was a masterpiece of engineering... The most popular game in the Colosseum was the gladiatorial shows and hunting games. The cruel and bloody gladiatorial games did not meet with acceptance from sober minds but people flocked to the Colosseum with excitement and enthusiasm by the thousands to 'enjoy the game'.

Philosophy of Church Architecture

The early Christians who died or were martyred in Rome were buried in the catacombs, a unique underground system which served the purpose of a cemetery. But some of the burial sarcophagus are of marble lavishly decorated. Some crypts, especially those of the popes are quite large, with frescoes, sculptures and inscriptions – such as one would find in a cathedral.

The first architecture was simple, reflecting the simplicity which Jesus preached. But the Eastern Church found sufficient peace to build churches
with some physical splendour too. Byzantine architecture with its beautiful domes reflects a command of the knowledge of physical forces and technology brought to the service of the church.... The parts have been fitted together with incredible skill in mid-air and floating off each other and resting only on the parts next to them, producing a single and most extraordinary harmony in the work'. Paul the Silentiary read the dome as a vision 'suspended from heaven by a golden chain.'

The early abbeys were largely concerned with spiritual matters... Yet as their order spread and became richer they took interest in art and architecture. The Benedictine Abbey of Cluny played a powerful role in nurturing Romanesque architecture from 1309; it was responsible for building most of the churches on pilgrim routes.

Abbot Suger's church at St Denis played a similar role for the Gothic. Suger also developed the rationale of Gothic architecture. His case was that 'the dull mind rises to truth through that which is material. He was able to see that he could appeal at several levels to the ordinary person by using the rib vault. He could create soaring arches which would draw the spirit of man up to heaven; he could transform church walls into screens of glass which would teach the worshipper the doctrine and design of faith in picture stories while submerging him in celestial light. Thus the church was able to give the devotees an experience of heaven on earth.

Gothic is a typical example of medieval architects as finding "solutions of problems of how to throw stones high into the air, and balance them there" (Lethaby).

The romantic success in the crusades was one of the factors that catalysed new forms of thought. Christians could view God's world and its beauty in comparative safety, and could rejoice in his worship. "Nature was let loose on choir stalls, portals, canopies and chapter houses, in an exuberance of tendrils and leaves, birds, animals and flowers." The crusades also sensitised Europe to Islamic architecture. Some excellent syntheses of European and Islamic architecture were developed, particularly in Spain.
Renaissance (15th to 18th c) had its impact on sacred as well as secular architecture. Renaissance was an enlightening and awakening mood with a rationalistic and inquiring outlook as a break from the authoritarian, static and even backward-looking attitude of the church, the church employed a number of top-rank Renaissance artists in church-building.

Later, the urge for more freedom in church building came in the form of Baroque architecture. It asserted freedom, deserted the static form of the square and of the circle for shapes that swirl and move: S-curves, undulating façades and plans based on ovals. It promoted an extreme form of theatricality, which involved the creating of illusion. Bernini’s Ecstasy of St Theresa (1646) in the Chapel of Santa Maria della Vittoria, is actually the staging of a little play.

**Indian architecture and the underlying philosophy**

There is reason to believe that in the structural and sculptural dimensions of Indian architecture, the pre-Aryan base was very strong. The mother goddess, yakshas, yakshis and many other images are believed to be pre-Vedic. As worshippers of natural elements rather than built cult forms, the Aryans might not have brought in much of an architectural culture into India. But some of their spiritual and cult concerns seem to have been symbolically represented in temples built later.

The decorations in the doors of a later Jain temple at Pattadakkal contains some figures which are interpreted as symbolical of the ideas and myths associated with the Vedic worship and meditation. Tadgill gives much importance to the water cosmology and related ideas:

Varuna is the ‘Unborn’, reclining on the Cosmic Ocean which held the ‘Germ of all Existence’, and through his navel the Germ sends forth the ‘Tree of Life’. A crucial step in the synthesis of the Vedic and Native traditions, which constituted the so-called ‘Water Cosmology’, was taken in the late Atharva-Veda with the, identification of the ‘Unborn’ as the Great Yaksha. As we have seen, yakshas controlled fertility and abundance for the native devotee. They were to be accepted by Vedic writers as attendant upon their lord in the guardianship of the ‘Vital Essence’ of the Waters, guiding its operation through its cyclical course from
Ocean to Heaven and back in the infusion of sap, semen, soma - the life of plants, animals, man and the Gods.

For Varuna's tree the lotus often stands as a symbol of the unfolding universe, born of water-borne earth. The cycle of the waters laden with 'Vital Essence' is symbolised by the swan (hamsa), the 'Vital Essence' itself by the crocodile (makara), the vehicle (vaahana) of Varuna. Water is represented by the water pot (kumbha), vase or bowl (kalasha). With lotus vegetation issuing from its mouth, the makara has its equivalent in the bowl with lotus foliage trailing from its brim (purna-kalasha), the inexhaustible cup from which the deity is revived at the sacrifice, and in the yaksha sprouting at the navel, the very image of fertility and abundance. The dual aspect of the yaksha as guardian and guide of 'Vital Essence' is reflected in the twin imagery of the armed male defender (gandharva) and the voluptuous female stimulator (apsara) tree-borne or mounted on a makara and festooned with pearls (mukta-sara), the richest fruit of the sea, as the River-Goddess, consort of Varuna. The stimulation of the male deity's activity by his consort is the significance of the most potent and controversial of all India's images, 'the Productive Couple' (mithuna).

The Buddhists took the lead in sacred architecture. The Buddhist symbols are found in most venerable chaityas - the stupas containing the Buddha's relics and - significantly - the sacred trees at Lumbini, Gaya, Sarnath and Kushinagara under which he was born, attained Enlightenment, preached and died. In addition to these great chaityas, the early reliefs show veneration of a number of symbols: the empty seat of Enlightenment (Vajrasana - the veyaddi of the resident yaksha); the Buddha's footprints and promenade of meditation (Chankama), the Wheel of the Law (Dharmachakra) and the creed's 'Three Jewels', the Buddha, the Dharma and the Sangha (Triratna). Beside their vedikas, as places of sacred significance the most important Buddhist chaityas were accompanied by a pole (skambha) with animal device recalling the Vedic yupa and marking the synthesis of the Vedic and Native traditions. The philosophical elaborations of these symbols are found in literature.

The Indo-Greek Buddhists initiated some of the finest and most serene images of Buddha. Mahayana Buddhism rationalised the use of image worship, which facilitated its elaboration by Hinduism in the temples built after the fifth century.

In the later Hindu temples the symbols conveyed by the temple structures and the sculptures are more and more elaborate. The
Dakshinamurthy pose of Siva and the puranas around it suggest that Lord Siva is a better communicator through dance *mudras* than through verbal communication. Another concept elaborated in Hindu philosophy by the bhakti and mystic poets particularly around the temple at Chidambaram, is that the more relevant dance spiritually is not the external dance which Nataraja performs in the temple, but his dancing in the heart of the devotee. In fact the term Chidambaram (*chit+ambaram*) means the 'internal space' in the mind of the devotee.

**H. PHILOSOPHY OF MUSIC**

*Earlier studies in the Manuel School*

In this field an enormous amount of conceptual literature is available, particularly because the supervising teacher, Dr. Manuel has guided four doctoral and two master's studies exploring different facets of the problem: comparative analysis (Vasantha Srinivasan, née L. Vasantha, music climate (Venugopu), implication for animation of school education (Ashok Alex Philip), application in formal and nonformal education (Vargheese). The application-oriented project studies of Manuel and Vasantha are still more relevant for the present study. Besides these, the College of the investigator conducted in January 2005 a National Seminar on Music Education in which Manuel and Vasantha supported by Dr. S. Lakshmi were the resource persons throughout the workshop, and Dr. A. Sukumaran Nair the initiator of music education in Kerala (1965) gave the key note address. Plenty of ideas emanated from the workshop. The conceptual analysis from the earlier studies of this school as well as the music education seminar insights are skipped in the present chapter on considerations of space, but some relevant constructs were used in the application episodes and described in Chapter VII.
Musical Spirituality and Transcendence à la Jesudas and Suvarna

Suvarna Nalapat (2003), a medical doctor practising music therapy in Ernakulam itself was also a resource person in our Music Education Seminar (January 2005) and the insights emanating from it are stated in Chapter VII. But some uncommon experiences of music transporting a rasika to another plane may be worth recording here itself. Suvarna in her book, Without a Stumble, has endeavoured to present her ideas on The spirituality of Music. Much of it has been developed through her deep analytical study as well as meditative efforts music over several decades and occasional transportive experiences. Her dialogue and that of her son Abilash with K.J. Jesudas feature prominently in much of this work.

Jesudas was releasing Suvarna's earlier book Sāndrānandam on February 6, 1999. She asked him "I always get into a trance-like experience with music. Do you get that while performing?" He said, "While I close my eyes and sing, I get it and when I open the eyes I see the audience in front and that experience is broken. That is the experience of Sāmavedins and Yogins of Rāgānurāgabhakti. But he gets the experience when he sings to himself at home and he will go on elaborating a Rāga for many hours. The Parabrahma of love and the nature (the leaves and flowers and trees around) must be ecstatic because Nature is Sita, the divine mother.

Suvarna reports that as she heard the songs of Jesudas at Bombay in 1969 – in Malayalam, Telugu, Tamil and Sanskrit, she lived in the present, the sea into which rivers – small and big ones of the past flowed. She lived in the future, too, sometimes by evacuating the mind of all its thoughts, other times by dreaming of egalitarian and romantic utopias fashioned by music. The opening lines of T.S. Eliot's 'Four Quartets' flashed through her mind like lightning: 'Time present and time past || Are both perhaps present in time future'. The effect of timelessness induced by music is thus brought out.

Suvarna wanted to do introspective research based on Levi Strauss: 'If one can describe the musical consciousness of a musician one can enter
into all the types of human thoughts'. But she could not enter the
consciousness of a Tyagaraja simply by reading his lyrics or that of Ilango
Adikal. She had to enter his consciousness through the sweet and devotion-
rich voice of a living singer Jesudas.

Suvarna says that from time immemorial there had been great men
and women who were geniuses in several fields and one such set of
symbols of thought was the classical music of India. Since it is a symbol of
thought, it cannot be said with spoken or written word. It cannot be analysed
but can be experienced. Though we hear it with our external ears and our
mind grasps it, the real experiencing field is a field of transcendental
experience. And that is a non-visible and unutterable field of light and sound
which we call Pranava. She recalls Howard Gardner’s question about the
power of symbols in different domains – of which book knowledge and
intelligence in music and dance are recalled. In this connection she recalls
the transcendental idealism of Immanuel Kant, which is almost similar to the
Advaitha of Sankara and the experience of going beyond mundane
experiences.

After recalling nonverbal communication in several cultures ranging
from Greece to Mexico she says that the method of giving a secret message
or idea through music - (dhwani, tāṭa, rāga and bhava without the help of
sāhitya) is equivalent to the use of symbols to elaborate a mathematical
theorem. She also recalls the affinity to dance which is a bodily kinetic
intelligence – and its relation to music.

In reply to some questions of Abhilash, son of Suvarna Nalapat, in an
interview Jesudas states some of his experiences and views.

[If you start spirituality that transcends the formalism of particular religious
denominations] It is at that level that I say there is no Christian, no Hindu, no
Buddhist, or no Muslim. You can enjoy bliss that is everywhere. Magic of spirituality
is that which gives you realization that everythingness and nothingness are the
same states. ‘He is everywhere, yet He is nowhere. He is big, yet He is very small’
If you realise this then you will throw open the boundaries that have been
constructed. I went to a children’s home yesterday. They were all dancing and
enjoying. What they were doing they were doing to the fullest. They remembered or
thought about nothing else. If only such a state existed in the world!
Music is divine. Music is spiritual. When I sing, I am able to experience the non-duality of the spiritual experience. But there is a duality when I perform. All performances have a dwaitha aspect, because I am performing to make another happy. I have to do everything to make them enjoy. It is enjoyment to you. A divine consciousness in me is aware of a 'you' then. A 'you' to be made happy and so there is a dwaitha, but enjoyment or Ananda is divine or godly and is Brahma. . . . I am not cheating you but giving you the feeling of enjoyment, of oneness and Advaitha.

When I sing I experience a great pleasure. I can't say whether it is due to my devotion to music or if it is a symbol of happiness. I feel that my mind is crossing over to the depth of thought - a dream that travels to attain its height in expression. At that time the emotion gives life to my song and it is such a sweet experience that is just exquisite and developed below the sruthy. I sing for the sheer bliss of singing and if my songs bring me adulations from my fans and awards from the jury I think they are just the perks which inspire me to aspire for the ultimate perfection. I see myself standing in the shores of the vast ocean which is classical music with so much to learn and master and with so little time. I tend to forget the whole world when I sing. Happiness, worries, everything is set aside and I let myself become one with music and let myself go giving myself totally to the song.

I believe in Nāda - it makes you ignore everything around you. I forget everything and this happens on stage is very embarrassing. Once I was singing a Sloka and a Kriti on it; I went so deep into the Nāda that I lost myself and kept repeating the verse. My Guru Chembai cautioned me to be watchful when your voice turns to gold. Gold shines and needs no polish, but does not give off a good sound and you have to regularly polish it to retain its shine. A good voice is God's gift and I protect it and enrich it further.

When spirituality increases the creativity in music is totally gone. Because there will not be any desire - not even any desire to achieve something. It is something like nothingness. Total detachment and we will not make an effort to create. In that way I am not spiritually evolved to perfection. When music is created the desire is there. So hundred percent spirituality is not there in my music, but it was there in Tyagaraja's music.

Ecstasy is experienced quite unexpectedly. I expect that from all stages but get it only on some. The Rasika has come to get it from us. If they are immersed in the pure Sruti they will not move. But the ecstasy is a state beyond the Sruthisuddhata. Sometimes I get it from a single Pada in a Keerthan, or a Swaravisthāra, or may be a Pallavi. There are some Rāgas which never become perfect however much you sing. There are some Keerthans which will not satisfy you how many times you sing. Sometimes within a split second you are transported to a state of ecstasy. I remember an instance in Thiruvanantapuram when singing the Charana gurukripākaram in Harivarasanam the ecstasy that spread to my heart became a flow of emotion which made me spellbound. It is something beyond words. It is total bliss beyond everything. They are the moments which follow a musician like divine angels with silvery wings. Once while singing in Shanmukhananda Hall in Bombay, after one or two Keerthanas I just closed my eyes. I felt I was flying over the audience. When the people said that I sang well that day I knew they too might have enjoyed the experience.
Suvarna reports several other extra-ordinary experiences of Jesudas — when his party went to Annamalai, to see Visweswaraswami,

He had a strange dream after seeing Visweswaraswamy. The dream was actually a Yogic vision. He saw the lane leading to the Mookambika temple... Then he saw the idol- like figure of Devi Mookambika. It was green in colour and naked. He said he had that sort of vision of Mookambika again and again. A sort of test Devi was trying to know his mental strength in withstanding that type of Kama. Suvarna thinks it was the indication of Devi Saraswathi’s love for him. She was internalized in him because she loved him - Her devotee.

Suvarna remembers seeing the Devi three times in subsequent years from 1977 to 1979 herself (in the middle of a sparkling golden ocean of Rāśichakra).

Jesudas had another strange experience with Kotiswami. He asked Jesudas to enter a coffin-like box and to sleep there. The moment he entered the box he was fast asleep. It was just like a coma. He was unaware of anything. After sometime Prabha was worried because she could see from outside that ants were crawling over his body as if he was dead and he was not conscious of that even. She tried to call him and wake him up but the Swami did not allow her to do that. After a long time he himself awakened him and Jesudas came out of the coffin refreshed and calm as if nothing had happened. He was given a Samadhi experience by the Swami. And the Swami told them that this was to give him protection. If he hadn’t slept in those crucial hours he would have died. He had converted a death experience into that of a coma like Samadhi.

But Suvarna thinks it was strange that Jesudas believes Tyagaraja had never seen Rama though he sang on him but it was a lady who went for all his Kacheris who had the rare luck of having the Darshan, She believes the second part because she herself has experienced it. But she wonders how a person can give that experience to others if he themselves had not experienced it.
At this point, Suvarna, notwithstanding all his admiration for Jesudas, openly differs from him and cites several lines from Tyagaraja to that effect. The comments of the supervising teacher (Dr Manuel) come handy at this point. Commonsense also tells us that many who themselves have not experienced trance experience and supra-sensory perception might be willing to concede the authenticity of the trance experience reported by another, especially if they note some supporting extra-ordinary behaviour in him. Jesudas apparently displays such positive extraordinary behaviour, which musically sensitive people can discern. But to assert that another person who has displayed even more extra-ordinary behaviour has not seen Rama does not seem to be reasonable – especially when Tyagaraja has given evidence of being constantly in the presence (sannidhi) of Rama – vide the famous lines "nidhi chaala sukhama? - Ramu nee seva san-nidhi chaala sukhama?" [This should have been sung with a feeling of presence by Jesudas several times.]

But it is possible to defend Jesudas’s position on the assumption that Tyagaraja has been so close to Rama – in fact enveloped by the Rama-presence, perhaps in the fullest advaitic mode - that he could not have an externalist kind of vision available to most people even in a darsan.

It may be interesting to recall here that the master among literary theorist, Roland Barthes, says somewhere that a poet cannot ‘read’ his own work. Perhaps the man who created it ‘from inside’ subjectively cannot read it ‘as an object’ ‘from outside’.

An episode about another Rama-bhakta might explain the tangibility involved in the Rama-vision:

One of the kingdoms in the Deccan was ruled by a just Muslim Nawab. He did collect tax, but spent it mostly on development work for the benefit of the people. Badrachalam Ramadas was an efficient and honest officer, entrusted with the development work. At one phase the bhakti of Ramadas exceeded his administrative propriety; he built a temple for Rama with the tax money. Development work was at a standstill and the Nawab received numerous complaints. The Nawab called Ramadas, who could not repay the money spent, and had to go to jail. Ramadas spent twelve years in jail, but continued to sing praises and petitions to Rama – sometimes through Seethamma as the mediator - all the time.
Then one fine morning two young men with tufts, bows and arrows and *tejas* (a bright halo) in their face appeared before the Nawab. They introduced themselves as a friend of Badrachalam Ramadas. They owed a large amount of money to Ramadas, which had been paid in the State Treasury. The Nawab checked the payments in the treasury and found that the amount was equal to the sum 'appropriated' by Ramadas for building the temple. Then the two 'young men' disappeared. The Nawab immediately released Ramadas with apologies and honours.

Immediately on his release, Badrachalam Ramadas sang:

O Rama, I have been singing your praises all my life
But you have chosen to mete out twelve years jail life to me
And you have chosen to give your darshan to this Muslim Nawab!

This can be explained satisfactorily only on the assumption that even during his twelve years of imprisonment Ramadas was having an internal vision/presence of Rama. The Nawab had got the external vision.

Several episodes are also presented to show the deep philosophy hidden behind the love metaphor ranging from crude erotics to deep divine joy.

*Stayibhava* (abiding affective reactivities) of man are shaped by nature (*Prakriti*) and nurture (*Seela* or habits) and corresponds to sentiments (as defined by Shand) organised constellations of feelings around an entity. The affectivity is abiding but latent and is activated by basic and ancillary stimuli. These are the *Alambana Vibhava* and the *Uddipana vibhava* of the Indian theory. Triggered by the stimuli the latent reactivity becomes manifest as an emotional state. The behaviour of human beings - voluntary like provocative glances (*Anubhava*) involuntary like blushing (*Sâtwika*) contextual modifications of the prime feeling (*Vyabhichâri* or *Sanchâri*) are the derived emotions analysed by McDougall - anxiety in absence, joy in expectation, in love etc. motivate human beings because emotion is the dynamic of goal seeking practical behaviour in the psychophysical organism. In human beings for whom the representation is an aesthetic representation, no impulse for active intervention arises, for the emotions, transferred by sympathetic induction are meant for savouring and
are in fact relished, given an adequate sensibility. Rasa is this aesthetically relished feeling. In Indian aesthetics Sahitya and Sangheetha are given equal importance (Udbhayapradhāna) to get the Rasānubhava. In Sāhitya there is Vārtha (news or report), Varnana (descriptive proposition) and Kāvya (poetry) with a Darsana (vision). It is the Kāvya and Darsana which are important in a Sahitya of music. Dwani, the miraculous, discontinuous quantum leap from the stated to the suggested, gives aesthetic beauty to musical performances.

Before Mallarmé in Europe Abhinavagupta in India dwelt upon this subject in detail. Mallarmé claimed the identity of poetry and music. T.S.Eliot was not in agreement to it because in poetry the words are used not only for the beauty of sound but for communicating a grammatical statement. Anandhavardhana pointed out that poetry is a linguistic discourse and in it sound has to communicate, not merely express. Non-verbalised ejaculatory cries, and the cries of animals can be expressive but they are not qualifiable as communicative language. Indian theory says that suggestions may evoke an objective factuality (Vasthu Dwani) a poetic figure (Alamkaradwani) but has ultimately to be evocative of feeling-relish (Rasadwani) if it is to be truly poetic. It is this Rasadwani that the musicians bring out from the Sahitya of the Krithis which they expand and sing. They communicate to us the message of the entire Krithi, its Bhava and Rasa in entirety, embellishing the subtle Dwani with the elaborate Gamakas and voice modulations. The ideally appropriate relationship which the musician makes with the soul of the Sahitya to make the poetic organism alive is called Auchitya. Rasa is the soul and Auchitya the life, says Kshemendra. Auchitya is the life of the Rasa-ensouled poem. C.D.Narasimhayya points out the difference between the west and east towards the erotic feelings in poetics. In the west the erotic is a part of human life and can be stated in open. In utter contrast in Indian context love in separation (Vipralambha) or Viraha is not a wistful longing so much as a tension in the loins and love in union (Sambhoga) or the sexual act, but a spiritual union. Sringara evokes Karuna and Veera in Indian poetry but not the desire for physical union quite unlike the western poetics.
Suvardna suggests that there is mounting evidence from researches conducted in India and abroad to show that music therapy improves:

1. Communication skills
   a. Improve expressive language (ability to communicate thoughts and feelings)
   b. Improve receptive language (ability to understand)
   c. Improve speech and verbal communication.
   d. Promote effective use of nonverbal communication.

2. Academic / behaviour skills.
   a. Encourage the ability to imitate
   b. Improve the ability to comprehend written language
   c. Improve ability to count and associate numbers with concepts
   d. Improves ability to discriminate colours
   e. Promote reality orientation
   f. Improve memory skills.
   g. Enhance on-task behaviour
   h. Improve ability to follow direction
   i. Increase participation
   j. Decrease interfering behaviour.
   k. Promote ability to complete activities of daily living

3. Motor skills
   a. Maintains /improve fine motor functioning
   b. Maintain and improve gross motor functioning
   c. Promote identification of body-parts
   d. Improve the reach/grasp/release skills
   e. Maintain the improve range of motion
   f. Improve the eye/hand coordination
   g. Improve the auditory and visual perception

4. Emotional skills
   a. Increase the verbal/ nonverbal expression of feelings
   b. Improve self-esteem
   c. Improve impulse control.
   d. Increase attention span.
   e. Develop coping skills
   f. Decrease stress and anxiety
   g. Facilitate grieving process
   h. Teach relaxation techniques
   i. Facilitate exploration of spiritual concerns.

5. Social skills
   a. Improve social interaction with others
   b. Improve appropriate eye contact
   c. Improve ability to touch others appropriately
d. increase willingness to be touched by others
e. Increase ability to share materials and equipments with others
f. Improve the ability to accept constructive criticism from others
g. Improve ability to make choices and initiate responses
h. To improve ability to accept praise and give praise to others
i. To decrease isolation
j. Improve ability to participate in appropriate play activities
k. Improve interpersonal skills
l. To build relationships

6. Leisure skills
   a. Develop skills to participate in appropriate leisure time activities
   b. To develop knowledge of available leisure time activation

7. Other skills
   a. Decrease pain
   b. Teach pain management skills
   c. Promote independence
   d. Facilitate reminiscences and life review
   e. Develop creativity and sense of identity

Suvarna defines music therapy as the systematic use of music within a developing relationship between patient and therapist to restore, maintain, and improve physical, emotional, psychological and neurological functions. It is an established healthcare profession that uses music and music activities both as treatment programmes which address the physical, emotional, social and cognitive challenges faced by children and adults with diverse illnesses and special needs and in wellness programmes which promote the maintenance of good health in the general population. The therapy is a specific intervention designed on emerging knowledge of how music affects the brain function.

The function of music therapist is to provide improvised music that encourages participants to move and to give musical cues to the movements that are initiated, and provide music that can create a nurturing energetic atmosphere. The music should be responsive to the musical identity of the participants. The physiotherapists should instruct and assist the participant in a variety of movements. Music therapy is helpful in increasing the self-expression, socialization and self esteem of patients so that it increases the quality of life.
Individual and group sessions in music therapy have been found useful to patients with dementia, diabetes, heart ailments, stroke, multiple sclerosis, cancer, depression, coma, Lyme’s arthritis etc. The methods are based on guided musical improvisations, compositions, music listening, accompaniment and vocalization. The music therapy intervention has to be designed depending upon the diagnosis and the needs of the patient. Physical, psychological, and spiritual issues of the patient (which the patient brings to the session) have to be dealt with individually and on the musical preferences. Music therapist should help the patient to express themselves through improvised or composed music that focuses on specific patient issues.

They can be encouraged to compose songs/music related to issues experienced by them during the hospital stay. That will help to facilitate the expression of the patient’s feelings related to here and now, his disease, his hopes, fears, his soft thoughts. Improvised or recorded music is to be used for relaxation and pain reduction. Music therapist has to facilitate interpersonal and intra-personal communication through improvised techniques.

In a music therapy group sessions can be audio taped so that patients can hear them in and outside the sessions. Music therapy groups develop a positive trusting dynamic where patients are encouraged to explore new ways of self expression and to experience greater self acceptance when positive feedback follows. Group therapy sessions are conducted in Indian music from time immemorial as Bhajans in temples.

Individual therapy sessions should be planned carefully and each patient should be assessed for his musical preferences and musical background. A preliminary questionnaire and later on a few personal sessions with the music therapist will help. Lyric writing and samasya are done to facilitate self-expression for patients who are cognitively intact but who have limited verbal ability.
Great Philosophers as Inspirers / Role Models for Teachers of Philosophy: Formal and Informal