

CHAPTER - I

Chapter One

INTRODUCTION

Religion is the bi-product of the continuous inquiry of innocent human brain over the centuries towards the nature and its relatively supreme powers over the living creatures.

Thousands of years before, in ancient times, the prehistoric man who physically grew as a human being but totally was in his initial stage of mind, was living in the natural caves and wandered for his daily food collecting from the nature. When he encountered with natural calamities like rain, storms, thunder and lighting, he became helpless and those proved to be beyond his imaginations and inquiries. His helplessness made him surrender himself to these supernatural forces. The awe of natural forces made him to worship those for his not understanding of them of what they were. To save himself off and to stay away these things from his existance, he began worshipping these supernatural things. The conceptualisation of GOD thus began. Later on the concept was grounded firmly and began to flourish with different dimensions.

The prehistoric man, who knew only to react with existing things and living creatures, suited with his primary stage logic, he started personifying these things. He started worshipping them as Sun God,

Moon God, Wind God, Rain God. The phenomena of shining the stars was strange feeling to him. To protect himself off these stars, storms, thunder and lighting and to keep them happy for him, he began praising them. This personification is the revolutionary historic act which proved the evolution of human ideas. This act made the prehistoric man to begin thinking.¹

Simultaneously, the evolution of human ideas continued resulting the conceptual flourishing of the GOD and allied religious terms.

Fully developed prehistorical society, accepts the term "GOD" as the part and parcel of its daily happenings. The evolution still continued, and began magnifying the ways and methods of worshipping.² The dominance of the supremacy beyond imagination of human ideas grew up so vast and wrapped the whole mankind on the earth existed. The socialized concept then became the RELIGION of man.

1. James Edgar Swain - History of World Civilization pp, 12-24.

2. Barati Vidya Bhavan - The History & Culture of The Indian People.

Vol. I, pp, 1-25.

PREHISTORIC RELIGION IN SOUTH ASIA

By 3000 B.C. much of the Indus Valley was brought into shape, and bronze was beginning to be used for practical purposes. The culture was by no means uniform. Wide differences are found in the pottery from village to village, and other features of daily life shows comparable variation. Most of the village cultures, however, were by comparison well advanced, and though they had not yet evolved a civilization, in the real sense of the term the city life was well on way to advance. Out of the village cultures there began to grow and spread, in about 2700 B.C., a great civilization. This culture is known to archeologists as the Harappa Culture and more popularly referred to as the Indus civilization. Its main centers were two large cities, the original names of which are unknown to us. They are now known by the names of the moderns villages nearest the sites, Moenjo-Daro and Harappa. Moenjo-Daro, on the right bank of the Indus River below the great Sukkur Dam, is about 400 to 500 miles (650 to 800 kms.) from Harappa, which is on the Ravi River about 100 to 150 miles (160 top 240 kms.) from Lahore. Besides these two great cities there were numerous smaller ones, and village sites of the Harappa culture found spread as far a field as Gujarat in the southwest.

However, these two ancient cities had grown up simultaneously with similarities in cultural, political & social systems. Our efforts have failed to read the pictographic script of the Indus Valley, and this places up its civilisation in proto-historic period. A. L. Basham tells us that without written records of this prehistoric civilization, one's knowledge of its religion is very defective, but we may be sure that it had certain features common to both the ancient religion of the Middle East and the later religion of India. Moreover, the sites have yielded many terra-cotta figurines of broad-hipped women, some with fantastic headdresses, which were evidently representations of a Goddess. This features, the Mother goddess representing the Earth and the sacred bull representing the fertilizing sky, were common to early agriculturists through out Euro-Asia. They are the main elements of a cult designed to insure the fertility of crops, herds and humans.³

3. A. L. Basham, *The Origins And Development Of Classical Hinduism*

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It is also fairly certain that the religion of the Harappa culture emphasized virtual purity, maintained by ablution with water. This is proved by the presence of a drained bathroom in almost every house and by the large 'Swimming Pool', surrounded by small cells, in Moenjo-Daro. It is very unlikely that the purpose of these was purely hygienic. It was probably felt that washing and bathing were absolutely necessary to preserve the purity without which one's body would become the prey of evil spirits. It is also obvious that the people of the Indus believed in some kind of survival after death; for they buried their dead, unlike later Indians, who practiced cremation. With the dead were buried pots, which originally no doubt contained food for the after life. The features of the Indus religion just outlined are fairly certain. Other features mainly gathered from seals, are the horned God and the pipal tree, with its spear-shaped leaves, which is depicted in numerous contexts and which must have been sacred, as it was sacred in later times in both Buddhism and Hinduism. The horned God appears to be ithyphallic, it is generally accepted that he has traces of two faces in profile, as well as that facing the observer, he is surrounded by animals, and his legs are bent in a difficult posture, with the soles of the feet pressed together, known to latter yogins as "Utkatikasana". These facts have led to his identification as the prototype of the later Hindu God "Siva". and it is often confidently

stated that the religion of the Harappa culture was an early form of Hinduism. An enigmatic feature of the ancient cities of the Indus is that nowhere in them is found a building that can be confidently identified as a temple; though there are one or two large halls that may have served this purpose. No monumental statuary, no traces of mural painting have been discovered. It seems that the main focus of the religious life of the people was the home, a feature that is still fundamentally true of Indian Religion. It is possible to be a very devout Hindu without ever going near the temple, which is a late development in Hinduism and is still not one of its essential features. ⁴

Prehistoric man always hunted for the truth behind the nature and its representative powers like rain, storm, thunder, lightning etc. Again the periodical recurring of these power was a mysterious thing for him. Man also found that the supernatural powers were both beneficial as well as harmful & therefore pleasing them was essential. Hence he thought of praising them by evolving the mode of worship. In Rigveda, the earliest record of history of our past,

4. A. L. Basham, The Origins And Development Of Classical Hinduism

the mode of worship that man has evolved was offering the ghee mixed with the juice of soma plant that was available on the Mujavat mountain in North-Western Kashmir, to fire(Agni) who was supposed to carry the offering to the forces mentioned above and they are regarded as celestial gods. While offering the Mantras were uttered by the priest and the Rigveda is the book of these Mantras composed by the priestly families who used these Mantras while making offering to the gods in Yajnyas. Kindling fire, offering the oblations in the fire with uttering Mantras, all this process of worshipping was called as Yajnya.

Thus the ideas of religion were centred around Yajnya in relation to the worship of natural forces and for Yajnya they constructed the Vedi-Yajnya ground, a kind of basement built with bricks and used to destroy it after performing Yajnya. There was not yet a permanently fixed place of worshipping as Vedic society was pastoral, semi-agricultural and fully agricultural in stages, hence yet to a great extent a moving society but when we come to the next period of development, the period called Later Vedic period, represented by three Vedas, the Brahmanas, the Aranyakas, and the older-Upanishads, we find things changing. The natural powers like sun, moon, wind, thunder, lightning, shining of stars etc. have been brought into the process of personification. Sun has become Prajapati in the Later-Vedic period and he is the all-powerful creator.

His physical features have also been described in Brahmanas. Already there is reference to the image of Indra in the Rigveda. Idol worship was widely prevalent in Indus Valley civilisation which was of Dravidian and decidedly pre Rigvedic.

We consider the historical period from the Rigvedic period, who's spread is of 500 years (From 1500 BC to 900 BC). Rigveda primarily deals with the philosophy of human life. The ritual worship developed by three Vedas and their Brahmanas was so stereotyped that it over burdened the society considerably and rational minded men like the Upanishadic philosophers began ignoring the rituals and started contemplating over the various powers sustaining the world as both cause and effect of world existing and its moving. This gave rise to the Upanishadic philosophy which advocated kind of idealism of formless all pervading and activating power as Brahma as the cause of the world. In other words it gave rise to a powerful school advocating Jnyanmarga as opposed to Karma-kands as a path for salvation. Both Buddhism and Jainism emerged in the 6th century B.C. and flourished out of this anti- ritual tide of philosophical equality in 6th century B.C. Both Buddha and Mahavira made their religions as the missionary religions and went door to door to preach their philosophy. They also produced an organisation of monks to preach their religion. This gave rise to the monasteries of the monks to which the

patronising kings and rich people gave donations liberally. The charity building also had its beginning in this idea of monks dwelling places. The institution of monks gave rise to two things; one was monasteries (the dwelling places) and another was their worshipping places called as Chaityas, and this was the beginning of Art & Architecture and future concept of Temple building in India.

Speculative philosophy that had already made its beginning in Rigveda also developed rapidly with the rapid growth of ritualistic religion of Vedic sacrifices dominated by the priests and in Upanishadas it relegated the sacrifices to the background and in 6th century B.C. it cultivated in the form of Buddhism or Jainism and other systems of knowing.

The sixth century B.C. saw the appearance of numerous ascetic movements that completely rejected the Vedas, the sacrificial cult that the Vedas taught, and the authority of the brahmins who performed the sacrifices. In general, the new movements were antiritualistic. All the new sects, as far as we can see, aimed at releasing their members from the bonds of birth, death, and rebirth by the quickest method. This, they believed, could be achieved only by the complete renunciation of all worldly ties, by owning nothing, or next to nothing, and by devoting all one's time to spiritual activities. Among the most potent causes of evil 'karman', binding

humans to the cycle of rebirth, were acts of violence, socially killing. The ascetic must do everything in his power to avoid even the accidental killing of any creature whatever.

There is a general view, largely inspired by Marxist theories on the relations of religious philosophy with the prevailing class system, that the rise of the heterodoxies such as Buddhism and Jainism was concomitant with the rise of an influential mercantile class that gave its support to these new movements, which were less expensive than orthodoxy and gave a greater place to the laity in religious activities. There may be some truth in this, but there were many other factors in the rise of these sects, and the idea that the main supporters of early Buddhism were well-to-do merchants is not wholly borne out by the evidence of the early Buddhist texts. Though many members of the middle class gave support to Buddhism, it appears that brahmins formed the largest group of both the monks and the lay supporters of Buddhism. Buddhism in its early form appealed chiefly to the intellectuals and rulers and few members of the lower orders supported it.⁵

5. Dr. B. R. Kamble. Cast And Philosophy In Pre Buddhist India

pp. 73 - 76, A. L. Basham. The origins And Developments Of Classical

Hinduism, pp. 20 - 27

One of the most important effects of the heterodox sects in the context of Hinduism is their opposition to animal sacrifice and their support of the doctrine of 'ahimsa'. As a result of their steady pressure, such sacrifices became less and less frequent until they disappeared altogether. Later a different form of animal sacrifice arose, among the mediaeval sects devoted to Siva's feminine aspect, Sakti, but the old Vedic sacrifices slowly came to an end. Doubts were early raised, even by the more orthodox teachers recorded in the Upanisads, as to the efficacy of sacrificial ritual in achieving more than temporal blessings. The heterodox teachers went further and completely condemned it. Steadily sentiment in favour of nonviolence spread. As far as lay persons were concerned, acts of violence were justified only in certain circumstances, such as in self-defense, in righteous warfare, and in the enforcement of law. The motive for non-violence was not purely respect for life on a self-sacrificing ethical basis, but also enlightened self-interest. Once the doctrines of 'karman' and 'samsara' were accepted, it was generally agreed by orthodox and heterodox alike that acts of violence were among the most potent sources of bad 'karman', leading to very unpleasant rebirths.⁶

6. A. L. Basham, *The Wonder That Was India*, pp. 72 - 78

A. L. Basham, *The Origins And Developments Of Classical Hinduism*, pp. 37 - 43

All these ideas have greatly influenced the Art & Architecture of late day India and the Indian Art has also amply revealed the domination of these ideas in it.

ABOUT ARCHITECTURE IN BRIEF

Everything that encloses space on some scale sufficient for human being to move in, is a building. In mere building, the idea of utility, safety and economy are kept in view. But in architecture in addition to utility, safety, (practical requirements) the building is designed considering the 'aesthetic appeal' of power or pleasing, including all the elements of sources of beauty (expressive requirements). Now the aesthetic appeal is introduced in a building in three different ways.

First, the aesthetic sensations may be caused by the treatment of walls, the proportions of openings in the form of doors and windows, relation of one story to another etc.

Secondly, it may be caused by the treatment of the exterior of the building which is aesthetically significant as a whole, such as a pitched or flat roof or a dome, the rhythm of projections and recessions etc. Thirdly, the effect may be produced by the treatment of interior, the sequence of rooms, circulation etc. The first of the above three ways, is two-dimensional, it is the painter's way.

The second is three-dimensional and treats the building as volume or a plastic unit, it is therefore sculptor's way. The third is three-dimensional too ; but it deals with space ; it is the architect's own way more than the others. What makes architecture different from painting and sculpture is its spatial quality and it is only in this, no other artist can excel the architect.

Architecture is therefore, an art of organising space not only functionally but beautifully. The constituents of beauty are structure, utility and aesthetics - the 'Trinity' of Architecture. Thus architecture is specialised form of art.

The architecture of the society must be consistent with the contemporary ideas and ways of life. Though its obvious purpose is to house the complex activities of man, its more positive attribute is to elevate the spirit of humanity and be sympathetic and integrated with its idealism. If we believe in freedom for the individual and in the dignity of man, then the qualities of humanity needed to implement these beliefs must include love, gentleness, joy, serenity, beauty and hope. An architecture which is representative of and needs to implement a better way of our life must recognize these human characteristics which are fundamental to it. Indian history of architecture is such a complex phenomena aggregating all the

above elements time to time and yet the monuments as a whole or as a part, stand unaltered telling the glorious concepts and ideas of contemporary philosophies of the past societies.

Good architecture should stimulate a sense of appreciation and kindle imagination in the minds of those who look at it. To look at a building is to examine how far it satisfies the essentials of architecture and how far these are combined to give a harmonious unity of form. A good building with its imposing mass and graceful outlines produces happiness and enjoyment on seeing it, i.e., the aim of architecture is to give such satisfaction and enjoyment. According to poet Keats' saying " a thing of beauty is a joy for ever". Its aim is to enhance the enjoyment of life through beauty and delight. Therefore, the Indian Architectural History stated to be the delighted of its kind by several world scholars.

Importance of Architecture

(I) Inspiration : Some of the monumental works erected to commemorate some important event or in memory of great national leaders arouse inspiration in the minds of the people for all the times. For example, the Tower of Victory built by Rana of Chittor and Indian War Memorial at Delhi inspire the feelings of patriotism.

(ii) Record of the past history : Architecture is the most powerful record of the past history of any country. It throws light on the social, religious customs and manners and development of the country. The development of civilisation of any country is reproduced in the development of architecture.

Architecture is therefore considered as the 'printing press of all ages and gives history of state of society in which it was erected'.

Thus, Egyptian architecture reflects the absolute power of the Pharaohs and slavery of the people. Greek architecture that we so admire was the product of the democratic belief of Greek civilisation. It had rich beauty which reached highest perfection. The majestic buildings of Rome clearly show the great skill and constructive ability and expression of 'Roman Imperial Power', but royal palaces and thermae speak of their luxury. Basilican churches reflect religious enthusiasm. Gothic reflects the condition of passionate energy. French Renaissance shows the pompous life of Monarchs, in their palaces and the Indian architecture clearly shows its spiritual content and represents in numerous religious buildings which are characterised by the treatment of wall surfaces containing the high or low relief of noble 'Gods of Indian Mythology'.

Now temples and churches are becoming less and less in 20th century, whereas we come across libraries, museums, markets, hospitals, town-halls, institutions, swimming pools, theatres etc. which are the indices of social forces at work. Architecture is more than a history of form and style, it is a product of culture and environmental factors and expression of the way of life of the people for whom it is built. Architecture is therefore sometimes called as "matrix of civilisation".

(iii) Architecture as a Fine Art : Any human activity where there is skill directed towards production of beauty, is considered as an 'Art'.

Art is both static and dynamic. The static art delights in order and proportion. It deals with space and result in fine architecture and painting. The dynamic art delights in movements and rhythm. It deals with time and results in music, poetry and dancing. The painting and dancing appeal to the eye, whereas music appeals to the ear and poetry to the mind. Architecture is the most comprehensive of all visual arts and has a right to claim superiority over the arts, since it assimilates and translates all these faculties and beauties into an elegant building.

(iv) Architecture as Mother of all Arts : We can look at a thing in three different ways.

First, we may look at a thing considering its practical goodness and usefulness. We may be pleased, only because the thing is useful and hence it may be considered as suitable. Such kinds of arts are called 'Technique Arts' where utility alone is important. For example, cooking, fishing, etc.

Secondly, we may look at a thing in a speculatively thoughtful way, which is different from appreciation of utility. The scientific happiness derived from 'truth' will be the result of art. Such arts are called 'Phonetic Arts'. For example, sculpture, fresco, etc.

The third way of looking at a thing is not from point of view of goodness, truth but at its appearance, shape and colour. What it looks like is more important than what it is ! Here we search for beauty in a thing rather than its practical utility. Such arts, which involve beauty are called 'Aesthetic Arts'. For example, Sculpture, fresco, etc.

Technique arts stand for 'Goodness', Phonetic arts for expression of 'Truth' and aesthetic arts for 'Beauty'. But architecture stands for 'Goodness, Truth and Beauty' which are its three main principles. In short, architecture can thus be said as "Mother of all Arts".

(v) Architecture as Poetry of Construction and Frozen Music : Architecture is based on building construction and poetry is based on prose. But architecture is not mere art of building construction so also poetry is not mere prose. Prose converts into poetry with the introduction of verses, metres, and fine flow of language etc. and there is enjoyment over the artistic representation in poetry. So also in music, there is a combination of harmonious sounds arranged in a systematic way so as to arouse excitement and enjoyment. Similarly the building converts into fine piece of architecture when it is composed of elements which are systematically as well as aesthetically arranged so as to serve a utilitarian purpose and in addition to have emotional appeal. And we enjoy at the look of such building which strikes deep and solemn chords in the human heart. In words of Goethe "architecture is 'poetry of construction' and frozen music".

Principles of Architecture

For the real analysis and research about the Indian Architecture of the past, one must need to clarify the basic principles constituting the expressions and feelings about the architecture.

(I) Goodness or convenient arrangement : Every architectural building must possess the principle of goodness and utility. In case of ordinary house we should first consider the adequate sizes of rooms, their convenient arrangement or grouping, rather than decorating with costly sculpture, paintings etc. Moreover the house should provide the informal intimacy of home life. A museum should have galleries, with ample wall space and top light, which eliminates windows and necessitates the use of sky-lights. A shop should have large show-windows for the display and sale of merchandise. In school building, we need large sized classrooms with many windows to admit the necessary side lights, meeting halls and a play ground at the rear. Similarly, a factory should not be a structural erection of four walls and a roof for mere sheltering machinery and labour. But general arrangement of office, workshops, and godowns etc. should be of convenient sizes based on well thought plan for the co-ordination of various activities and manufacture process from raw material to finished products. Under

such arrangement work is more pleasure than a task, efficiency ensured, output is increased and labour discontent eliminated.

(ii) **Beauty** : Beauty is the second great principle of architecture. The spirit of beauty which poet Shelley describes "Dear and yet dearer for its mystery". It is some illusive principle and cannot be easily determined in terms of its essential nature. It remains dearer for its mystery. It lies in the eyes of the beholder. It raises the thought and touches the heart. One cannot measure beauty, but one can feel it.

A grand building with the imposing mass and graceful out-lines creates a deep impression and stimulates emotions in the human heart. We enjoy at the look of such building. For example, Taj Mahal. Here goodness or convenient arrangement may not be an important criteria at all. Such building of architecture has the main consideration of aesthetic appeal. It produces and brings immense pleasure in the minds who look at it. We enjoy at its look because according to Keats' saying "a thing of beauty is a joy for ever. Its power is to kindle imagination, purify and stimulate emotion".

(iii) **Truth** : The third great principle of architecture is the truth by which we mean harmony with the established laws whether moral,

aesthetic or scientific on which the strength and beauty in the universe are built up.

Truth is exhibited in two ways namely clarity of purpose and clarity of structure.

(a) Clarity of purpose : Good architecture should not be devoid of truth. There should not be deception in its expression. Good architecture can never deceive the eye even for a moment. Nothing must appear other than what it is ! The building should express the true idea of the purpose. A residential building should not look like a theatre, nor a town-hall like an assembly hall. A temple of Dravidian style or a church of Gothic style must express its spiritual, ecclesiastical purpose and should enhance the religious moods and sentiments. On the other hand, in a theatre building recreation or enjoyment must be sought in the design. Again the town-hall should express the dignity and importance of official life by largeness of scale and stately arrangement of various parts.

There should not be a false statement in regard to the purpose of the construction. A living room should not look like a store room. A smoke chimney should not pretend to be a supporting column or a buttress. A church should not look like an Assembly hall. What the

eye does not admire, the heart does not desire. Any type of deception is a departure from the principle of truth.

(b) Clarity of structure : Each part of the structure should express the function it has to perform.

The different materials of the structure should be used in the truthful manner to perform in their proper function. Stronger materials should be used to support the weaker ones. Suppose we use brick-work for foundation and size stones for superstructure. Even though such structure may stand but it will find lack of function. It may produce a sense of incongruity, if not danger.

No confusion should arise by the mis-position of materials. The materials should be used in their proper place. Granite which is hard and carries heavy weight without being crushed is fit for foundation and basement, brick for supporting walls, marble for tracery-work, pumic stones for vaults, etc. Such a skillful disposition of materials will not only make the building strong, durable but also produce an appearance of strength. For example, the Pantheon at Rome.

Architecture and Engineering

Engineering comprises a wide field of activities such as Civil, Mechanical, Electrical, etc. which have precise scientific laws. Here we are concerned with the properties and strength of materials, safety and economy of construction.

In architecture in addition to above human aesthetics and cultural values are most important consideration. Architecture covers a remarkable wide field of knowledge and of human activities. It makes use of applied services such as structural engineering, sanitation, hygiene, heating, lighting and ventilation etc.

A bicycle shed is a building but Taj Mahal is a piece of architecture. The term architecture applies only to buildings designed with a view to aesthetic appeal. The designer therefore should use his specialised knowledge in designing to combine into an aesthetic whole, programme or requirements of materials and construction which distinguish and make the structure beautiful or a piece of architecture. It should therefore be noted that Engineering and Architecture are fundamentally different. Engineering is based on scientific laws whereas Architecture is based on certain principles such as goodness, beauty and truth, together with its

fundamental qualities and factors which are described in the preceding chapters.

Factors in Architecture

For the criticism of Indian Architecture of the past ages, it is necessary to study all its operations through the angle of 'factors' forming these buildings for psychological impact and their analysis one must need it. There factors are,

1. Mass
2. Form
3. Proportion
4. Balance & symmetry and
5. Contrast.

1. **Mass** : It is an important factor in the construction of building. The introduction of this factor 'mass' makes the building to look strong and stable. The massive size of the building is often important to make it look durable and long standing. Massive size of columns and arches give more mass to the building. For example, massive and stout columns of Greek Temple of Parthenon at Athens denote strength, stability, power and an assured position. The massive pyramids of Egypt also express eternity and stability.

The various elements of a building help to form a composition of a mass. By arranging them carefully we can produce a dominant or focal point of interest. The focal point of interest may be a solid element or a single line which may be called the centre of gravity of the composition of the mass. To get a satisfactory and good composition as it lacks the sense of stability. Hence it should be approximately at central position to form a nicely balanced picture irrespective of whether the elements are of the same or different shapes and sizes.

A building with unequal masses on either side will be lacking in stability and produces the sense of discomfort, and incongruity.

2. Form : It is the shape given to the architectural feature in a building. Forms should follow functions. Form used in a building must be suitable for which it is made. Every form is equally good provided it is used in the right place. There are various geometrical forms such as square, rectangular, triangular, circular which have definite proportions. Certain geometrical forms are very much pleasing to the human eye, because of their proportions. An equilateral triangle is a form of good proportion. It diminishes or tapers in a regular way from base to apex, the apex forming the local point of interest. The application of this form can be seen in many classic and Gothic buildings.

Pyramidal, rectangular, square forms represent stability, firmness and power. For example, rectangular openings are best suited for doorways. Curved forms represent more softness, delicacy and elegance. Hence they are best suited for columns and arcades. A skillful combination of these will produce both the characters in a building.

3. Proportion : Proportion is entirely the relation between one part to another, and to the composition as a whole. It is not the actual size but the relative size of one part to another that is of so much importance.

The pleasing appearance of the architectural building can be obtained by proportional division either horizontal or vertical. Pillars can be employed to provide vertical proportion whereas cornices, chajjas, lintels can be provided to obtain horizontal proportion. A correct combination of these will create harmony in a building which can please every one. Also some old public offices in Bangalore have floors at 5.8 m high but the columns, openings and architrave are in good proportions and therefore are pleasing to the eye.

✓ Again taking example of the colossal statue of Gomteshwar at Shravanbelogola, which is about 17.38 m. high, its ears, limbs,

hands etc. bear a proper proportion to its height. It looks therefore very proportionate because the sculptor has followed the human scale exactly to get the proper proportions.

Proportion is entirely a matter of relationship. The design of an arched opening may fairly be easy but to provide delicate mouldings, comices, brackets, pilasters etc. one should be fully acquainted with the correct proportions of these details.

Many geometrical figures had symbolic importance in the past and their use has influenced some geometrical rules of proportion with interesting coincidence in antique architecture. For example, the use of equilateral triangle in classic and Gothic buildings and use of arch and rectangular openings in Renaissance building. The study reveals that the openings are two diameters. A combination of circle and square have been found to possess certain proportions in Roman Buildings.

There are mathematical proportions in the beautiful building Taj Mahal at Agra. The width of the building is almost equal to its height and the facade in the centre has the same height as the dome.

4. Balance and symmetry : Balance means equality and can be easily obtained by purely symmetrical type. Now the various elements

which go to form a composition may be grouped to furnish a focal point of interest.

In case of symmetrical type, the focal point of interest is placed exactly in the centre of composition.

In such cases, the perfect symmetry is achieved by arranging the elements in precisely the same way on either side of the central axis. Such buildings on account of 'equality' are thus perfectly balanced.

Taking the example of Taj, at Agra, on its western side is a mosque and on the opposite side is the Mihman Khana, a building built with no religious impact but to provide a symmetrical balance or Jawab (answer).

But in practice, it may not be always possible to adopt the symmetrical type, on account of different requirements and conditions. In such building, care should be taken such that the centre of gravity should not be awkwardly situated at extremity of the composition.

The centre of interest should be brought very close to the centre of gravity of the composition by balancing the arrangement of various

elements, i.e. by adopting appropriate forms, colour, texture in unequal masses.

5. Contrast : Good architecture is devoid of monotony, i.e. repetition of the same elements. It is therefore necessary that the composition should avoid monotony and induce interest to the observer. This interest will be obtained by careful and skillful introduction of variety or contrast with experience and aesthetic sense.