Amber Fort: Its Architectural and Strategic Description, 16\textsuperscript{Th} & 17\textsuperscript{Th} Century A.D

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Abstract:
The fort has been attracted to Rulers of the states since ancient times. It was a symbol of prestige, Glory, power of Kingdom or Reign, in the contemporaneous ages of civilization. The skill and practice of constructing forts in India has recorded about 3000B.C. During the Medieval period the Rajput clan of Mewar, India, were prolific builders of Forts, struggle and proud of state and alertness towards security and safety of Forts in their regions. The study reveals that Inspite of harsh physical terrain, relief features, landscape and resources, rigid – intact rocky cliff hillock and strong fortification structure of Amber fort was marked as the architectural marvelous upto 17\textsuperscript{th} century A.D. The architectural features of Amber Fort was known for its artistic Rajput style of elements with its huge ramparts and series of Gates and cobbled, paths and the beneath of these forts their lies a Moata Lake. The water of these lakes was the main source of Amber palace. The fabulous Amber Fort is a widespread palace complex that has been constructed with light yellow and pink sandstone and with white marble. Abul Fazl Akburnama and Ain-\textit{i}-Akbari, Abdul Qadar Badaoni Muntakhab - \textit{ut} - Tawarikh, and Khawaja Niazam–ud- Din Ahmed \textit{Tabaqat-i- Akbari} gives considerable attention to the significance of this fort from military point of view. The fort of Amber also finds special mention in the Mughal sources.

Keywords: Suk Mandir, Diwan-e-Khas, Sheesh Mahal, Maota Sarovar, Pol, Jenana, Dogra

Background:
Architecture, the mother of all Arts, has been most vigorously cultivated in India through the centuries. The early developments are found in the excavation sites i.e, ancient ruins of Mohenjodaro and Harappa take back the Indian Architectural tradition around 3000B.C. The artistic custom of India architecture passed from generation to generation as a caste craft since 2000 years ago, and were responsible for the creation of wonderful structure of any civilization can be proud.\textsuperscript{1}

The term Indian architecture needs clarification. Geographically, construction of whatever origin and style built anywhere and at any time in India may bear the designation. Like modern scientific invention, such as telegraphy, radio, gramophones, internet, etc, architectural stuff and styles of pillars, arches, domes, etc., migrate all over the civilized world. Thus construction with some unique features of various Europe, Byzantine, Persia and Mogul styles may be observable in India. They are not, however, usually designated as works of Indian architecture, which is generally understood in the limited sense of Hindu architecture only.\textsuperscript{2}
Introduction:
The Amber fort had been built on the basis of Hindu architecture. From 1290-1310 Rajdev further finished the fortifications of Amber which was begin by his ancestors, built tanks, founded a town and fortified it with strong walls. In 16th century, the present Amber fort was made up, as a larger place to the already existing house of the Maharajas. The entire palace is known as Kadimi Mahal which is said to be the oldest surviving palace in the country. Amber fort had witnessed the expansion of succeeding rulers over the next 150 years until the Kachawaha transferred their capital to Jaipur during the reign of Sawai Jai Singh in 1727.

The town of Amber was originally built by Meena’s and later it was ruled by Raja Man Singh I from 1550-1614. The architectural features of Amber Fort were known for its artistic Rajput style of elements with its huge ramparts and series of Gates and cobbled paths and beneath the fort their lies a Moata Lake. The water of this lake was the main source of water in Amber palace. The fabulous Amber Fort is a widespread palace complex that has been constructed with light yellow and pink sandstone and with white marble. The eye catching and magnificent palace is laid out on four different level and each of them has a courtyard and several gates.. It consists of the Diwan-a- Aam or hall of public audience. Diwan-e-Khas, Sheesh Mahal or Jay Mandir or Sukh Niwas where cool climate is artificially created by winds that blows over water cascade within the palace. Hence, this fort is also known as Amber Fort. Rajput Maharajas and their families used this palace as their residency. At the entrance to the near, the first Ganesh gate, there is a temple dedicated to Sheela Devi, goddess of Chaitanya cult, which was given to Raja Man Singh when he defeated Raja of Jessore in Bengal in 1604. The Amber Fort and palace illustrate great example of beautiful Rajput style of architecture.

Percy Brown writes, about the fortress of Amber, “Two halls within the large square are outstanding. The Diwan-i-Am and Diwan- i-Khas clearly depicted the influence of Mughal court, particularly the Diwan-i- Aam. It’s double wall pillars, clusters of brackets, wide caves and high perforated parapet above, being reminiscent of the pavilion known as the Zenana Palace of Allahabad; the example at Amber having been most probably executed by masons trained in the Akbari style by Mughul overseers.”

Abul Fazl Akbarnama and Ain-i- Akbari, Abdul Qadar Badaoni Muntakhab - ut - Tawarikh, and Khawaja Niazam-ud-Din Ahmed Tabaqat-i-Akbari gives considerable attention to the significance of this fort from military point of view. The fort of amber also finds special mentions in the Mughal sources. The description of this fort is very much informative in terms of location and strength of the forts.

Methodology:
Firstly I have personally visited the Amber Fort for photography. Apart from that, photography has been interpreted with inductive and deductive reasoning about landscape, Fort Hills, premises, construction structures, etc. with ground truth. Various literatures regarding Rajput History, defense of Fort, Resources and other themes have been consulted, cited in the reference and acknowledged.

Location:
Amber fort is situated in Amber Rajasthan. It is situated in 26° 59’ N and 75°51’E. Amber is the town within an area of 4 sq. km to be found 11 km away from Jaipur, capital of Rajasthan, situated high on a mount. It is the most important tourist attraction place in Jaipur.
Physical condition: Landscape and Drainage:
The Physical condition of the Amber fort is represented by rocky hilly terrain with undulating topography marked by number of parallel north south elongated ridges Quart sites, sand stones separated by small valleys of shale and limestone rocks. Regionally, there are one major drainage lines flowing towards the bottom of the hill. Moata Lake is originated in the premises of the town of Amber and that is about 12km away from Jaipur city. The fort is located on a top of hill, which was surrounded by thick and thorny forest. Amber was of a great strategic significance because the peak on which it was located, protects the regions lying to the north and south and the route of narrow passage which joined them. This hill where fort is located having steep slopes which makes it very difficult for the enemy to climb and even for subjugation.

Engineering Properties of Rock/stones/ Blocks:
In the fortification and construction of super structure of Amber Fort the Aravalli Quartzitic sandstone of Kaimur Group rock were utilized. The masonry work includes Fort Walls, Parapets, Bastions, Palaces, Roof, Lintels, Arches and Foundation of the building. The smooth polished face work of inner and outer walls made up of dressed stone blocks and cut and shaped stone blocks or slab. The main engineering properties like strength, hardness, toughness and bulk density is important apart from colour and shining of rock surface.

Site suitability for Amber Fort:
Effect of erosion and weathering is less due to steep slope and hard rock formation. It makes highly secured and safe site for fortification and it is easy available in the area as good quality of stone block for construction.

Fortification styles:
The Rajputs were great builders as well as fighters. The magnificent fort of Amber is extraordinary monopoly of heroic resistance as well as graceful exertion of art. It was the exceptional example of native architecture at Fort of Amber, which was positioned on the summit of hill and underneath of it is a lake which has been used to make outstanding architectural and engineering skill for the purpose of both defense and decorative magnificence. As for defense intention they build artificial lake on bottom of the fort and also construct floating garden with commendable skill in manufacturing and architecture, both of which are still living tradition of Rajputana. Its powerful and extensive walls and towers enabled its rulers to prepare themselves for defense from inside.

Construction material used:
The walls of the Fort were constructed with integrated circular enforcement using dressed stone masonry with lime mortar. The Amber Fort was constructed with red sandstone and white marble.

Amber Fort Architecture Description:
This fort was built on top of a hill. The three sides of this hill are covered with forests in which thorny trees have been found. Beyond these dense forest high and wide wall has been built around the top of the hill. And there is a lake called Mota sraver on eastern side in the bottom of peak, which is very important in terms of security. The architecture of the Amber fort was designed for the safety of the
region and kingdom. It is famous for its Rajput and Hindu style of architecture and amalgamation of Hindu and Mughals style of ornamentation. The wonderful mixtures of diverse styles of design make it even more interesting.

Views of Amber Fort  (Source: Internet)

Outer Wall
Huge wall has been built around the fort. It was very difficult for the enemies to come inside these high walls. Apart from these high walls there were huge gates have been made to protect the fort, and guards were kept near them to watch the enemies. These gates were large enough for the elephants to pass through comfortably.

Maota Sarovar (Floating Garden)

The ancient name of Sarovar is “mahavota” but in local language it is called as maota, and nearby the lake there were large wat trees. Because of this tree it is express as “maotha”.
The lake collects rain water flowing down from the nearby hills. The water of this lake is the main source for the inhabitant of this Amber Palace. The dil-Aram Bagh is sited on its northern part. The “kesari kyari” (saffron glower beds) garden is in the middle of that looks very graceful and fine-looking. This garden looks like a floating garden.

View of the fortification and bastions following the natural contours of the hill

The main entrance of the palace from the east side and it witness the sun ray of the day, hence called the name Suraj Pol. In the native dialect of Rajasthan “Suraj” means sun and “Pol” means gate. According to the local guide when I visited in this fort he had narrated the story of Rajput Kings i.e., the King with his troops would enter the palace through this very gate celebrating victory feast after winning a battle. There are many small jallis or screen windows on top of the palace, through which the women living in the palace used to get the glimpse of the victory parade. According to the local source in present time, they told me the first courtyard of Amber Fort called Jaleb Chowk.
Ganesh Pol Gate is the main and most artistic gate of Amber Fort. It combines Mughal and Rajput styles. They constructed magnificent palaces and fort. The Rajput style of Mughal architecture made great use of arches, cornices, and hanging balconies. The latticed window was made up of vertical and horizontal marble or red sandstone strips with space between them. The shapes of Lattice windows screen seems like an octagonal design followed in symmetrical model. The architectural marvelous found in these octagonal lattice widows. These windows are constructed with marble and red sandstone.
Exterior View of Sheesh Mehal

The roof of the Sheesh Mehal was adorned by the mirror pieces. The glass is decorated with flowers inside. The glass adorned with flowers is beautifully decorated and looks like the beads of the necklace. Putting these design in glass looks as if they were carved by machines. The artistic skill of ceiling and wall of Sheesh Mahal looks so elegant. The carvings on the ceiling and the walls are extraordinary features of this Amber Palace.
The *Jenana* Royal families were living during the mid-day of summer season in Sukh-Mandir. This consists of a large oblong chamber with two side rooms and a verandah in front overlooking the garden. All the rooms are unlocking into a common corridor. The veranda of this courtyard is made of square and having four columns with arches of equal distances seems towards the garden. The walls of the chamber are beautifully embossed in plaster in Mughal pattern. The back wall of the main chamber has a beautiful marble cascade formed by a perforated marble screen which is connected with a stripped channel. The cascade was once provided with running water from the tank built on the roof of the building and with the breeze passing through the perforations carved as a cooling device during summer. Rooms are having two sandal wood doors adorned with ivory in lay works. A garden has been made in front of the courtyard. There is a fountain in the middle of the Garden. It seems that water facilities were also installed inside the fort.⁸

**Fourth courtyard**

The *Jenana* Royal family women include mistress live there. There are many living rooms in the courtyard where the queens stayed and who were attended by the king at their choice without being informed. The palace part in *Janani Deorhi* is lived by the queen mother and the raja's consorts who were also housed by their female attendants. A deep interest was taken up in building temples by the queen mother in Amber town. *Jas Mandir* is located in the courtyard, with a hall for private audience, with the floor made of glass.
Maharana Bhagurat Singh of Mewar initiated Mahrana Pratap Memorial. Marble carved with magic flower is a particular attractive place. The base of the pillars are so strong that it will sustain for years, the pillars depicted two hovering butterflies, with a fish tail, and there are seven unique designs in the flower. The border of this portrait magic flower is decorated with geometrical parallel lines in square format and interior of this outline is filled with beautiful and symmetrical art. The magic flower story is narrated by the local guide in the Amber Fort during my visit at this place.

**Construction Materials**

The construction material of this magic flower was made of white marble and which is depicted in the wall of the Sheeish Mahal.
Palace of Man Singh I

Man Singh I Palace is the oldest part of the palace fort which is positioned at the south of the courtyard. The central courtyard of the palace is the pavilion or the painted tiles embellish the rooms on the ground and the upper floor also, this pavilion was used to be utilized as the meeting venue by the Maharani’s. The pavilion surfaces are allied to many small rooms with unclosed balconies.
Inner –Hall Wooden Gate

The lion gate, which is known as finest gate, was once used for the purpose of protection. As for the strength, power and might features of these wooden gates entitled as lion gate and was installed in-between the private apartment of the palace. This lion gate was constructed during the reign of Sawai Jai Singh, and the architectural alignment of this huge wooden lion gates seems to be in symmetrical design. This gate was made by mixing sandalwood with iron pieces for the security purpose to defend from the invaders. Even after so much time had been passed, these wooden gates are still in same condition. That, the wood which has brought from outside Rajputana suited climatic condition of the Amber and the gates of the fort are made of the same wood which surviving generation after generation. This shows that the fort construction also encouraged trade and commerce between Rajput and other states.

Huge Gates meant for Defense Purpose:
Gates provides security to the fort precincts from the invasion of enemy attacks apart from the safety of wealth and treasury. The plan and design of Gates comprises strategic elements. These were built with huge block of massive wood fixed with Iron rod. The pointed arches protect the gates from canons and the elephants of invaders/enemies were unable to push the Gate during the war. The parapets were also constructed for the archers of the fort to shoot arrows on attackers. The parapets support the archers and acts as protection shields. The Amber fort has huge entrances, known as Suraj Pol, Chand Pol, Singh Pol and Ganesh Pol.
Tunnel

Tunnels are to be found quite commonly in the palaces and forts of the medieval period. They were used to conceal movement and to allow escape during a siege of defenders. This shows that the tunnel used for the defence purpose. Lying on the western side of the palace, the Amber Palace tunnel connects it to the Jaigarh fort. It is subterraneous till a point near the Rang Mahal. Therefore, it runs, roofless, on the surface, up to Jiagarh. The tunnel is accessible from the Man Singh Palace, Zenani Deorhi (Ladies Apartments) and Diwan-i-Khas. Torcher provides light inside in it. The ruler used to light in the tunnel by burning wood.  

Column at Pandav Temple Karmichi Udhampur (Jammu and Kashmir)
Some Linkage of architectural design of Column found in Ancient Pandav Temple at Karmichi Udhampur (Jammu and Kashmir):

I personally visited at the ancient historical site at Kirmachi Udhampur in Jammu and Kashmir. Here I find that the column which I seen at Amber fort Rajasthan is somehow modified form of this Pandav temple. The material for constructing of these pillar were locally available in this region. The artistic design with minor modification in the making of these pillars were found in the medieval forts architecture in the country. This seems that the architectural techniques were indigenous in origin and not the Persian invention. Moreover, Mughal only patronage the Local artists and craftsman and with the help of them they explored the indigenous architectural with refined form in various forts in different part of Mughal India.
The hall pillars of this hall are built in line. The pillars on both east (exterior) and west side are doubly placed, designed to strengthen the palace. And the inside the Hall there is single column which is installed at equal distance. Lotus flowers engraved on the bottom and top of a Pillar in a symmetrical design. All these columns are placed in equal distance in order to decorate the palace in symmetrical design. The artistic features are displayed on the ceiling of this Palace, there is a single stone engraved with some art and installed on the top of these columns. All these designs were looking like a same architectural pattern.

**Amber Fort as role model of other Rajputs states:**
Architectural plan of these columns are found in a same designed carved in a huge stone block even in the palace of Dogra rulers of Jammu hill states, stone Column construct on Gate of Bhimgarh Fort Reasi and even some of these columns found in wooden architecture in the Kacha houses of present day at hilly areas of Jammu Province. These Forts and Palaces structures shown the amalgamation of Rajputs and Mughals Architecture.
Ramnagar Fort at Udhampur

Wooden column at Kacha House in Jammu Province

Canopied Balcony / Exterior view
Resemblance of Fort Architecture:
The architectural plan below the Canopy of the Ajmer Museum have a single bulb like figure on the top and double bulb like figure in the base of this structure, where as a same type of architecture sketch also found in one Dogra Palace at Udhampur. Here, below the terrace same structure of one bulb like figure is on top and one on the bottom of it are constructed with minor modification is seen. This shows that it was the mixture of Rajputs and Mughal architecture during the contemporary period. However, the fort of Amber became the model for other Rajputs Fort in the country during or later period.

Significance of Research Article:
The significance of my research article is, it enables people to have knowledge about the Amber Fort. The research article can be used for many purposes like for knowledge, education, employment and economy. There are lot many countries apart from India, they are not aware of Indian history especially
of this historic fort. After reading my article they will come to know in detail about the above-mentioned architecture. The awareness will make the person interested to visit physical to such historical place, which will create the revenue for the state in the shape of tourism. The local inhabitant of that area is getting the opportunity of employment from tourism. The fort which is being visited by the foreigners will help native earn more money. And it is important to mention a type of town or market emerged around the fort.

Conclusion:
That the Fort meant for military purpose and defense of the royal family, expresses the cultural identity of Rajasthan. It tells the History of Amber state in terms of Architectural development. Though it was built to strengthen the security of Royal family, there was increase in urbanization process as markets, roads, were built around the fort. Moreover, sum of the material, particularly wooden material imported from Maharashtra, which boosted trade and commerce between Rajputana and Deccani states. The feature of the fort shows that Artistic design provided opportunity to the craftsman for employment. Thus Amber fort has played most important role in the making of History of the region.

2 Ibid; p - 411.
3 Erskine, K.D, *Imperial Gazetteer of India Provincial Series, RAJPUTANA*, Books Treasure, Jodhpur (Raj), Published 1908, p-255.
4The town Amber has taken its name from Ambikeshwara (a title of Shiva), but other derive it form Ambarisha, the son of Mandhatta and King of Ayodhya. Its full name is said to have been Ambarikhanera, which gradually contracted to Amber or Ambiner, Erskine, K.D, p-255.
7 Personal visit at the Amber fort on 2022
8 Personal Visit in the Amber Fort on 2022.
9 Inscribed on the Marble Plate were kept inside the Amber Fort.
10 It was palace complex or Fort consisted of three sections, constructed by Dogra Ruler Raja Suchet Singh (1822-1844 A.D) at Ramnagar in Udhpur. Jammu and Kashmir, Source from Wikipedia the encyclopedia.