INTRODUCTION

The Golden Temple is the popular name of Sri Harmandar Sahib*, ¹ the Temple of God, or Sri Darbar Sahib, Court of the Lord. It is situated in Amritsar, the City Sacred of the Indian Punjab. The city itself derives its name from the holy Pool of Nectar, Amrit-Sarovar, which surrounds the sacred shrine. To the Sikhs, there is no place more sacred than Sri Harmandar Sahib where the Sikh Bible, Sri Guru Granth Sahib (SGGS), is ceremoniously installed daily to mark the commencement of religious services. It is thus their most important pilgrimage site.

Sri Harmandar Sahib was built in 1604 AD by Guru Arjan Dev (b. 1563 AD, Goindwal, Punjab; d. 1606 AD, Delhi), the Sikh religion's fifth Guru (spiritual guide) and its first martyr. The Guru symbolically had the Golden Temple placed on a lower level, [as an expression of Humility which, founder of the Sikh Faith, Guru Nanak Dev (1469-1539 AD), made the Cardinal Principle of the new religion] so that even the humblest had to step down to enter it, and with entrances on all four sides, signifying that it was open to worshippers of all castes and creeds. The sacred shrine seems to rise like a lotus from the surrounding waters of the holy Pool of Nectar. The shrine is approached from the West through a gateway (Darshani Deorhi) by means of a causeway.

The foundation-stone was laid by Mian Mir, a Muslim divine of Lahore. The Temple was destroyed several times by Afghan invaders but rebuilt in marble and copper. Sri Harmandar Sahib was overlaid with gold foil during the reign (1801-1839 AD) of Maharaja Ranjit Singh, whence it took its popular epithet of “Golden Temple”.

The Golden Temple is the most outstanding architectural monument of the Sikh Faith, which ushered in a new style that deserves to be treated as Sikh Architecture. However, in populist (though misplaced) perception, it is a

¹ The word “Harmandir” on the title-page has been spelt in this study as “Harmandar”, which is its most widely-accepted version among the followers of the Sikh Faith.
blending of Indian and Saracenic styles. Its chief motifs, such as the dome and the geometrical design, are repeated in most of the gurdwaras (literally, gateways of the guru or spiritual guide), or Sikh shrines. Mural paintings in some of the gurdwaras preserve specimens of Sikh Art. The Golden Temple itself is rich in gold filigree work of the most delicate kind and in panels with floral designs and marble claddings inlaid with semi-precious coloured stones.

The nomenclatures, Sri Harmandar Sahib and the Golden Temple, have been used interchangeably in the present study.

Sri Harmandar Sahib is the sheet-anchor of the art and science of Building Design which deserves to be called the "Sikh Architectural Style". The study of the Holy Shrine would focus on understanding its Architecture, Engineering, and Aesthetics, by illustrated analysis, on the comparative method.

The aim is to establish how the three stated disciplines distinguish the creative merit of the Golden Temple (the name by which this holiest of the holy shrine of Sikh Faith is now popularly known, and make it the sixth most favoured of places of tourist interest worldwide.

The scope of work would be limited to the study of the Holy Shrine and the Amrit-Sarovar, from which the Vatican City of the Sikhs derives its name: Amritsar.

The Golden Temple, being the sheet-anchor of the Building Design characteristics which have been shown to form an independent style I call "Sikh Architecture" [in the same sense as all scholars distinguish historical architecture as Buddhist, Hindu, Islamic, Christian, etc.], has thus been exclusively put under the scanner.

Before I give an account of my Method of Approach used in the present study, it is necessary to emphasize the fact that the object of my investigation is the Form of Sri Harmandar Sahib as it exists today because, according to
historians, the Holy Shrine was demolished by invaders several times and was rebuilt by the Sikhs time and again. Unfortunately, no records of the original design and drawings are available, and, thus, to go into that uncharted territory of research would radically shift the focus of this project. It should, therefore, be clear that my aim is not to study the historical development of the *Gurdwara* form or the stylistic evolution of its architecture. I have concentrated primarily on how the idea of a given Place of Worship takes shape architecturally, and how the contemporary architectural elements are modified to further articulate the expression of that idea.

There are certain incidental features which normally appear in all kinds of Religious Architecture because of the devotion of the followers concerned who try to bring about a change in the Form of the Place of Worship according to their own faith and understanding of the subject that clearly falls outside the scope of non-professional human activities. Such, indeed, has been the case of Sri Harmandar Sahib which was got gilded by Maharaja Ranjit Singh as a personal act of devotion. Humility being the cardinal principle of the Sikh Faith, it is unlikely that the *Gurus* would have approved of such an expensive embellishment of the Holy Shrine. Fortunately, this gesture of royal extravagance has been neutralized beautifully by the vast expanse of the *Amrit-Sarovar*.

It must be reiterated that no comparative study of *Gurdwara* architecture is intended. The directive principle underlying this project is the comprehensive study of the three aspects: Architecture, Engineering, and Aesthetics, which together make Sri Harmandar Sahib the holiest shrine of the Sikh Faith. I have thus approached this project from a professional point of view concentrating mainly on the three stated aspects of the Golden Temple [the name by which this Holy Shrine has been known throughout the world since Maharaja Ranjit Singh got it gold-plated] and, in no way, have I tried to bring in religious or ritualistic aspects.
My approach is philosophical, and is clearly directed towards the exposition and evaluation of Architecture, Engineering, and Aesthetics, as related to the existing Building under study.

It is pertinent to point out how my Method of Approach is different from that of other scholars whose studies of the Golden Temple have preceded mine. Madanjit Kaur’s *The Golden Temple: past and present* is a historical account of the circumstances and related factors which led to the building of the Holy Shrine. PS Arshi’s *The Golden Temple: history, art and architecture,* is a sequel to his PhD thesis on Sikh Architecture in which he had documented the plan- and elevation-shapes of various gurdwaras. Though he has dealt with art and architecture, his emphasis is also on history. *The Golden Temple* by Mohinder Singh is a publication that carries introductory material to cater to the needs of tourists/visitors to the Holy Shrine.

In the areas identified above, the usefulness of the studies done by the three scholars cannot be denied. However, since these scholars are not architects, their work has only a nodding acquaintance with the complexity and creativity of the profession of Architecture, and has thus a limited value for students and practitioners of this "Mother of all Arts".

My approach, though theoretical, pointedly aims at the formulation of a system of analysis and evaluation of Architecture, Engineering, and Aesthetics, as manifest in the Building of Sri Harmandar Sahib. To this distinct approach I bring the knowledge and insights I have personally gained as a practitioner, researcher, and pedagogue in the three highly specialised, though interdependent, interlinked, and complementary, areas of study.

I have endeavoured to show through an illustrated analysis, how Idea becomes an image to eventually take shape as Form, and how the latter assumes a metaphorical and symbolic significance that sustains the devotion of those who continue to use and worship it.
The method of approach thus used in this project traces the three interdependent, interlinked, and complementary areas of study, namely: Architecture, Engineering, and Aesthetics, to their constituent Elements of Space, Structure, and Form, respectively. The fourth Element of Time has been studied to give historical context to the Holy Shrine.

Although the most outstanding architectural historian Sir Banister Fletcher has used the “Comparative Method”, and many other scholars have also drawn comparisons between one “style” of architecture and another, their approach, in my considered opinion, lacks the profundity that could be accomplished only by going back to the beginning, that is, The Source, as embodied in the sacred Scripture(s) of the Religion concerned. To my knowledge, all forms of Creativity are often explained on the analogy of Human Biology, which I have tried to extend to what may be called the pre-conception stage of “birth”, from where it is developed to full blossom through pre-natal, natal, and post-natal stages. This definitely helps in putting under check all tendencies of speculation about the “origin of things”, as we see them today, and yet putting the material under study into distinguishable categories whose common source is possible to pin down. This must have been the reason which prompted scholars to class the members of species, Homo sapiens, under four distinct races, although all human beings are made of the same material and have the same constituent organs.

I have thus modified the “Comparative Method” into an “Illustrated Analysis” based on rational “Comparison”. For such an approach I have identified these elements: Space, Structure, Form, and Time. Space is purpose-specific, and the purpose, especially in Religious Architecture, comes from The Source: the sacred Scriptures of a particular community. The concept of Space thus cannot escape the colour and overtones of a given culture. Christianity and Islam are based on the idea of “collective worship”, but Hinduism is not. Thus, a church or a mosque can never be like a mandir. The Sikh Faith also approves of collective worship (sadhi-sangat or the holy
company) but it is also conscious of the fact that the scale of the shrine must not become awesome in deference for the Religion's Cardinal Principle of Humility.

**Structure**, as support system, is a physical attribute of all that occupies Space, and is indispensable to the realisation of an idea (in the mind) into an object (on ground). Though it can be *customised* to meet the peculiar requirements of Space, **Structure** is essentially *universal*. It is the Grammar of the Language of Building Design. The intent and content of this unique language come from Space, and its expression is made possible by Form. Building Design, realised on site, becomes psycho-somatic in terms of Space and Form.

**Form** is the third dimension of Plan that "generates" the Space on a sheet of paper which has only two dimensions. Form is the Body of Building Design. Form, with its elements of Mass and Surface, tends to become Culture-specific, too. **Form** is what qualifies Building Design to be classified as a "visual" or "plastic" art. So strong is Form's visual impact that a vast majority of historians and scholars tend to mistake it for the final arbiter of what, in common parlance, is called Architecture.

**Time** is the most potent element as much of Creativity as of life on this planet Earth; so much so that Time creates its own Space! At any given point in the course of history, Time can be seen frozen as *objets d'art*. In its *Present*, it is fluid, and as Future, it tends to be nebulous or gaseous. Albert Einstein called Time as the Fourth Dimension of Space. To my understanding, Time has its own two dimensions: its linearity and its cyclicity. The two together constitute a *helix* which encompasses, as well as dwells in vacuity to create Time-Space Continuum. It should be evident that a proper study of Time as Historical Periods alone can yield material whereby one may *contextualise* both the "Act of Creation" and its myriad products called *objets d'art*.
SPACE accommodates.
It is a measure of Utility: use-effectiveness, making activities efficient,
with flexibility for exigencies. Utility serves.

STRUCTURE supports.
It is a measure of Economy: optimal deployment of resources with
respect to Utility. Economy saves.

FORM expresses.
It is a measure of Beauty: harmony and well being. Beauty elevates.

TIME creates its own space.
It is a measure of Appropriateness.

Space is the spirit called ARCHITECTURE.
It is what you do not see as much as you feel.

Form is the Body called AESTHETICS.
It is what you do not feel as much as you see.

Structure is the Skeleton called ENGINEERING.
It is what you neither see nor feel as much as you ought to.

In the sense in which I have deliberated on the three distinct
disciplines, it should be clear that I have purposely substituted the phrase
“Building Design” for Architecture, Engineering, and Aesthetics. Architecture
becomes manifest as a Building, but all Buildings are NOT Architecture. All
Buildings are NOT apt expressions of the art and science of Engineering. Nor
can Aesthetics be ascribed to every Building. When a humanist like Geoffrey
Scott considers Architecture under three conditions: commodity, firmness, and
delight, he is, in effect, alluding to what I have termed: Space, Structure, and
Form, respectively. While these tools have been used to highlight the creative
merit of Sri Harmandar Sahib, the singular example of the Holy Shrine comes
handy to establish a new Method of Approach to the study of Places of
Worship of different world religions.
Since measured drawings had to be prepared as base material for this study, the very nature of the project required me to make several visits to the Holy Shrine. These extended encounters gave me the all-important opportunity to make fresh on-the-spot observations of the Building in terms of its architectural ambience, engineering skills, and aesthetic charm, whereby I gained deep insights into my areas of study. It may be conceded that such authentic, firsthand knowledge would not have been possible by only looking at the photographs. At any rate, by adopting this somewhat inevitable technique, my philosophic Method of Approach has become substantiated by lots of corroborative evidence, which contains such observations as may well be the first ones of the kind in the study of the Golden Temple.

This study has been done as Presentation as written text, and in the form of measured as well as conceptual drawings, diagrams, photographs, and on-site observations, which together constitute the material necessary for illustrated analysis—critically developed in the body of the text as studious description. The drawings done on AutoCAD, though remarkable in certain ways, are not as satisfying as those made by human hands. But the latter species is now almost extinct, and I have to be content with whatever I have succeeded in accomplishing.

Chandigarh

S S Bhatti