4.1. Introduction
During the entire period of the Sikh history, Punjab has witnessed series of foreign invasions and political upheavals. So the people, suffered from war and destruction imposed upon by the invaders, and hardly ever experienced peace for a long period of time (Rani, 1987). There were times when the survival of Sikhs hung in balance and they lived like nomads. It was during Maharaja Ranjit Singh’s rule that peace prevailed in the Punjab after long period of turbulence. During the era of peace and normalcy, wealth and prosperity of the residents grew and art received generous patronage from the liberal Maharaja. His patronage to Sikh art and architecture in particular was great. He donated large amount of money for the construction and renovation of various historical Sikh shrines (S. Singh, 1992). He also donated liberally to other religious structures like Hindu temples and Muslim mosques etc.

The Sikhs have produced a very rich and wide-ranging art and architecture, but it is unfortunate that there have been limited attempts to document and analyze this aspect of rich heritage of the Sikhs. The Sikhs constructed many of their shrines with the magnificence and splendour under royal patronage of Maharaja Ranjit Singh. Ranjit Singh’s rule can be termed as a period of artistic and cultural renaissance in Punjab. The Harmandar Sahib is a treasure house of mural paintings, inlay work and gold work (Rani, 1987).

4.2. Philosophy in the Sikh Art
The concept of a close relationship between the nature and human beings is very old, versatile and widespread. The Sikhs have always been passionate lovers of nature which has been reflected in the designs used in various art forms used in Sikh shrines, palaces and mansions (havelis) of Sikh chiefs. This may be because the Sikh warriors had to frequently take refuge in forests under adverse conditions during the period of struggle with Mughals and Afghans. Moreover, Punjab being largely an agrarian state with fertile land and bounded by hills in the north and east, might have led to strong bond with the nature and forms like trees, flowers, leaves, birds and animals etc. The Guru Granth Sahib, a collection of the hymns of Sikh Gurus, Hindu, and Muslim saints, contains hymns abound in poetic images of various elements of nature in Gurbani (B. Singh, 2007).
Various natural elements are used including trees, floral patterns, and fruits. But human figure was rarely used in various art forms like Mohraksi (frescos), Jartakari, Gach work, and Gold plating etc. Paintings of Sikh Gurus have been used in a few places like Gurudwara Baba Atal in the Harmandar Sahib complex.

4.3. Patrons of Art and Artists

Right from the period of recorded history of mankind, this pattern of patron-artist relationship has been in existence. It continues even today in some form or other. Maharaja Ranjit Singh inherited a rich art and cultural heritage when he occupied Lahore. He expanded this built heritage by constructing many residential, religious and defence structures. Like him, his courtiers, ministers and nobles constructed their mansions (havelis) and got religious structures constructed and decorated. Political centres such as Lahore, Amritsar, Patiala, Kapurthala and Jind offered court patronage to artists. Apart from Gurudwaras, other religious places like temples and mosques and mausoleums were also richly decorated with floral patterns and beautiful calligraphic rendering of ayats in Arabic from the holy Quran (H. Singh, 1995).

Harmandar Sahib at Amritsar is a treasure house of various forms of art work used by the Sikhs. It was originally built in 1601 but its present structure is the result of the joint efforts of the Sikh Misls under the leadership of Sardar Jassa Singh Ahluwalia. The Harmandar Sahib began to take shape from 1765 when reconstruction was started by the Sikhs after successfully beating back Ahmed Shah Abdali. The construction work was carried under the supervision of Bhai Des Raj, a financer of Amritsar, who was also entrusted with the job of collection of cash offerings.

Later on Maharaja Ranjit Singh ordered repair and renovation work of Harmandar Sahib, when he occupied Amritsar in 1802. He acted in the name of Sarkar-i-Khalsa and had great respect for the Harmandar Sahib, the nerve centre of the Sikh power. A number of Sikh Sardars made their contributions in the construction, beautification and extension of the Harmandar (D. Singh, 2003). For gold plating of the domes and upper part of walls of the Harmandar Sahib he donated rupees five lakh and the work was executed by Mistri Yar Mohammad Khan, under the supervision of Bhai Sand Singh. The first gold plated copper sheet was fixed in 1803 (Kang, 1977).

Tara Singh Gheba, Pratap Singh and Jodh Singh donated for the beautification of the ceiling of the Harmandar Sahib’s ground floor. The archway under the darshani deodi was covered with gold platted copper sheets by the Raja of Jind, Sangat Singh. The
Harmandar Sahib being the most important shrine of the Sikhs, almost every Sardar and noble contributed for its renovation and decorative additions from time to time. It is not possible to make a chronological account of the decorations, murals or other work except for a few date-inscribed works, in the Harmandar Sahib (Kang, 1977).

### 4.3.1. Background of the Artists

During the period of Sikh supremacy in Punjab, the art and cultural atmosphere drew master craftsmen from different areas and from various religious backgrounds. With the arrival of these artists, the art activity flourished in Lahore, Amritsar and other princely states like Kapurthala, Faridkot, and Patiala etc. According to the tradition of those days, various arts related activities were carried out on hereditary basis by the various artists from one generation to other. As a result, families (*gharanas*) with expertise in specific art form became popular. Housing lanes in the cities were known after these families as was the case at Lahore and Amritsar. Most of these artists lived in Katra Tarkhana in Amritsar. The prominent artist families that thrived and worked at Lahore either for the Sikh court or for general nobility were the Chughtai family, Kehar Singh-Kishan Singh family, and Purku-Nain Sukh family (Harbans, 1995). Chughtai family was par excellent in the field of *naqqashi* and painting. Kehar Singh and Kishan Singh concentrated mainly on Sikh themes, religious and secular. They contributed a lot to the ornamentation of inner walls of the Harmandar Sahib, Amritsar. Their selfless service brought them honour of *Fakhr-e-Zaum* (Pride of the Nation) (H. Singh, 1995).

In 1819, Maharaja Ranjit Singh conquered Chaniot town (now in Pakistan) located on left bank of the Chenab River on the Sargodha-Faisalabad road. One of the Sikh commanders came across big *havelis* at that place which were elegantly decorated with fresco paintings. He informed the Maharaja about this art and local

![Figure 4.1: Early 19th century painting of Ten Sikh Gurus by Purku a Pahari painter (Satinder and Narinder Kapany Collection) Source: http://www.slideshare.net/soniadhami/kapany-collection-uc-santa-barbara](http://www.slideshare.net/soniadhami/kapany-collection-uc-santa-barbara)
Muslim painters who were expert in this art work. Maharaja ordered to approach those Muslim painters to work at the Harmandar Sahib and offered them good remuneration in return. The decoration work at the Harmandar Sahib, with fresco paintings and *naqqashi* work, was done by these Muslim painters belonging to west Punjab during early 19th century (D. Singh, 2003). Unfortunately most of the Artists, who had worked in the Harmandar Sahib on various art forms, remained unknown. Therefore, except for a very few recorded works, it is not impossible to associate any of these works to a particular artist. The late Bhai Hari Singh, a renowned artist, after an in depth study of art work in the Sikh Gurudwaras, prepared a list of Sikh *naqqashs* and artists who had the honour to work in Harmandar Sahib. According to his study, the earlier Sikh *naqqashs* were Bhai Kehar Singh, Bishen Singh, Kapur Singh and Kishen Singh, who enjoyed wide recognition in Lahore and Amritsar and worked in indigenous style. The sons of Bishen Singh namely Jawahar Singh and Nihal Singh followed their father. Gian Singh and Harnam Singh were the disciples of Nihal Singh. Most of the renovation work of decayed fresco paintings on the inner walls at first story has been done by these two *naqqashs*. Sardar Harbhajan Singh *naqqash*, who was trained by Atma Singh, worked on the shrine of Sri Akal Takht Sahib constructed after the operation Bluestar.

The most beautiful part of *naqqashi* and fresco painting works can be seen in the Harmandar Sahib on the second storey in the pavilion known as *sheesh mahal* or mirror room. It is believed that this extended portion of *sheesh mahal* or Har Ki Pauri was added by Maharaja Ranjit Singh (D. Singh, 2003). Bhai Gian Singh, who was one of the master artists, belonged to the line of *Naqqash* started by Bhai Kehar Singh. He was an expert in fresco painting and served in the Harmandar Sahib, Amritsar, for about 32 years. With his demise in 1953, the curtain was finally dropped on the time-hallowed school of *Naqqash*, which had been started by Maharaja Ranjit Singh (S. Singh, 1992).

When Maharaja Ranjit Singh occupied Kangra and surrounding hill states, the *Pahari* artists were attracted towards the plains. They were commissioned by the Sikh nobility and were also provided state patronage, which led to the revival of the art of paintings in the Punjab and thus came into being the Sikh School of Art. *Pahari* painters, who came to the Punjab plains in search of new patrons, did an excellent job here. They brought with them *Pahari* style, its delicacy, architectural details, and style of portraying the famine charm with a natural grace, landscapes, countryside, rivers, trees, birds, cattle,
and flowers which have been very carefully portrayed in these paintings ("Kangra Arts", n.d.). They soon adjusted to the new setting, new patrons and new philosophy of life. They produced Sikh subjects in Pahari style; the works executed in this region during the first half of 19th century show a mark of Kangra style (see figure: 4.1).

The focal theme of Kangra painting is Shingar (the erotic sentiment and deals with the subjects of love and devotion). Kangra paintings influenced by the Bhagavad Purana portrayed incidents from the life of the young Krishna against the Brindavan forest or river Yamuna. The love story of Radha and Krishna was the main source of spiritual experience ("Kangra painting", 2010). However, when Kangra came under the control of Raja Sher Singh, son of Maharaja Ranjit Singh, these painters rapidly adapted their paintings to suit the Sikh sentiments. Individual portraits, books, and walls were embellished in this style depicting mythologies from Hindu scriptures and also Janam Sakhis (literature related to the life and teachings of Guru Nanak) from Sikh religion. Sikh Gurus and Janam Sakhis were for the first time illustrated in the eighteenth and nineteenth centuries. After that, there was a rapid growth of paintings of Gurus during the last phase of the nineteenth century and the beginning of the twentieth century (H. Singh, 1995). The Pahari painters were engaged mainly to execute following two categories of paintings:

1. Murals: the Pahari painters were commissioned by Maharaja to design and execute murals on the walls of the newly constructed Gurudwaras, Palaces etc. with the active assistance of the local painters. The local landlords and mahants followed suit and commissioned Pahari painters to decorate the walls of their havelis and akharas.

2. Portraits: Artists were also hired by the ruling class and the elites to sketch Portraits (Rani, 1987).

There are evidences to show that even the religious faith of the artists has also played an important role in borrowing some peculiar style of painting of their choice. For instance Muslim artists of Lahore and Pahari artists preferred to work in Mughal style. Colour schemes, landscape surrounding the figures, portraits, use of halo around the principal figure, use of gold in the border etc., were inspired from the Mughal period. There is a reason behind it as Lahore used to be provincial capital of the Mughal Empire. Artists’ studios existed at Lahore from the times of Humayun when Persian masters of calligraphy and painting came to Lahore and settled down there (Srivastava, 1983).
A large number of the old work, particularly murals and fresco paintings have disappeared from the Harmandar Sahib complex. The disappearance of murals started in late 19th century, when devotees were allowed to present contributions in the form of inlaid marble slabs, which were fixed on the walls painted with frescoes. The large number of bungas in Harmandar Sahib complex, which have been demolished, were treasure of splendid paintings. Similarly, there was a treasure of fresco paintings in the shrine of Baba Atal. Most of these paintings have been lost either due to negligence or due to covering of wall surface with marble slabs (Kang, 1987).

4.4. Traditional Names for the Design and Techniques

Designs are traditionally divided into four categories.

- Floral (Gulkari)
- Natural painting (Mussawari)
- Calligraphic (Khattati)
- Geometric (Chitsaali)

The artisan can use these designs individually or in a combination (Hosain, n.d.).

4.5. Reflex of Various Art Forms from Historic Sikh Shrines

The various art forms which add to the ornamentation of Harmandar Sahib in particular and other historical Sikh Shrines in general include:

4.5.1. Jratkari (inlaid stone):

![Figure 4.2: Jratkari work at the Harmandar Sahib Amritsar](image)

This art form comprises of various fascinating designs formed by inlaying stones of different types and colours in marble. This form of Art work has been extensively used in Harmandar Sahib on the exterior walls of the ground floor. These walls are finished with white marble cladding which has rich inlays of stones forming various
intricate and fascinating patterns, while upper portion of the walls are cladded in gold. The artists have taken these motifs from the Hindu mythological themes. The main components of inlaid stone include: flowers, leaves, fruits, human figures and animals (Figure 4.2).

For executing the *Jaratkari* work, the marble slabs were cut to a desired size. Then the artist prepared the drawing and transferred that drawing from the paper to a slab. The design drawn on marble slab was chiselled to required depth by the stone-engraver with the help of small pointed tools. The next stage involved cutting and finishing the stones to be used for inlay work and finally these finished stones were fixed into the finely chiselled out patterns in the marble slab with the help of white mortar. The in-ay consisted of semi precious stones such as lapis, lazuli red, and carnelian etc. The flower motif was inlaid with stones as jasper, agates and blood stones, each chosen so as to best replicate the soft shading of flower. The depth of these cut stones fixed on slabs varies from 10mm-16mm (3/8 inch to 5/8 inch). The ivory work can be seen only on the entrance door of *darshani deodi* (D. Singh, 2003). The craftsmanship of this *jaratkari* (mosaic) reminds us of the Mughal technique used for the decoration of the Taj *Mahal* at Agra (M. Kaur, 1992). Special stones in natural colours are selected to suit the subject with the necessary fibres and other textures (S. Singh, 1987).

### 4.5.2. Mohrakashi (frescos)

The practice of using fresco paintings for decoration purpose, in the sub-continent goes back to the Ajanta period. The Mughals made extensive use of these in their building, followed by the Sikhs in this region. *Mohrakashi* is the art of ‘Frescos’, it is a mural painting which is drawn on a plaster when it is still wet. *Mohrakashi* work can be seen in Harmandar Sahib, Amritsar on the walls and ceiling of the first floor, staircase leading to the first floor, and intrados of arched windows. This art form can also be seen in *darshani deodi*, on upper walls, and underside of brackets below the eaves. The lower portion of walls of *darshani deodi* were also decorated with *mohrakashi* paintings, but these paintings got lost when walls were cladded with marble slabs. This art form can also be seen in Darbar Sahib at Tarn Taran, Sri Keshgarh Sahib at Anandpur Sahib, Gurudwara Bhai Bir Singh at Naurangabad (Figure 4.3), and Chola Sahib at Dera Baba Nanak. It was extensively used in Gurudwara Baba Atal in Amritsar. The whole life of the first Guru of Sikhs, Guru Nanak Dev, has been depicted with the help of this technique on the walls & ceiling of first floor (B. Singh, 2007).
Wall paintings are broadly of three types: tempera, fresco or fresco-secco. Tempera paintings are done on dry wall plaster with pigments made in an organic medium. True frescos are done on wet wall plaster with colour pigments grounded in water. Fresco-secco paintings are done on a dry wall with colour pigments grounded in water. For executing any of these paintings attention must to be paid to:

- The carrier (base) which supports ground
- The ground on which painting are executed,
- The material or pigments used in the work and
- The binding medium or the means by which pigments are attached to the ground so as to make the work firm and long lasting.

Finding a suitable surface like a wall or ceiling which acts as carrier (base) is of great importance, because the durability of painting depends on the plaster coats making up the mural ground. During early 19th century, fresco painting done in Punjab normally used brick walls or ceilings constructed using lime-sand mortar as carrier. For this purpose, preference was given to thick walls, usually not less than 750mm (2’6”) thick to ensure damp proofing. Where murals were executed on existing walls, first of all the old plaster used to be removed and the surface made rough to hold the new plaster firmly (Srivastava, 1983). Usually internal walls not affected by dampness acted as the best ‘carrier’ for mural paintings. The lime used for plastering was thoroughly slaked to prevent ‘blisters’ appearing in the plaster. A more or less similar process was adopted for preparing ‘ground’ for dry wall plaster techniques of tempera and fresco-secco paintings only. The material used and the application seldom reached the refinement required for fresco work. Relatively few murals done in tempera have survived.

The wall forming vertical planes were usually divided by horizontal and vertical lines.
forming rectangular or square panels, normally of uniform dimensions but sometime panels of different dimensions were also used. Generally, the horizontal panels, with more width than height, were painted on the space nearer the ceiling and vertical panels, with more height than width, were used lower down the walls (Srivastava, 1983).

For executing Mohrakashi work, first of all the painting is drawn in pencil or charcoal on a reasonably thick sheet of paper. Then outline of the drawing is then perforated keeping the perforations uniform and perfect. The perforated drawing is called khaka. The wall area where work has to be done is kept damp with water and then covered with lime plaster (this plaster is called pora). On this plaster a layer of doga, a curd-like residue of white plaster prepared from burnt and soaked marble screened through fine cloth, is applied. On wet doga, the design is transferred with the help of charcoal dust sprinkled over the perforated outline of design drawn on paper from cloth-knots (called potli). Thereafter colours are filled in the drawing transferred on the plaster by means of a small wooden trowel (called nehla) with a slight hunch in the middle which is gently ‘thumped’ on the plaster in such a way that the colour does not get rubbed or mixed with the adjoining colours. This process requires unabated attention and artists are known to have generally gone without meals to ensure the setting in of colours before the plaster dried up (S. Singh, 1987).

According to late Bhai Gian Singh naqqash, only six colours: red, green, yellow, blue, black and white were used in a fresco painting. Except green, different tones of various colours were obtained by mixing with white colour. Green was treated with yellow clay (Srivastava, 1983). In Tempera painting, solid pigments were employed mixed with water as a medium, with some kind of dissolved gum to prevent the scaling off the colours. Gum obtained from a tree like acacia was mainly used as ‘binding agent’. Tempera painting could not withstand exposure to weathering agents for long and were not suitable for external decoration. Coats of varnish normally applied on the surface to preserve the pigments are rarely used because they gave a brownish tint to the surface and affected the original beauty of the colours. It also appears that varnishing came in only with the arrival of European influence (Srivastava, 1983). Colours required for fresco-paintings are always kept wet with water in earthen pots. Dried up colours are of no use. Similarly, the brushes are prepared by the artists themselves from squirrel tail or goat and camel hair for use in a fresco-painting (S. Singh, 1992).

Most of the fresco-paintings are an adaptation of the Kangra, Rajput, the Persian and the
Mughal motifs. Still the distinctive setting and combination of plants, flowers, birds and animals gives it distinct identity. Although the Sikh artists adopted the Mughal mohrakashi style involving the Iranian motifs of relief, bold flowers, glamorous colours, and geometrical designs, yet the Sikh artists depicted fine samples of art work of their own. Consequently human figures, animals, birds, flowers and leaves can be seen drawn in their natural setting. Borders in elegant traditional designs enhance the beauty of the mural paintings. The contribution of the Harmandar Sahib to the art of fresco-painting lies in the preservation of the local traditions and in an extension of the art work of the Kangra and allied schools (M. Kaur, 1999).

4.5.3. **Dehin Work**

*Dehin* is a form of fresco painting seen in a Gurudwara (Figure 4.4). One of the finest examples of this style of painting can be seen at the Harmandar Sahib. A *Dehin* painting is an imaginative collection of forms taken by an artist from animal or vegetable life. The basic structure of a *Dehin*, called *ghawanj*, consists of a vase placed on a pedestal. It has three parts: pedestal, a vase poised on the pedestal and a bouquet of flowers or a floral bush called *jhar*. On the pedestal birds or animals are depicted in various dramatic postures. It is painted in a square form, bordered by creepers. These square paintings adorn the walls, floors and the ceiling of a Gurudwara. The collection of these paintings often resembles a carpet. The colours used in *Dehin* are prepared from natural materials. The painting is done on the wet plaster. These are used on wall, floor or for ceiling decoration. The square usually consists of a fine setting of flowers, leaves, creepers or bushes within a flowery border with handsomely patterned corners.

*Dehin*, the most fascinating item of fresco-painting, was Gian Singh’s forte. Gian Singh introduced a number of innovations in the art of fresco painting. His predecessors, in the Sikh school of art, depicted gods and goddesses in the body of the pedestal in the manner of their Persian or Mughal forerunners. But Gian Singh replaced these motifs with those of “grapples” (*pakran*) of animals, birds, flowers, creepers, etc. (H. Singh, 1995).
4.5.4. Naqqashi

The art of naqqashi is the ancient art of writing on walls. This starts with making of an object, preparation of the surface, and selection of the design pattern and colours to be used. Skilled techniques involved in the various stages of art and craft were passed through oral traditions from one generation to the next (Figure 4.5). Till the advent of the 20th century, the craft was a well-kept skill, maintained within the artisan community (“Naqqashi”, 2009).

This art was started about 900 years ago by a Rajput family of Multan which was expert in fine arts and handicrafts. Their expertise was in the preparation of handicrafts from camel skin and then painting those using the skills of the art of Naqqashi. This family embraced Islam and stated working using sacred Islamic Ayats and gradually the new styles of Naqqashi came into being. Naqqashi crossed the boundaries of Multan and spread throughout the sub-continent. Mughal emperors impressed by the art of Naqqashi encouraged the artists with state patronage. They commissioned the Multani artists to decorate their forts, mosques, tombs, and buildings in addition to their palaces. Taj Mahal (Agra) was decorated by the Mutani Naqqashs. When Sikhs gained control of this region, they used the services of these artists (“Naqqashi”, 2009).

The floral pattern, interspersed with animal motifs etc., are traditionally employed in the naqqashi work following a pattern. It reflects the local setting as well. However, the colour scheme that is used for this art form is mostly limited to four or five basic colours with numerous shade gradients. The overall effect of the object normally tends towards blue, green or gold. There are about 300 different patterns adorning the walls of the Harmandar Sahib. The decoration on the porch of the first floor displays fine naqqashi executed in gold and various colours and cut-glasses of different shapes and varieties. The naqqash or painters developed a terminology of their own to distinguish various designs.

Figure 4.5: Naqqashi Work First floor of the Harmandar Sahib
4.5.5. Gach Work

*Gach* is the term used to describe a plaster made from gypsum. It is prepared by heating the lime stone in fire, then it is pulverised and finally sieved through fine cloth. A paste is prepared by adding water to gypsum. It is mixed in small quantities so that the artist can make use of before it dries out because it dries up immediately on mixing in a minute or two and becomes unfit for use. This *Gach* is first applied as plaster and before it dries, it is cut into the required design using tools like the steel cutter and other implements and shaped out in floral designs. After the design dries up, it is covered with yellow color mixed with varnish and then gold leaves (*Warq*) of pure gold are pasted on the ornamental design with specially made sticking material over this varnish coating (Figure 4.6).

This unique and excellent art work can be predominantly seen on the ceiling and so fit the arches on the first floor and over the *Har-ki-Pauri* at Harmandar Sahib. On the first floor hall, religious prayers have been embossed with this technique. The prayers include *Japuji Sahib, Jaap Sahib* and *Anand Sahib*. Each stanza in these verses is enclosed in a separate unit marked by a golden border. Written in golden over red and blue backgrounds, these are further enclosed in golden and blue thick border (B. Singh, 2007). Verses from the Guru Granth Sahib have been rendered in this style by Bhai Gian Singh. This art work is also used in Darbar Sahib at Tarn Taran and Akal Takhat at Amritsar.

4.5.6. Tukri (mirror piece)

Art form consisting of inlaying pieces (*tukries*) of coloured and looking glass inlaid into a gypsum plaster (*Gach* work) is known as ‘Tukri’ (Figure 4.7). *Gach* has not only been inlaid with tukri but also with precious stones. This was most widely used by the
Mughals in their palaces and forts, forming ‘Sheesh Mahals’. This art work also received great patronage from the Sikh chiefs. The glass used in this work is usually given a coating of copper and sometime a coating of mercury is done on the inner surface of the thin glass. These are then broken and the pieces are cut into desired shapes as per design on Gach work using a sharp edged stone called ‘krund’, to suit the floral and other details of Gach work. At some places, precious stones were used in the cuts on the Gach work. Buildings containing such works are generally called Sheesh Mahal or glass houses. This type of work can be seen in the ceiling of the pavilion on the second floor of Harmandar Sahib. The ceiling of the central dome is a work of rare craftsmanship (M. Kaur, 1992). Likewise the walls of the stairs leading to the second floor abound in some of the rare master pieces of the Sikh paintings (M. Kaur, 1992). Mostly round in shape, the size varies according to the flower size of which it forms the centre. The base colour is either blue or red enclosed in golden engravings of different geometric shapes such as star shape, hexagonal shape etc. The ceiling is separated from wall by a beautiful Gach work border engraved in gold colour with blue base. At some places, rectangular frame shows the Tukri work depicting mainly flowers in golden colour.

4.5.7. **Gold Embossing**
This art form consisting of various beautiful patterns can be seen on the upper portion of the outer walls of the Harmandar Sahib, the ceiling inside and in the *Darshani Deodi*. It has also been used in Darbar Sahib at Tarn Taran, Akal Takhat at Amritsar, and at some places in Baba Atal at Amritsar. In this technique, first the drawing is prepared then it is transferred on to copper plates, on the reverse side of the copper sheets, by embossing. The gold leaves (*warq*) are pressed on these sheets, which get the impression of the embossed design (B. Singh, 2007). The work of gold plating and marble work in Harmandar Sahib was started in 1803, and completed in 1830. The work was done under the supervision of Giani Sant Singh and after his death by his son Bhai Gurmukh Singh supervised the work. About 165 kilograms of gold was used, valued at 6.5 million Indian rupees at that time (D. Singh, 2003).

The task for regilding the upper portions of the shrine was entrusted by the Shiromani Gurudwara Committee (SGPC) to a UK based Guru Nanak Nishkam Sewa Jatha, headed by Baba Mohinder Singh. This *Kar Sewa* was launched on February 3, 1995 by removing a few old sheets from the central dome of the Harmandar Sahib and completed at the start of Tercentenary celebrations of birth of Khalsa in April 1999. Bhai Mehega Singh, a senior functionary of UK based organisation was stationed at Harmandar Sahib to supervise the entire work which was carried out by more than hundred experts. Pure 24 carat gold was used for the task. This is hammered and converted into *warq* of gold, a piece of 17.5 grams runs into 5.5 feet long and one inch wide sheet.

All the copper sheets of the time of Maharaja Ranjit Singh were removed and replaced with new sheets imported from Germany. Efforts were made to follow the original design of gold embossing. At the time of Maharaja, a wooden frame was used over the dome. The frescos painting beneath the copper sheets were intact, but now the old paintings have been scrapped, cement put on top and all cavities filled and then new carved out copper sheets with gold plating fixed over them (S. Singh, 1992). The gold plating work was done by adopting traditional method used during maharaja’s
regime considering its time tested reliability and suitability, modern techniques like electroplating were rejected after due consideration. It is estimated that 12 layers of gold warqs were applied during the time of Maharaja Ranjit Singh. While replacing the sheets of domes, all traditional carving, floral designs, patterns and writings were kept intact. Experts for preparing these sheets of domes with traditional designs were called from Moradabad and Varanasi. They worked along with local experts. Images of Sikh gurus and floral patterns used on the upper part of the external walls of Harmandar Sahib are shown in Figure 4.8 and 4.9.

For gold plating, first of all copper sheets were prepared with proper design and after the copper sheets were ready it was cleaned with a particular chemical. Mercury was applied before fixing the warq (gold leaf) on the copper sheet. Twenty layers of warq were fixed after sprinkling mercury. Then indirect heat was applied, the mercury evaporated with heat and only layer of gold warq were left on sheets. Four more layers of gold warq were fixed thereafter and subsequently it was polished. The new gold plating is expected to last more than 300 years. Nearly 500 kg of gold was consumed in this gigantic task (Bhanwar, 1999).

4.6. Summary

The emergence of the Sikh art school is credited to the rule of Maharaja Ranjit Singh. During this period of Sikh supremacy in Punjab, the art and cultural atmosphere drew master craftsmen from different areas and from various religions. With the arrival of these artists, the art activity flourished in Lahore, Amritsar and other princely states like Kapurthala and Patiala etc. When he occupied Kangra and surrounding hill states, the Pahari artists were attracted towards the plains and they were commissioned by the Sikh nobility and were also provided state patronage, which led to the revival of the art of paintings in the Punjab. Earlier, painting in the Punjab was concentrated in the Pahari region. Artists from the important painting centers were then employed by the Maharaja and his nobles to produce portraits of the leading personalities of the Sikh court, or paintings of the Gurus. They were also employed to decorate the walls of palaces with elaborate designs and vibrant Colours.

The Harmandar Sahib was gilded under the patronage of Ranjit Singh during his reign, apart from gilding the various art forms which add to the ornamentation of Harmandar Sahib in particular and other Sikh Shrines in general includes Jaratkari (inlaid stone), Mohrakashi (frescoes), Gach work, Naqqashi work, tukri work and Gold Embossing.
A large amount of the old work, particularly murals and fresco paintings has disappeared from the Harmandar Sahib complex. The disappearance of murals started in late 19th century, when devotees were allowed to present contributions in the form of inlaid marble slabs, which were fixed on the walls painted with frescoes. The large number of bungas in Harmandar Sahib complex, which have been demolished, were a treasure of impressive fresco paintings. Similarly, the shrine of Baba Atal was a treasure of fresco painting. Most of these paintings have been lost either due to negligence or due to covering of wall surface with marble slabs. The various art forms as discussed above are priceless heritage. It is high time that due patronage for their revival and conservation is given by the SGPC as well as by the Sikh society.