Religion and art are expressions of culture in two different ways. Among these perhaps the art is more sensitive indication of change. It is the architecture among the art, which displays the cultural inheritance to a great extent. Therefore, a study of architecture is essential to understand the cultural developments of a particular period and region.

The building activities of the Rajputs in the pre-Mughal period were of two-fold nature which can be placed in two categories, viz:

(a) The sacred architecture i.e. the construction of the temples for the worship of different Gods and Goddesses;

(b) The defensive architecture i.e. the construction of forts (garh) for the defence of their territory at strategic points in their states or kingdoms, which also included the palaces, stores, reservoirs, baolis etc.

However, it was the sacred architecture, which dominates, in the field of architecture in pre-Mughal period. During this period a large number of temples were constructed in different parts of Rajasthan belonging to Hindu and Jain faiths. These temples were constructed on the principle of

trabeate and corbelled method, where the pillars, capitals, brackets and lintels were used in different structures of the building. The roofing of the cloisters of the temples were of trabeate style and flat type, while the central apartment of the temple (garbhagriha) was roofed through the corbelled technique, resulting into, the shape of a pyramidal roof (Sikhara). The continuation of both trabeate and corbelled styles of architecture in the construction was in vogue on traditional pattern of ancient Indian architecture. The temples into the 8th century were the crude imitation of Gupta and western chalukya style. But from the close of 8th c. to the close of 12th c. new form developed in the temple architecture, during the period of Pratihara Imperialism, where the bee-hive like temple spires (Sikhara) in place of pyramidal ones, short shaft pillars with large scale sculpture developed in the style. In sculpture, figures of human beings, kirtimukhas, hansas, animal figures, and floral motifs were most popular. The different varieties of sandstone were used for construction purposes and we do not find use of any plaster in these buildings.


From 12th to 15th century again we find the dominance of sacred architecture, where the Rajput rulers continued the old practice. As a result of this practice in the capitals of Rajput kingdoms, a good number of temples were constructed. The temples of Jukabeshwar Mahadev, Digambar Jain, Eklingji, Sringar Chauri, Sathia Deori and Kumbhshyam at Chittor, are important temples of this period. They are very crude in finish, unmethodical in proportion and without expression. But the temples (Sringar Chauri, Sathia Deori, Kumbhshyam, Varah) of Maharana Kumbha's reign (15th c.) are better monuments throwing light on the temple architecture of this era. They are all constructed of almost gray sandstone and in structural form comprised of garbhagrihi, ardhamandap, sabhamandap, pradikshana path and crowned shikhras. The sculptures of this period are unproportionate in size, crudely finished and expressionless and decorated by heavy and excessive ornaments of low-class tastes. The human figures predominate in sculpture ming along with floral and animal motifs. However a great change is found in the structural architecture of the roof, where oval shape is given to the ceiling or madapas, which seems to be the result of the influence of Malwa Sultanate.

At Jodhpur, Ghanshvam temple is one of the significant temple of this period along with a group of temples at Osia, Nagor and Nabol. The temples are having higher plinth; the essential structure of the temple architecture i.e. garbhagriha, ardhamandap, saba-mandap and pradikshna path are contained in almost all these temples. The striking feature of these temples lies in the sikhas (spires) of temples, which resembles to those of early temples of Orissa. In decoration, the sculpture dominates the pillars, brackets, lintels and even the inner walls of the garbhagriha with the figures of human beings, animals and with floral motifs. The carving is profuse and is unproportionate like the Chittor temples of the period.

At Bikaner, the temple of Laxminarayan (close of 15th c.) and at Jaisalmer, the temple of Parswanthji (15th c.) belongs to this period, among the capitals of the Rajput states. The stone of different varieties are used for building purposes and the trabeate style of construction was prevalent in and all these temples, while the corbelled style was particularly adopted in the construction of spires (sikhas) of the temples. The shape of the spire was determined by the corbel method of construction and which after attaining the height, limited the span. On the top the crown (amalak) binds the whole structure with its weight. The sculpture as usual prevails as chief form of decoration with traditional motifs of the figures of human
beings and animals, floral motifs of different types and the
domination of the Hindu mythological scenes.

As far as the problem of civil or secular architecture
is concerned we do not find much buildings of this period.
The only available buildings at present are the forts of
Amber, Chittor, Jodhpur, Bikaner and Lundi, devoid of any
civil buildings of this period except the fort of Chittor.
In most of these old forts, the old buildings were replaced by
the construction of new buildings in their place during the
Mughal period due to lack of space inside the fortified walls.
The result was this that at present we find only the buildings
of Mughal period in these forts. The outer wall of the fortifi-
cations with the entrance gates are the only architectural
remains of pre-Mughal period in these forts. These forts
are constructed of red and gray sandstone along with the use
of quartzite. The walls are massive and solid, divided by the
creations of round bastions and surmounted by battlements in
the form of parapet of the wall. These battlements are of big
size so that they may provide a cover to the defenders of the
fort. Further the loopholes are also created in these battle-
ments to be used to discharge the arrows by the defenders or

1. The Strongholds of India, Sidney Toy, pp. 84,88,81,83.
to pour hot oil over the besiegers. The entrance gates are constructed on trabeate method of construction i.e. the covering of the opening with the use of a massive stone beams, above which a small window as in the case of main entrance of Bikaner and Jodhpur forts. The side walls of the gates containing niches are decorated with sculpture.

The civil buildings of architectural interest of pre-Mughal period are the ruins of the palaces of Maharana Kumbha in Chittor fort. These are the darikhana, Surai Sokhardha, place of Johar and zenana Mahal along with the celebrated Kirtistambh, and six principal gates of the fort of Chittor. (Rampol, Shairavpol, Hammanpol, Chemundapol, Tarapol and Laxminpol). The Kirtistambh stands on a plinth of 42 feet square which is of a height of 12 feet. The height of the stambha over the plinth is 122 feet. The whole structure is consisted of nine storeys with the openings at every face of each story and all the doors are colonnade porticos. Each storey is provided with light through the creation of latticed windows, in such a manner that the angles and recesses not


intersected by staircase. The inner walls contain niches, which are utilised for status and other sculptural details. The exterior or the structure is divided into nine principal divisions each furnished with trabeate windows, hanging eaves or chhajjas, while the eighth storey is significantly divided by oriel balconies on all the four sides, supported by four pillars on each side; and the ninth storey having the balconies of type of lower storey but not supported by the oriel base; and the top finally covered with octagonal small pyramidal dome. To give it a decorative effect horizontal bands are created in each and every successive storey. The sides of the windows of each and every storey along with the corners of the four sides of the structure are profusely decorated with sculpture. The contours and symmetry are perfectly maintained in this building, which denotes the perfection of the architecture of the period. The building is chiefly constructed of limestone and quartzite, and pilaster is also used in the exterior of the building.

The different palaces of the fort of Rana Kumbha's period chiefly the darikhana and zenana Mahal are not devoid of architectural details. The main components of these buildings are the rectangular pillars, capitals, lintels, kisks and the arched entrances. Significantly the arched entrances
seems to be the outcome of the influence of Malwa architecture of this period, though they are used in the structures with some sort of restrictiveness. The ruins of Rana Kumbha's palaces and other buildings at Chittore, show Hindu balconies (Chha'Jia) and crested walls scattered over the terrace, kiosks covered with plain and segmented domes resting on lintels and columns.

However, one of the temples outside the fortress of Kumbhalmer of Rana Kumbha's period is of much interest from the point of view of architecture. This temple is consisted of a square sanctuary surrounded by a colonnade on all the four sides. The columns of the colonnade are round in shape in place of the rectangular ones used earlier in the buildings. The cornice (Chha'Jia) is of hanging type as prevalent in the period. But the ceiling of the main sanctuary is definitely against the norms of the established customs of the temple architecture. The ceiling is constructed on the arcuate style with a vaulted dome, though the phase of transition is altogether absent, in the sense of arcuate method of construction. The result is that the square is converted into octagonal base of the dome with the help of the stone beams in the corners of the square apartment. Thus it seems that the

Arcuate style penetrated in Rajasthan as early as in 15th century in the buildings. Though it is difficult to establish the influence of Delhi Sultanate or Malwa Sultanate in this field.

The Rajput Architecture during the Mughal Period:

The Mughal period can be called the golden period of Rajasthan from the point of view of the development of architecture. With the establishment of the Mughal sovereignty, Rajasthan did not only enjoy the period of peace but also the period of material prosperity; due to the increase of material resources of the rulers of the region throughout the period. Further due to the process of cultural give and take between the Rajputs and Mughals, the architecture of the period was considerably influenced particularly in the state capitals of the Rajput chiefs.

The building activities of this period can be grouped into three categories on the basis of the nature of the building viz.

1. The sacred architecture (temples)
2. The secular architecture (palaces, stores (kothas), reservoirs (talabas), Baolis (stepped wells) etc.
3. The Memorial architecture (Chhatris sati memorials)
The temples were the chief buildings in the sacred architecture of Rajasthan. The Rajput rulers of Rajasthan enriched their capitals at different periods by constructing the temples during the 16th and 17th centuries. In the state of Mewar, the centre of building activities changed the site from Chittor to Udaipur, which became the capital city of Ranas during the Mughal period. The famous temples of Udaipur are Udayshayam, constructed by Rana Uda Singh, Bhimpadmeshwar by the queen of Rana Bhim Singh, Ambika-bhavan by Rana Raj Singh I, Jagdish and Jagannath Rai by Rana Jagat Singh. While the temple of Ratnaswar and Mira Mandir are only two temples constructed at Chittor during this period. Almost all these temples are constructed on a high plinth and the entablature (garbhagriha) is situated in the rear part of the whole structure as seen from the facade. The front of the square entablature is covered by one or two colonnades as in case of Ratnaswara temple and Mira Mandir at Chittor and Bhimpadmeshwar and Udaishvam temples of Udaipur. The colonnades in these temples form the architecture of trabeate order supported by circular shaft pillars, surmounted by capitals, which bear the weight of the stone beam. The ceilings of the colonnades are of arcuate style constructed on the principles of true arch, resulting into the

formation of true domes. These domes are crowned with _shikharas_ like that of the earlier _shikhara_ (spires) of the temples. However the main apartment of the temple or entablature is significantly covered with a _shikhara_ ceilings in almost all the temples. But the shape and size of _shikhara_ is peculiarly of Rajasthan's own individualistic style, developed during this period. The emergence of true dome in the temple architecture seems to be the result of Mughal influence, which was probably incorporated in the temple architecture to relieve the monotony of _shikhara_ as well as to bring symmetry in the building, since the domes created in the structure are not of equal size. The decoration also changes under Mughal influence, when the parapets in the walls are created with merlon or battlement designs along with the use of geometrical motifs in the carving of pillars and brackets. The use of perforated screens to cover the lower parts of the architrave in the colonnade, again seems to be borrowed from Mughal architecture.

The _Jagdish_ temple at Udaipur, constructed in 17th century seems to be influenced by Mughal architecture from its plan to structure. The plinth of the temple is increased considerably on the pattern of _Jama Masjid_ of Mughal period. The whole area around the plinth is closed with a wall on all the sides. The main entrance is provided on the north side. The entrance is of trabeate type but the porch of the gate is
having a wagaon vaulted roof or bent vaulted roof, which was
the peculiar feature of Mughal architecture of Fatehpur Sikri.
To bring symmetry to the whole structure the main building of
temple is flanked by two similar but smaller buildings on its
right and left side but at equal distance. The height of the
Central building is increased by the super-imposition of the
collonade in the first storey over the ground floor. In shape
and size, the sikharas continues to be of Rajasthani style. But
the change in plan as well as in structure was the result of
Mughal features of architecture, though the trabeato and cor­
belled method of construction are basically applied in this
building.

The two important temples of Jodhpur belonging to this
period are Chawshyam temple and Anandâhan's temple constructed
by Maharaja Jaswant Singh and his father Maharaja Gaj Singh
respectively in the 17th century.

Both these temples are constructed on a regular plan.
the usual plan on which the structure of temple is arranged
consists of a square entablature (garbhârâna), a porch (mandap)
and a roofed colonnade surrounding the temples. The plinth is
unusually high in these temples and the multifoliated arches
of Shahjahan's period are applied in the adjoining entrances

to the main entrance. The kiosks, eaves, use of pillars and brackets, remained as usual in the structure. The other feature probably taken from the Mughal architecture is the use of perforated screens to cover the windows, where geometrical designs of Shahjahan's period prevails.

The main temples of Bikaner belonging to this period are Har Mandir, Bhairoji, Laxminarayan, Davidwara, Karniil (at Deshnok) and the Jain temple of Neminath. The temple of Har Mandir was originally constructed by Rao Rai Singh, though completely renovated later on. The structure of the temple is over a small cella, which is richly gilded and capped by the oblong pyramidal vaults, characteristic of the period. The decoration suggest the influence of Akbar's period in the carving of lotus, resettes, peacocks and parrot motifs. The star cartouches and arabesques represent the variety of so-called Akbari doors. The temple of Bhairoji & Neminath belong to the same period, and are constructed on usual plan of entablature, colonnade and spires. The decoration of the main spire (sikhra) with miniature spires (siphra) on its four sides is the new development in the temple architecture of this place.

The decoration is found on the sides of the entrances and on the interior walls, pillars and brackets. The introduction

1. Bikaner Ka Tikhas, G.H.Ojha, V.I, p.43.
tion of arabesques of purely Indo-Muslim type in these temples, is the result of Mughal impact. The temple of Laxminarayan was initially constructed by Rao Lunkaran towards the beginning of the 16th century but renovated in the 17th century. The collonade is constituted of short columns with simple cross corbels. The domes are the prototypes of the Mughal domes of the 16th century, which suggest that the renovation of the temple was not later than the beginning of the 17th century. The domes are constructed on the principle of arcuate method of construction and are oval domes as found in the Akbar's period.

The oldest temple of Karni at Deshnok was erected in the reign of Rao Sur Singh. It is two storied sanctuary, surmounted by a fluted central dome, which is in turn, enclosed by smaller fluted lotus domes and oblong dome vaults inspired probably by the style of the tombs of Deccani rulers. The columns, brackets and the capitals are carved with traditional pattern of figures of human beings, animals, floral motifs, bell and chains.

The other important temple is of Davidwara in the fort. The ceiling seems to be the work of 18th century, while the entrance hall to the temple court with its pointed wall decoration, the pillars having the capitals of elephants heads,
seems to be the product of the 17th century belonging to the
regions of Rea Sur Singh and Karan Singh.

Jagat Siromani temple and Shiladavi temple are two
important temples of Ambor belonging to the close of the 16th
century. The temple of Jagat Siromani was constructed by
Rani Kankavati W/o Raja Man Singh in memory of her son Kunwar
Jagat Singh. It is constructed on a raised plinth, and having
a huge structure like a palace. The rear of the structure
is having a spire (sikhra) while the front of the entablature
is three stoneyied in height. The entrance gate of the temple
is constructed by the minaret or tower like structures, divided
into five divisions on both the ends. After the fourth division
both the towers are connected by the placement of stone beams,
the centre of which is decorated with the creation of a
kiosk. The terminals of these towers are formed in the shape
of miniature spires. The collonade on the side of the main
entrance is constructed purely of trabeate order with the
help of rectangular pillars, brackets and stone beams. The
ceiling is flat and the parapet is merlon type like the Mughal
buildings of the period. It is an unique example of Rajput
architecture. The whole structure is constructed of white
marble. The Mughal influence is visible in the arabesques,
merlon parapets, and in true dome in front of the spire of the
temple. Though the originality of the temple architecture is
retained in this structure even then the Mughal influence is visible in composition and different decorative details.

The temple of Shiladevi is also a contemporary temple of Jagat Siromani at Amber, which was constructed by Raja Man Singh. It seems that this temple was renovated later on because we find multifoliated arches, floral motifs on the spandrels of arches, slender and tapering pillars of Shahjahan's period.

Besides the above temples, the Luthergy temple at Jaisalmer; Nilkantha temple at Kota; Sun temple at Jhalawar; Charbhujia, Laxminthii and Hansdevi temple at Bundi are some of the good examples of the temple architecture of the period. Almost all of these temples are constructed on the traditional pattern of temple architecture. The Mughal influence is visible only in the construction of domes, arched recesses and tapering pillars in these temples.

SECULAR ARCHITECTURE:

During Mughal period the great emphasis was laid, by the Rajput rulers, on the construction of royal palaces, court halls, pleasure pavilions, and reservoir etc. This period was a period of peace and prosperity and the resources of the Rajput rulers had increased manifold in comparison to earlier period.
However, the building activities of the rulers were limited to the state capitals only.

The first influence of Mughul architecture seems to be at Amber the capital of Kachhwahas. The city of Amber is precisely a grand grouping of imperial buildings. The main building of Amber is the palace. The palace is approached by means of a fine staircase and through an imposing gateway. The two halls within the square are Diwan-i-Am or the hall of audience. The details of this place are interesting. In some respects they contrast favourably with those of Akbar’s contemporary palace of Fatehpur Sikri.

The approach to the palace from the town is by five gates, the passages are wide and tall. The outer wall is battlemented. The battlements have square loop holes for musket fires. The facade of the palace is richly decorated and full of architectural details. The structural appearance of the facade suggests the domination of arcuate style. The central entrance is a vaulted recess, comprising of a pointed arch of Akbar’s period. To give a two storeyed effect in the facade, two arches on each side of the main entrance are created, over

which the oriel balconies are provided. At the level of ceiling the side walls are covered with octagonal domes while the main entrance is surmounted by a wagon-vaulted roof. The perforated screens to cover the side arched entrances, the merlon type battlements in the parapet and the domed roofs are some of the features of Mughal architecture. However, the decoration by means of creating a range of small niches in the facade according to traditional architecture is maintained. The presence of multifoliated arch in the main entrance gate suggest that, it is of later period because multifoliated arches were originated during Shahjahan's period. But the interior of the palace reminds the memory of the buildings of Fatehpur Sikri, where the shafts, capitals and brackets of the pillars, resembles in toto with Akbari architecture.

Facing to the palace, is the building of Diwan-i-Am. The building is consisted of a portico or colonnade of double row of columns supporting a massive entablature. These columns are of sandstone. Inside the colonnade is a splendid rectangular hall surmounted by a dome, which is supported by marble pillars of the interior. The pillars are almost of the same style as found in the Diwan-i-Am of Agra fort with the exceptions of brackets only. The domed roofs are curved one which became

1. Indian Architecture, Percy Brown, p.112; The History of Fine Art in India & Ceylon, V.A. Smith, p.96.
a peculiar feature of Rajasthan. There is also a beautiful latticed gallery for the ladies of the ruling house. The latticed work also resembles with that of the latticed galleries of the so called Jodh Bai's palace of Fatehpur Sikri.

Beside the palace and Diwan-i-Am, there are also two other buildings of importance, i.e. Zanana Mahal and Baradari. In both these buildings the shafts of the pillars are of Akbari type and the ceilings are vaulted. The arches are pointed and even the niches created inside are arched ones in place of trabeate type. It seems that the buildings at Amber might have been executed by the masons trained in the Akbari style of Architecture.

In the kingdom of Mewar, the civil architecture developed and flourished at its new capital Udaipur. Among the earliest buildings of Udaipur Bara Mahal is significant, which was constructed by Rana Amar Singh I. The whole structure is five storeyed stone edifice, while the fifth storey's upper portion is constructed of marble. The trabeate and corbelled windows, flat roof and trellis screens are important features of this building. The pillars, brackets and the beams are heavily curved with different motifs of sculpture.

1. Mansi, V.I, p.33; Les Indes des naqshah, L. Rousselet (Eng.) p. 278.
The palace of Jag Mandir, Mohan Mandir, Zenana Mahal, were constructed by Rana Jagat Singh I. Haya Mahal, Parvat Vilas and Karn Vilas are the buildings belonging to Rana Karan Singh's period which stand in the original form and shape while Manak Mahal, Bham Vilas, Noti Mahal and Dilkushan Mahal are renovated partly by the later Ranas. Apart from these buildings a large number of structures known as Silahkhana, Rai Angan, Baha Ki Chaunan, Pandey Ki Ovari, Hardhi Chitrasali, Panera's Nauchawkia and Makkarkhana, were also constructed during this period.

The palace of Jag Mandir was built by Rana Jagat Singh in white and black marble. The use of Longali bent cornice, cusped and multifoliated arches, domes, kiosks, balconies and open terraces are arranged according to structural and decorative needs. These arches, domes and terraces with the use of latticed work are clear indications of Mughal architecture's influence. The interior walls are decorated with fresco paintings, again based upon Mughal pattern of decoration.

The other palace Jag Mandir was constructed by Rana Karan in Pichhola lake of Udaipur for the stay of prince Khurram. The cusped arches, slender pillars, perforated screens and domes are the peculiar architectural features of this palace. The

1. Vir Vinod, V.I, pp. 151, 152, 156.
creation of a range of kiosks for decorative purposes is another important feature borrowed from Mughal architecture. In decoration the earliest trace of *pietra-dura* is also found in the interior of this building, where particularly the figures of peacock are studded with precious stones. Probably it was from here that Shahjahan took the inspiration of *pietra dura* decoration, which became the significant mode of decoration in Shahjahan architecture.

The other palaces are the creations of late 17th century or early 18th century and seems to be the proto-types of Shahjahan's buildings. The *Dilkusha Mahal* and *Moti Mahal* are full of Mughal architectural details like arches, squinches, spandrels, domes and the decorative motifs. The decorative motifs are purely Mughal and sculpture is almost negligible in these buildings. The Bengali bent cornice and Bengali bent roof is adjusted between the spherical domes to create a skyline and to bring symmetry to the buildings.

The gardens and fountains were also added in these buildings on Mughal pattern by the successive rulers.

The rulers of the state of Bikaner were not behind in the field of building activities with that of Amber & Udaipur. The original grand plan of palaces of Bikaner follows approximately the pattern of Mughal palaces. Rao hai Singh was the earliest ruler of this state, who took deep interest
In building activities. The buildings of his period are Suraj Pol (of the fort); Karkhana Kalan, Har Mandir, Sur Mandir, Chaubara and Hazuri Darwaja. The buildings of Phool Mahal, Chandra Mahal, Gaj Mandir and Kachahari are attributed to Maharaja Gaj Singh. Karan Mahal and Sujan Mahal were constructed by Maharaja Anup Singh and Sujan Singh respectively.

Almost all these buildings are constructed of red sandstone or lime stone. The doors are covered by too heavy pilaster and in the sides niches are created. The walls are covered with battlement parapets. The pillars are of Mughal type while the corbel support brackets are sculpture with decorated heads of elephants, figures of peacocks or hansas. Sometimes these animal figures are used as brackets between the beam work. The ceilings are flat and sometimes domed. Whenever the domes are created, they are created on the method of squinch supports.

The Hazuri gate of Bikaner fort has an arch of Khalji type i.e. round or horse-shoe fringed arch.

The Aaran Mahal of Bikaner is probably the best example of Mughal influence. This building was erected by Maharaja Anup Singh towards the close of the 17th century in memory of

his father. From general appearance Karan Mahal looks like the true copy of Diwan-i-Khas and Rang Mahal of Delhi, though the structure is smaller one. The shafts and the capitals of the pillars of this building are identical with that of Diwan-i-Khas. The hall is divided by cusped arches and the wooden ceiling rests on a broad cornice on all the sides. The decoration is in the form of arabesque and floral motifs.

Anup Mahal and Sultan Mahal are spacious buildings with large court halls, constructed with the help of tapering pillars. The cusped arches are identical with that of Karan Mahal. But the composition of the hall is made with help of two rows of pillars. The nichos and arches are purely Mughal derivations of Shahjahan’s period. The Bengali bent cornice and bent vaulted roof are also favoured in the composition of these buildings.

Zorawar Mahal, Shish Mahal and Kang Mahal are later constructions and are influenced by later Mughal architecture.

The civil buildings at Jodhpur constructed during Mughal period are Toran Pol, Sabha Mandir, Diwan Khana, of Raja Gaj Singh’s period; Moti Mahal of Sur Singh’s period; Fatehpur, Gopal Pol, Diwan Khana, Khwabgah and Janghala of Maharaja

Jaswant Singh's period, and Fateh Mahal of Maharaja Ajit Singh's period. Almost all these palaces are dominated with Mughal features except the traditional use of trabeate ceiling and brackets in the formation of roof and projected eaves. The cusped arches, slender and tapering pillars, latticed windows, vaulted roofs, kiska, and Bengal bent cornice and bent vaulted roof are the chief features found in these buildings. The sculpture is maintained in the formation of the brackets. The domed roofs are purely arcuate in method of construction and the use of squinches in the structure is applied in larger field. The layout of the gardens and fountains in the plan of these buildings is significantly a Mughal contribution in the civil architecture of this place.

The building activities in the states of Bundi, Kota, Kishangarh, Doongarpur and Banswara were relatively at a small scale due to the limited resources of the rulers of these states in comparison to Amber, Bikaner, Jodhpur and Udaipur. However, Chandra Mahal at Bundi, Laxmaja Mahal at Jaisalmer, Shahi Vilas at Banswara reflects the Mughal influence on the civic architecture of these places, where arcuate method of construction was employed in construction in place of trabeate and corbelled methods, though the Mughal influence in other architectural details is negligible. The palaces of Kota and Kishangarh are the works of late 17th century or 18th century, constructed by copying the Mughal architecture of Aurangzeb's period.
Later in 18th century Deeg in Bharatpur and Alwar produced the rare and very impressive architecture of the region, where each and every detail of Mughal architecture is fully achieved in the construction of different buildings, both in plan, lay out as well as in the styles of the architecture.

Among the fort architecture of Medieval period, the present fort of Bikaner presents a suitable example. This fort was constructed by Rao Rai Singh of Bikaner on a regular square plan. The fortified wall is strengthened by the creation of nine bastions on each side, to keep a close watch on the adjoining area. The fortification seems to have been based on Akbar’s pattern. The walls are slightly slanting, though not so much as under the Khalji’s or Tughluq’s. The battlements are broad and less prominent than the earlier centuries. But the bastions at the corners and centre of each facade are comparatively broader and higher than the others. The entrance to the fort is through the gate Guraj Pol. The entrance is constructed by providing a deep arcuate recess; covering the entire area with the vaults. The emergence of arcuate entrance is definitely an influence of Muslim architecture. Since the recess is not constructed on the principle of half domed recess, which was prevalent among the

Mughals, therefore the influence does not seem to be of the Mughals.

The same type of architecture is almost followed in the fort construction by other Rajput states with slight variations of the height of walls, the positions of bastions and the formation of entrances.

MEMORIAL ARCHITECTURE:

The memorial architecture of Rajasthan includes the construction of Chhatris and Mahasati monuments of Medieval period. These Chhatris and Mahasati edifices were constructed on the mortal remains of the dead rulers and their queens (particularly those who committed Sati). In other words, these buildings conveyed the same idea as the tombs convey in the Islamic architecture. The construction of memorial structures (chhatris) among the Rajputs seems to be the effect of cultural synthesis between Mughals and Rajputs. Because the earliest buildings of this type begin to make their appearance after the Mughal contact, during the 16th century. These buildings were constructed at the place of cremation of the corpse of the deceased and contained inside only the ashes. Therefore, strictly speaking they do not possess the mortal remains. While among Muslims tombs, the mortal remains are buried inside the main apartment of the structure.
In Rajasthan every native capital has its Mahasati or place where the rulers of the state and their nearest relatives are burned with their wives. Mostly such places are situated in a secluded place at some little distance from the capital city. The place of cremation at Bikaner is known as Davikund, which is at a distance of about five miles from the city. Similarly Ahadh was the place of cremation near Chittore, Gangodhvay near Udaipur and Mawdor near Jodhpur. The earliest Chhatri at Davikund is of Rao Kalyan Mal of Bikaner, at Gangodhvay that of Amar Singh I of Mewar.

The general pattern of construction of Chhatris in Rajasthan was to construct a raised platform of stone at the place of cremation where in the centre of the platform a square or circular colonnade or porch was constructed with the use of pillars, which were surmounted by a domed roof. The terminals of the architrave of the pillars were decorated in the exterior by the creation of the drooping eaves (chhajja) on all the sides of the colonnade. Generally in decoration the shafts, brackets, beams of the architrave and the octagonal base or drum of the dome were carved with sculpture or with arabesques. But a few variations were retained, in the architecture of memorial structures, by the individual states of Rajasthan.

2. Vir Vinod, V.I, p.158.
At Amber the sepulchre of Raja Man Singh is most elaborately carved and constructed on the pattern of newly evolved style of such types of the buildings. The porch is constructed with the use of pillars and significantly the pillars are tapering ones, and are twelve in number. From plinth to top the grace of the building is achieved by its plainness. The ceiling is domed one but from the style of architecture it is corbelled and not arcuate. The whole structure is made up of stone. The carving of the pillars is in geometrical patterns and the brackets are of elephant heads, like the carving of the buildings of Fatehpur Sikri.

The oldest Chhatri at Bikaner is of Rao Kalyan Mal. It is constructed of stones and bricks. On a large terrace there is a small platform for the main structure. It is consisted of four pillars. The lower parts of the shafts are quadrangular while the upper the octagonal. The architrave is of beams and above the dome is corbelled based on the principle of cross corbels. The drum of the dome is decorated with battlemented frieze.

The finest musoleums of the 17th century are the chhatris of Raja Haran Singh (died in 1675 A.D.) and of Raja Anup Singh (died in 1688 A.D.) of Bikaner. These chhatris rest on 16 pillars, which support a high central dome, four small corner
domes and four dome like oblong vaults along the axes, with in the common frame of surrounding caves (chhatris) and settlement frieze. In Karan Singh's chhatri the pillars grow from leaf motive bases; the lower portion of the shaft are quadrangular and are covered with plantain leaf motifs, the upper shafts are decorated with flower motifs. In Anup Singh's chhatri the shafts of the pillars are fluted. The beams of the architrave, the spandrils of arches are decorated with arabesques of Shahjahan's period. The shape of dome and arches are also characteristically borrowed from the architecture of Shahjahan's period.

The Chhatris of Sujan Singh belongs to early 18th century and is purely based on the Mughal style of architecture of Aurangzeb's period i.e., the heavy bellied columns decorated with fleshy lotus petals, the cusped arches, fluted domes etc.

The mausoleums of Jodhpur rulers seems to be less effected by the Mughal architecture. The classic example among the Chhatris of Jodhpur rulers is that of Maharaja Ajit Singh. At the centre of the pillared open hall rise four walls surmounted by a graceful and tall spire (sikhara) like that of the temples. On the four sides of the sikhara there are beautiful projected balconies in three stories one above the other, each supported on trabeate arches made up of four pillars. The top of the is roofed with a pyramidal roof. The general plan of the
musoleum seems to be derived from the temple architecture of the period and emphasis is laid on traditional form and style of architecture. The shafts of the pillars, brackets and capitals all are according to Hindu architecture of Rajasthan.

The musoleums at Gangodbhav (Udaipur) are numerous and of all sizes. The smallest chhatari of this place is made up of four pillars, surmounted by a domed canopy, while in the biggest structure the dome is supported by 56 pillars. The two important tombs of this place from the point of view of architectural details are that of Rana Amar Singh II and Rana Sangram Singh II.

The musoleum of Rana Amar Singh II possess 32 columns and smaller in size with compare to 56 columned structure of Rana Sangram Singh II. In other details both the tombs are more or less identical. The centre of the structure is supported by eight small pillars constructed at the ceiling level of the pillars of the pillared platform. Thus a two storyed effect is given by the infusion of eight pillars above the ceiling of the first row of pillars. The side portions along with the eight pillars are covered with flat roofs. The shape and construction of those domes seems to be typically Mughal but of Akbar's period. They are not bulbous domes like the domes of Shahjahan's period. The decoration of the drums of the dome are typically Mughal
based on merlons and geometrical designs. However, the pillars, brackets, lintels, eaves are all according to the local style.

However the later mausoleums of 18th century at Kota, Bundi, Kishangarh and Goverdhan of the rulers of Rajasthan, are the fine examples of the synthesis of Mughal Rajput architecture, where the bulbous domes with pinnacles, bent cornice and bent vaulted roofs with cupolas and kiosks of Mughal buildings, are embibed in the architecture of the different buildings.

Thus it seems that the Mughal architecture considerably influenced the Rajput architecture of Rajasthan during the 16th and 17th century almost in all types of buildings. The impact is limited in the case of sacred architecture while in the case of civil and memorial architecture it is noteworthy as the study reveals.