CHAPTER - V

Chapter Five

BEGINING OF ISLAMIC ARCHITECTURE IN INDIA

Our story of the Islamic architecture opens in the same region where some four thousand years ago the Indus Valley folk had built the earliest known civilisation. In the beginning of the 7th century A.D., Qasim, a young adventurer of the illustrious Arab tribe of the Quraish, provoked by reports of Hindu piracy of Arab fleets, had captured some of the Hindu cities of the Sind. However since his audacious spirit was restrained by the advice of moderation sent by the Governor of Baghdad, this invasion of Qasim turned out to be of little political importance - "an episode in the history of India and Islam, a triumph without results." Architecturally too the earliest footprints of Islam in the Sind Valley in India have been all but obliterated either through natural calamities or by the subsequent looting of the entire sea coast by the Ghaznavids and Ghorids. The meager remains of the foundations of the earliest Islamic structures on the Indian subcontinent give virtually no information other than merely statistical.

The multiple raids into India by the Turks and Afghans, some 350 years later than the Arab settlement in the Sind proved to be of

greater political and historical consequences. Though the Ghaznavid and Ghorids too did not build empires in India their devastating raids into India, in the early 12th century laid bare the heroic but feeble defenses of India which were manned by Rajput warriors. Ultimately the brave army of the Rajputs laid by the legendary figure of Prithviraj Chauhan, could not withstand the repeated onslaughts of the Afghans. In 1192 A.D. on the historic battlefield of Tarain, "like a great building the Hindu hosts tottered and collapsed in its own ruins." As we shall see almost literally out of these ruins grew up a new and refreshing tradition of Islamic building ventures in India.

Within an incredibly short period of this crucial Rajput defeat we find a Muslim Slave Dynasty King established as the ruler in Delhi and commencing in right earnest to structure the earliest extant mosque on Indian soil - The Quwwat-ul-Islam in the famous Qutb complex south of modern Delhi. Qutb-ud-din the hurry that he was in to carry out Mohammed's dictates of laying out a place of worship for the faithful in conquered territory, could not wait to import artisans, masons and architects from his native country. And

so right at the inception of Islamic building activity in India a sort of joint venture between local Hindu master builders and Muslim overseers was inevitable. In his haste, Qutb-ud-din did not even have the building material but was content to remove ready made blocks from existing Hindu and Jaina temples and reorganise them around a rectangular court to quickly assemble the essential rudiments of a mosque. The net result of this earliest effort in mosque architecture in India may well be termed an "archaeological miscellany." At the same time it sowed the seeds of a tradition of give and take between the rather austere traditions of Islamic building and the sculptural skills of the local Hindu stone masons. In fact, the subsequent history of Indian Islamic architecture is a fascinating study of the gradual fusion of two seemingly opposite ideals into one of the richest periods of Indian architectural history.[1]

Ala-ud-din laid out his city of Siri in the neighborhood of the Qutub complex. Though almost nothing of this city has survived Khalji's more modest Alai Darwaza at the Qutb complex marks the

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1. Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.15-17
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 15-20
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beginnings of the process of refinement of the basic module of Islamic architecture - a cubic volume crowned by a hemispherical true dome. Once this basic module had been perfected and the new technological principles of the true arch and the dome understood by the Hindu builders, this module could be assembled together in varying combinations to build mosques, tombs, palaces, markets and entire cities. Armed with this basic vocabulary the Tughlaqs in Delhi proceeded to endow their new cities in Delhi with a genuine Islamic urban flavour. This is strongly felt in the fortress cities of Tughlaqabad and Firuz Shah Kotala founded by Ghias-ud-din and Firuz Shah. The latter laid on the banks of the Jamuna river, enunciated clearly the principles of the planning of a Muslim citadel. It consisted of peripheral defensive ramparts and a series of public and private court-yards aligned along a central axis that culminated in the royal private palaces. The Tughlaqs were also responsible for creating a rather militant style of architecture comprised of fortress like sloping walls studded with buttresses and circular pylons. Their militant attitude however came to nought

under the assault of Timur the Mongol, who sacked and laid waste the city of Delhi just after the end of the rule of Firuz Shah Tughlaq.[2]

This devastation of the Islamic capital at Delhi was a signal for the artisans and craftsmen of Delhi to migrate to the various regional centers of Muslim power that had sprung up all over India. These were centered around the cities of Janupur and pandua in the east, Ahmedabad in the west, Malwa in central India and Bijapur in the South. In each of these regions in the early phase Muslim buildings were quickly put together from spoils of Hindu temples. Gradually however the craftsmen evolved viable and individualistic styles as they began to seriously contend with the climatic, geographic and social circumstances of each region. Thus, in Bengal, for example, the non-availability of stone as a building material and the incessant rains gave rise to largely covered mosques with a characteristic steeply sloping parapet. The surfaces were embellished with terra-cotta decorations in brick which was the chief building material.[3]

2.3.Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.18-25
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.21-28
Bhartiya Vidya Bhavan, The History & Culture Of The Indian People
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In Jaunpur, on the other hand, the strong influence of the Tughlaq style of Delhi resulted in the construction of large flamboyant stone pylons interwoven with colonnaded liwans. In Mandu too the Tughlaqian influence is apparent in the earlier stages. Ultimately however the Mandu builders evolved an extremely robust and original style of their own which is seen at its best in the Jami Masjid which even in its incomplete form is probably one of the finest mosques in India. In Gujarat and its environs however the Muslim rulers seem to have been completely swamped by the artistic skills of the local Jaina and Hindu craftsmen. They devised and constructed liwans for their mosques which were virtually temple mandapas with a facade of pointed arches. So much so that these halls supported by a virtual forest of columns have been classified as "temples in mosques". In sharp contrast, the south Indian craftsman early in his career of building for his Muslim overlords dropped any pretense at adapting Hindu techniques for Islamic buildings. Rather with immigrants well versed in Persian technology arriving by the sea route on the south western coast of India, Muslim building activity in this region displays a strong structural bias. Beginning with a large fully covered mosque at

Gulbarga this tradition culminated in the building of the famous Gol Gumbaz at Bijapur, the largest single dome of its time.[4]

In the meanwhile the Sayyids and Lodis held nominal sway over the city of Agra and Delhi subsequent to the departure of Timur after his sack of Delhi. During their rule the dominance of Islamic structural techniques was well established with the construction of massive boat keel shape domes over the numerous tombs of this period. However their rather robust architecture lacked grace. The major contribution of Lodi craftsmen was the adoption of the octagonal tomb.[5]

Babur's compact and well organised army spearheaded by a swift cavalry and backed by fire power defeated the vast but ponderous army of the Lodis in the legendary battlefield of Panipat, Babut, a homeless wanderer for long, had no desire to merely plunder and return. Rather he was in search of an empire to rule and the chaotic

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4.5. Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.26-35
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.29-38
Bhartiya Vidya Bhavan, The History & Culture Of The Indian People
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situation in India was tailor made for him to assert his authority. Though Babur ruled for a mere four years he laid the foundations of a kingdom that was to flourish into the famous Mughal empire. This empire though was founded as much on Babur's endeavors as on the genius of the Afghan usurper Sher Shah who forced Babur's son Humayun to relinquish Delhi and flee to Persia.

To the architectural traditions Sher Shah contributed handsomely. While the Qila Khan Masjid at Delhi, in the balanced perfection of its facade became the prototype for the Mughals to develop, his own tomb at Sasaram in Bihar is indeed a fitting climax to the series of octagonal tombs erected by the Tughlaqs and Lodis. Finally, Humayun managed to oust the Afghans and established the Mughal standard once again at Delhi. His rule too though was short-lived. However as subsequent events proved, Humayun bequeathed a great gift to India- his son Akbar who took charge of the royal reigns at the tender age of eleven. With the arrival of Akbar on the Indian scene an era of unparalleled and inspired building activity began. Humayun had brought back from his exile courtiers and craftsmen brimming with Persian ideas. During Akbar's rule these were blended with Hindu and Buddhist traditions into a style as unique as the eclectic personality of Akbar. This is

seen at its best in Humayun's tomb at Delhi, in the numerous structures of Akbar's new capital city at Fatehpur Sikri and his own tomb at Sikandara.[6] Akbar's son Jahangir who had languished as a prince under Akbar's long rule proved to be a none too great builder of empire of architecture.

It was this material that Jahangir's successor Shahjahan seized upon with great avidity. The passionate builder that he turned out to be he took the traditions of Mughal architecture to their climatic best in the famous Taj Mahal at Agra. But before the Taj was built, under Shahjahan's critical eye his craftsmen had mastered the use of marble as a building material in structures like the Dewan-E-Khas and Am and various other places in the Agra fort. With the growing wealth of the empire the great Mughal now endeavored to layout the city of Shahjahanabad, at Delhi. For the faithful there is the famous Jami Masjid just opposite the fort. This mosque, the Taj Mahal and palaces of Shahjahan were however to prove to be the swan song of Islamic architecture in India. The Mughal empire

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6. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp. 36-45
   Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 39-50
   Bhartiya Vidya Bhavan, The History & Culture Of The Indian People
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continued to survive under the orthodox and bigoted rule of Shahjahan's son Aurangzeb for another sixty years. However, it is a sad commentary on Aurangzeb that under his patronage or rather lack of it - not a single work of art of any consequence was created.[7]

THE SPIRIT OF THE MOSQUE

Qutb-ud-din, true to Prophet Mohammed's dictates of immediately installing a place of worship for the faithful on conquered territory, decided to build a mosque for the everlasting glory of Islam in 1195 A.D. This was the Quwat-ul-Islam (literally the "power of Islam") mosque within the fortified city of the Qila Rai Pithora. The decision to fulfill the Propher's dictates was easier planned than implemented. Qutbuddin's Ghorid forces that invaded India consisted of soldiers, warriors and generals. Master builders, artisans, and masons skilled in the art of building were naturally not

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7.Satish Grover, The Architecture of India (Islamic Period)Vol.II pp. 46-54
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 51-59
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a part of the army. The erection of a mosque, however, was imperative. Moreover, it had to be constructed rapidly. Under the circumstance, the Muslims could not build in the country of their adoption without utilizing the skills of the indigenous artisans of the country. Thus right at the inception of Islamic building activity in India, a sort of joint venture between the Hindu master builders and Islamic overseers was inevitable. Before the "joint venture" could get underway, the more knowledgeable of the soldiers and generals had to some how explain the basic concept of a Muslim place of worship to the local builders. Fortunately, this was not a difficult task. Unlike the Hindu temple the planning of the mosque was not governed by complex geomagnetic theories of architecture. Rather the basic concept of the mosque had evolved from the Prophet Mohammed's home in his birth-place. Here a courtyard had been attached to his house to allow the faithful to gather. It consisted of a rectangular open-to-sky space, cordoned off by walls or cloisters. Within this court, the Muslim brethren could congregate and prostrate themselves to the glory of God. One of the logical essentials of this otherwise austere and elementary requirement was that the worshippers be directed compulsively to pray in the direction of Mecca, the birthplace of Prophet Mohammed. This was achieved by the simple expedient of orienting the courtyard generally in the direction of Mecca. The wall towards

Mecca also had built into it, the holy arch or mehrab and the member, a sort of pulpit from which the priest would deliver the sermon. In India, thus it was the western wall that was critical to Islamic requirements.[8]

VOCABULARY OF ISLAMIC ARCHITECTURE

Apart from these rudimentary functional and religious requirements, Islamic architecture abroad had built up an identifiable structural vocabulary by 12 th century. Though much of it was borrowed from the Roman and Byzantine systems, it had become part and parcel of the Muslim architectural idiom. The two dominant elements of this language were the use of the pointed arch for spanning openings in walls, and the hemispherical dome for roofs. Although the faithful could well carry out the ritual of worship in a courtyard facing in the direction of Mecca if this space could further be embellished

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8. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.55-64
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 60-69
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with the familiar domes and arches it would add both a feeling of homeliness and pride to their congregational prayers.[9]

TEMPLE MATERIALS FOR MUSLIM MOSQUES

The structural sophistication of the Hindu masons, who had built these temples, facilitated the efforts of the demolition squads. They discovered the stone temples to be assembled out of meticulously cut structural elements such as beams, columns and lintels. These had been put together without mortar, like a child's building blocks with the sophistication that modern technology employs to fabricate structures out of precast concrete elements. Naturally, a building put together with so much precision could be ripped apart with equal ease and each element extracted intact. The only trouble with the building blocks recovered from the temples was that they were profusely covered with sculptures of the pantheon of Hindu gods and goddesses. Figurative representation had become anathema to

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9. Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.65-74
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 70-79
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the orthodox and iconoclastic followers of the Sunniest of Islam. In view of the expediency of the times, the Muslims had to be satisfied with defacing the sculpture by chopping off a nose here, an ear there or a face altogether in a rather feeble and crude attempt to render the human form unrecognizable. Hereafter, the task of erecting a mosque was fairly simple. Reassemble these structural elements to create a colonnade around an open to sky courtyard, instead of the dark labyrinths of a Hindu temple.[10]

Having chosen this blunt and expeditious method to erect their earliest mosque in India, the Muslim builders, it would seem, baulked even at the idea of going through the cumbersome procedure of digging trenches and laying new foundations. What was easier than building over the existing foundations of the colonnaded corridors that surrounded the Hindu or Jaina sanctuary? And this, apparently, is what the Muslim overlords commanded their demolition squads and the Hindu builders to do; raze the superstructure of the Hindu temple in toto, and re-erect the

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10. Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.75-84
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 80-89
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columns, beams and brackets over the existing foundations. Thus, general east-west orientation of temples too, suited their intentions admirably. To achieve their purpose of emphasizing the direction of prayers, all they had to do was to make the western verandah into a more spacious pillared hall. The rear wall of the hall so formed was then adorned with the traditional Qibla arch to guide the faithful to pray in the direction to Mecca.[11]

THE QUWWAT-UL-ISLAM AT DELHI

The rudiments of a mosque measuring 217 ft x 150 ft (66 m x 46 m) built around a paved courtyard were quickly and easily assembled together by the builders of Qutb-ud-din. Whatever extra height was required, as at the corners, was achieved by superimposing one column over the other. No wonder then that Islam's earliest building effort in India, the Quwwat-ul-Islam mosque has been alluded to as an archaeological miscellany rather

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11. Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.85-94
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 90-101
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than architecture. The description though is rather uncharitable, Even under these difficult circumstances, the Hindu builders put together an intelligible piece of architecture adorned with domes located over the corners of the courtyards and over the entrance canopy. These cupolas were fashioned by infilling with lime concrete the terraced pyramid that would result out of the Hindu's trabeate system of roofing and then applying a thick layer of plaster to produce the smooth profile of a shallow dome. Thus the Muslim requisite of a dome was achieved without going through the structural obligations of building up a true dome.[12]

SCREEN OF ARCHES FOR THE MOSQUE

The stratagem of using the Hindu trabeate and bracketing system to make the shapes desired by Muslim conventions of building was repeated once again. Some years later it was felt that at least the western walls of the courtyard of the Quwwatul-Islam needed

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12. Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.95-110
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 102-114
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greater Islamic emphasis. To achieve this, the Delhi builders took their cue from the Caliph Osman, who as early as in the middle of the 7th century had erected a "maqsura" or screen of brick in front of the sanctuary in the Prophet's mosque at Medina. For erecting this wall in the Delhi mosque with five pointed arched openings, the builders had no Hindu precedence to go by. Prudently, they decided to take no chances. This 108 feet (33 m) long stone masonry screen that was projected to rise to a height of 50 feet (15.2 m) was designed to be almost 8 feet (2.43 m) thick. It is in the construction of the arches, the larger being a span of 22 ft (6.7 m) that the Hindu builder again resorted to his method of corbelling. He first created the rough multiple bracketed opening and then proceeded to chisel away the objectionable corners to create the smooth profile required of a Muslim ogee arch. He was able to erect the arches mainly because the arches were more decorative than structural since they supported no load beyond their own. Otherwise, as had been common in Islamic buildings elsewhere, the true arch with radiating voussoirs, would have had to be employed. But as we

know the Hindu builder had traditionally eschewed the arch on the rather feeble excuse that it never sleeps.[13]

The next task in the completion of this project though was more in the ambit of the Hindu craftsmen's true skills. The rough rubble masonry was covered with a veneer of red sandstone and the entire surface was decorated with rich patterns of carvings. "Some of the designs are the loveliest of their kind, particularly graceful being a border of spiral form having a floral device within each coil of its convolutions, emphatically a Hindu conception, and contrasting with it are upright lines of decorative inscriptions just as emphatically Islamic." Engraved upon the sandstone these have been described by a contemporary Muslim traveller " as could not be done in wax." But of course, the Hindu stone-cutter had for centuries with infinite patience been treating even hard granite and marble as wad. Sandstone, therefore, was like butter to his chiselling skills and these engravings in stone were but a mere flick of his finger. Unlike Persian Islamic architecture multicolour glazed

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13.Satish Grover, The Architecture of India (Islamic Period)Vol.II pp.111-118
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 115-125
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tiles had been used to decorate the brick masonry. Muslim architecture in India continued to be influenced by the Hindu artists, penchant for more subtle monochrome carved surfaces.[14]

THE QUTB MINAR

The Hindu craftsman's talent for sculpture was soon given a job more worthy of his mettle than the simple task of decorating plain surface of sandstone. In the year 1199 A.D. Qutbud-din Aibak, probably to celebrate his appointment as a Governor, laid the foundations of a tower that was destined to rise to the staggering height of 238 feet (73 m). The confidence that Qutb-ud-din had in his Indian builders and designers is proven by the fact that "though minars and towers were common features of Islamic architecture, particularly in West Asia, yet none of such size had been constructed." Only a few years after making Delhi his capital Qutb-ud-din set out on such a magnificent building venture. Even today

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14. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp 119-129
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 126-139
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after hundreds of years of building in Delhi, and hundreds of architectural experiments, the Qutb Minar remains the most eye-catching monument in the capital. To many, Delhi is "the city of Qutb" and archaeologists and historians are still breaking their heads to discover the sources that inspired the building of so radical a monument.[15]

The Ghaznavid brick minarets near Kabul and Jam may well have served as models, but the Qutb turned out to be an edifice "without parallel in Islamic art anywhere in the world." Starting from a base of 47 feet (14.3 m) diameter, it tapers to a width of 9 ft (2.7 m), the top storey being approached by a central spiral staircase with 360 steps as it stands today. The verticality of its angular and curved outer turrets is broken by four balconies projected out over an elaborate system of stalactite like pendentives. The sculptural treatment of the multiple niches below the balcony mark the Hindu carvers' graduation in the art of non-figurative Islamic carving. It is true that the monument started by Qutb-ud-din and completed under

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15. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.130-138
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.140-154
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his successor's rule was also subsequently damaged by lightning and had two extra storeys added in the Mughal period with a casing of marble. Ultimately, even the merloned balusters of its balconies were replaced according to the design of one Major Smith as late as in 1828. Still, even as the Qutb Minar appears today with all its subsequent additions and alterations, it more than fulfills Qutb-ud-din's visions.[16]

MAKESHIFT PROVINCIAL MOSQUES

For the instant erection of mosques, the methods followed at Delhi were too conveniently attractive to be ignored. The earliest mosques in most of the provincial regions were thus no more than a recomposition of building materials extracted from existing Hindu and Jaina temples. However, only a few of them came up even to the rather minimal architectural standards of the Quwwat-ul-Islam, that had been built in Delhi under similar circumstances. It would,

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16. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp 139-149
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 155-169
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therefore, not be worthwhile to describe in detail the "reassembled" mosques of each region. In every province the initial efforts followed the general pattern established at Delhi. The differences in details of the structural and decorative techniques of these makeshift mosques were governed as much by the quality of available Hindu building materials and craftsmanship as the designers' ingenuity. Over a period of time however - again as at Delhi - the provincial builders gradually created the so-called language of Islamic ideas. The most lively elements even of this "pure" language however were those of indigenous craftsmanship, local building materials, and the climatological and social aspects of a province. So much so that each region freely developed its own dialect of regional architecture that was often more expressive and fascinating than the more orthodox building vocabulary of the "parent" family of Delhi. Inspiration from the architectural style of Delhi though was inevitable - at least for all the Muslim principalities, that were within the geographical and wavering political ambit of Delhi.[17]

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17. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.150-163
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp. 170-179
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THE PULSATING RHYTHMS OF ATALA MASJID

One of the earliest mosque to be erected at Janupur, the Atala admittedly displays the influence of the Delhi Tughlaq style of architecture, but has an additional flavour and vigour all its own. This is most apparent in the robust design of the inevitable pylon in the centre of the Atala liwan. The circular tapering shafts of the Tughlaq model are now resolved into rectangular turrets, while retaining the inclined profile of the original. Suspended between the two rectangular turrets is a huge spandrelled arch which too is more purposeful and majestic in its firm outlines than the wavering and ornamental ogee arch of the Tughlaqs. The typical Hindu bracketed openings as usual find their own place at the bottom of the arch, its upper reaches being filled in with arched apertures, jharokhas and jaalis. The builders of the Atala Masjid seemed to have been fully aware of the dramatic quality of the pylon that they had devised. Quite appropriately they not only installed two identical mini-pylons on either side of the central one but also designed the three gateways in the centers of the eastern, northern and southern colonnades of the courtyard to echo the style of the "maqsura" pylon. The silhouette of these various pylons of different sized in

the mosque sets up a pulsating rhythm that is not felt in any other mosque in India.[18]

It is probably this same feel for rhythm that prompted the Janupur builders to infuse a liveliness even into the composition of the rear wall of the liwan, an element that was traditionally left as a plain pile of masonry in most mosques. Thus, the rear wall of the Atala Majid is adorned with a central and side projections, each related in intent and size to the domes that crown the rectangular hall of the sanctuary. However, for some obscure reasons, the idiom used to define the ends of the projections is the same old Tughlaqian one of tapered circular buttresses rather than the rectangular ones that adorned the front of the Janupur liwan. This almost casual neglect of harmony strikes the only discordant note in an otherwise vibrant little gem of Islamic architecture in India. Inscriptional evidence testifies to the fact that the Atala Masjid was the work of a Hindu architect. "That Hindu artisans were largely employed upon the works" is only indicative of the fact that "freed from their age-old

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18. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.164-178
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.180-186
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indigenous conventions" they were more than capable of "inventive formation and infusing fresh spirit into such a notable architectural synthesis.[19]"

TALENTS OF THE GUJARATI BUILDER

The Muslim rulers of Gujarat became potentates, their treasuries being as rich as those of the earlier Jaina Kings with the revenues from sea trade that fell under their purview. Yet it would seem that not a single one of the rulers was either able or willing to exercise personal influence over the style of Islamic architecture practiced in his dominion. Thus, the Hindu and Jaina craftsman of Gujarat was left to deploy structural methods himself. He applied decoration and other architectonic techniques known to him to create a style that could be labeled as the "Mohammaden architecture of Gujarat." For this task the builders of Gujarat had been well-equipped by their ancient traditions of construction. The pre-eminent quality of these

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19. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.179-186
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.187-194
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was their propensity for building the most lavish mandapas or front halls for their temples. Some of these mandapas had been fairly large halls roofed by a pyramidical corbelled dome held up over a ring of columns. The plan of such a mandapa could easily constitute a multipliable unit. A number of such conjoined units assembled together with minor design variations would easily produce large rectangular space or hypostyle halls necessary for the liwans of the mosque. Moreover, the traditional Gujarati builder was capable of inducing dramatic spatial qualities into his temple mandapas, roofed with domes, cupolas and profusely carved horizontal ceiling panels situated at varying heights. In fact, the only new word the Gujarati architect needed to introduce to his vocabulary was that of the pointed arch and the only one he needed to delete was that of figurative sculpture. Once these two criteria were fulfilled his rather indulgent Muslim rulers were more than satisfied that an adequately Islamized architecture had been evolved.[20]

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20. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.187-193
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.195-201
Bhartiya Vidya Bhavan, The History & Culture Of The Indian People
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ARCHITECTURAL INSPIRATION FROM ABROAD

Various circumstances led to the Southern Muslim builder accepting novel building ideas from overseas Islamic countries rather than developing them from indigenous sources. The insularity of the South Indian Brahmin and his master craftsmen did not encourage the Muslim rulers to depend on the skills of the Hindu architects to build mosques and tombs for them. Also for historico-political reasons, the Muslim cities of the South like Bidar, Bijapur and Golconda were not built around live and thriving centers of Hindu culture. As such, spoils in the form of ready made Hindu building materials for the fashioning of new structures were not abundantly available. Also probably mindful of the Hindu oriented Islamic architecture of Gujarat, the foreign blooded Muslim rulers of the South were not so keen to perpetuate another Gujarat style " architecture" in their dominions. Furthermore, it would seem that in the 14th and 15th centuries, voyages to and from India across the Arabian sea had become fairly frequent and a number of skilled immigrants not only from neighbouring Persia but also from distant Turkey, were only too happy to do service for the burgeoning Muslim overloads of the South. Thus ironically enough, it was the conservative southern Hindu stronghold that was injected with

doses of an alien and virile architectural style. The energy generated by this infusion culminated in the building of the great Gol Gumbaz at Bijapur which was as triumphant and bold a structural statement, as subtle and glorious had been the exotic sculptural achievements of the Hindu builders of nearby Halebid and Belur. But before the builders of Bijapur could aspire to build the largest dome of the 16th century world of architecture, the 14th century builders of Gulbarga and Bidar were busy laying the foundations of a building style that was to literally rise to dizzy heights under the Adil Shahis of Bijapur.[21]

TOMBS OF THE BAHMANIS

The pattern of tomb building had been established before architect Rafi built the Jami Masjid. And for the building of tombs the builders had no other models to follow except that of distant Delhi. And thus, the earliest group of tombs (including that of the founder

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21. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.194-200
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.202-206
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of the dynasty who died in 1358 A.D.) consisting of "battered walls, sunken archways, heavy battlemented parapet, fluted corner finial and a low dome" is clearly derived from the Tughlaq prototype of Delhi. It is in the later group of Bahmani tombs which is popularly known as the Haft Gumbaz or literally "seven domes," that marks of Deccan originality appear. The batter of the walls is now hardly noticeable, and the 40 ft. (12 m) high surfaces are demarcated into two storeys by blind, screen filled archways. The arch itself with its well defined impost, imbibes something from the Gulbarga mosque. Again, as in the Gulbarga mosque, a new but consequently unsuccessful planning idea was adopted in the layout of the tombs. Thus, the tomb of Taj-ud-din Firoz like others before, consisted of two square conjoined chambers to form a rectangle measuring 78 ft x 158 ft (23.7 m x 48 m). The idea behind this "double mausoleum" was that while one chamber was reserved for the cenotaph of the ruler, the other was meant to accommodate those of his family. This innovation too remained a part of the local Gulbarga tradition. It was not adopted by the

succeeding line of Kings, when Ahmed Shah transferred the capital to Bidar, over 60 miles (96 km) northeast of Gulbarga, in 1425 A.D.[22]

BARID SHAHI AND THE "LOTUS DOME"

Under the Barid Shahi rulers who occupied Bidar for over 100 years from 1487 A.D. onwards, the city acquired a vast necropolis composed of tombs of the various Barid rulers. The architectural composition of all of these is simple in itself consisting as it does of an almost open cubic chamber below and a dome above. The cube below, in the now well-established popular technique, received long bands of coloured glazed tiles with inscriptions in the Kufi, Tughra or Naksh script containing personal eulogies and sacred couplets. It is, however, in the construction of the dome that the Barid Shahi builders took a step in a direction that was to reach its climax in the building of the Taj Mahal. The profile of the later domes of Bidar

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22. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.201-207
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.207-210
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took the form of a slight constriction in the lower contour or an inward return of its curve near the base. This novel form for the dome was most likely suggested as much by the architectural experiments of Timur in Samarkand and the Safavid domes of Persia, as it was a resurrection by the Indian craftsmen of the ancient Lotus arch and dome of the Buddhists. It is certain, however, that this form of the dome suddenly aroused the enthusiasm of the Indian builder to embellish it with motifs definitely inspired by classic architecture of the Hindus and Buddhists. In the subsequent domes of this nature the traditional petals at the "griva" or neck and the "maha-padma" at the crown of the dome made the resemblance between the Lotus dome of the Buddhist and the so-called onion, bulbous or Tartar dome of Islamic Indian architecture, more than a mere matter of accident.[23]

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23. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.208-211
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.211-214
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STATISTICS OF THE GOL GUMBAZ

Transcending all other buildings at Bijapur in its volume and massiveness, this tomb of Sultan Mohammed commenced construction in 1656 A.D. and its rubble masonry walls were still being plastered when the ruler died. That immensity of size was the major criterion of erecting this tomb is apparent from the building plan which is simply " a square hall enclosed by four lofty walls, buttressed up by octagonal towers at the corner and the whole surmounted by a hemispherical dome." The bare vital measurements of the entire structure are rather startling. For the "Simple square" is almost of 136 ft (41.5 m) side inside and as much as 205 ft (62.5 m) outside, the four lofty walls are over 10 ft (3m) thick and 110 ft (33.5 m) high, the diameter of octagonal buttresses is 25 ft (7.6 m) rising to a height of 150 ft. (45.7 m) the hemispherical dome is of 144 ft (44 m) diameter outside and 125 ft (38 m) diameter insideand its apex is over 200 ft (60.9 m) from ground level.

The whole structure in height along thus is the equivalent of a 20-storey structure of modern times. [24]

METHODS OF INTERSECTING ARCHES

It would be apparent then from these statistics, a study of the plan and rather plain exterior of the monument that the moving spirit behind this great building venture was not a conventionally trained architect but a daring structural engineer. It is, indeed, remarkable that without precedent to prove his skill, the master builder (probably one Yaqut of Dabul) could persuade the Sultan Muhammad that he would be able to successfully build for him a monument of such gigantic proportions. The crux of the whole design, as described earlier, became that of supporting the circular dome over the cube below and intelligibly managing the phase of transition from the cube to the dome above. Earlier this had been manager by a lintel, a series of pendentive or a squinch arch across

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24. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.212-216
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.215-217
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the corners of the cube below depending on the size of the structure. In a dome of the size of the Gol Gumbaz, none of these methods could be applied. The span across the corners of the square itself would be of the order of 75 ft (24 m) and by this conventional method the diameter and consequently the load of the dome would have been twice that of the present dome. Thus the problem was to somehow reduce the size of the dome while retaining the huge size of the square hall below. This was solved by the builders by employing what has come to be known as the method of intersecting arches." This procedure had been earlier adopted for erecting the dome over the Jami Masjid at Bijapur. But in the Jami Masjid, it seemed to have been used to produce a pleasing interior composition, while in the case of Gol Gumbaz, it was a sheer structural necessity.[25]

The geometrical essence of this solution lay in inscribing within the large square, two smaller overlapping squares, by dividing each side of the large square into three equal divisions and joining together

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25. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp 217-220
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.218-221
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the alternate points of division. As can be seen, eight points of intersection of the two smaller squares produced an octagon within the large square of size smaller than the octagon produced merely by chamfering the corners of the square. Continuing with the geometric analysis, it is this octagon that could now be gradually made to approximate to the required circular plan of the dome. Structurally, the location of the eight corners of the octagon in space was determined by erecting tall arches along each of the sides of the intersecting squares. The points at which these arches intersected in the volume above the large square became the corners of the octagonal platform over which a circular ring of masonry to act as the drum for the dome could be erected.[26]

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26. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.221-224
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.222-225
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AKBAR'S ALL INDIA ARCHITECTURE

Even the brief description in the Ain-i-Akbari of the numerous non-existent buildings and the extant examples are clues to Akbar's architectural vision through his half century of Empire and city building. First, in the very employment of "cunning artists of form" from Bengal, Gujarat and other parts of India, Akbar was launching the scheme of giving a free hand to artists from various parts of the country to exploit their native genius to the fullest. Again, in almost exclusively using locally available red sandstone as building material, Akbar was not only giving vent to his aesthetic partiality but also to his sense of austerity and moderation even in royal buildings. He seems to have been his own Minister of Public Works right through his Kingship and exercised personal control in regulating the price of building materials, the wages of craftsmen and collecting data for framing proper estimates." What is more, this "child of a Sunni father and Shia mother, born in Hindustan the and of Sufism at the house of a Hindu," was singularly obsessed with one aspect of his meagre formal education; from the great liberal, Mir Abdul Latif, he had fully imbibed the principles of sulh-i-kull" or religious tolerance. Thus, his builders were rarely

commanded to adhere to a style consciously representing a single religion.[27]

Akbar's directives of freedom expression to his Indian builders were also based on conclusions drawn from what his keen and observant eyes had seen. He had made fairly extensive travels in Hindustan by the time he really got down to buildings for himself. These had included expeditions to Gwalior, Mandu, Gujarat and large parts of Rajasthan. He had, no doubt, observed the proficiency and the immense diversity of building talent available all over the country. Since from an early age of his rule his horizons had envisaged an all-India empire, he had no inclination for promoting any one particular regional style of architecture. Thus under his liberal patronage all that was the best in the tradition of architecture anywhere in the country was suddenly activated. The only limitations Akbar placed on his architects and engineers were those of economy - a restraint that spurred his artists on to even more sophisticated heights. By this restraint

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27. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.225-227
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.226-228
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Akbar the Great Mughal, avoided the customary pitfall of a display of excessive wealth - that of vulgar extravagance. This is not to say that grand monuments were not produced. Rather even his more ambitious structures seem to have acquired an air of informal grandeur, rather than monumental oppressiveness.[28]

SIKRI - AKBAR'S PEAK OF VISION

Various romantic descriptions and equally romantic reasons have been preferred for the planning and building of a city that seemed the "work of a magician's hand." "A great complex of palatial, residential, official and religious buildings, so designed and executed as to form one of the most spectacular structural productions in the whole of India." Imagine too, "a city containing no streets but an arrangement of broad terraces and stately courtyards around which are grouped numerous palaces and pavilions" and "some idea may be gained of Fatehpur sikri during

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28. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.228-230
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.229-231
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its transient but enchanting hour towards the end of the 16th century." To the romantic, the magic of Sikri was but the "petrification of a passing mood in Akbar's strange nature, begun and finished at lightning speed while the mood lasted." But to another more forthright commentator "there is little evidence in its layout or composition of any systematic town planning having been put into practice." The true and technical clue to the planning of Sikri, of course, lies somewhere in between these two extremes. The city is truly a reflection of Akbar's personality and not merely of his despotic whims. There was, behind his apparent waywardness, an extremely shrewd and practical mind at work.

The philosophy that inspired the design and construction of Sikri was only an extension of the spirit that animated Akbar's administration and politics. He realised that his political dream of an all-India Empire could not be achieved through sheer physical subjugation of the numerous feudal rulers. Myriads of Rajput and

other rulers had to be won through a mixed policy of power and accommodation.[29]

THE POLITICS OF ARCHITECTURE

Fatehpur Sikri, the capital city of such an empire is but a transparent architectural reflection of its politics. Artisans, architects and builders from all parts of the country were allowed to express their designs freely under the overall control of a sympathetic but powerful guiding hand. The Mughal empire was rapidly built up by Akbar through quick marches to various trouble spots, instead of waging ponderously planned wars. In the same way, the city was quickly put together by "on-the-spot decisions" in many buildings under construction simultaneously at various sites. The location too of particular buildings was determined not by a rigid preordained plan but by pragmatic solutions of different problems. Function, orientation, topography, security and aesthetics

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29. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.231-232
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.232-232
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- each was considered, discussed, quickly decided, and the work allowed to proceed rapidly. Apparently the guidelines in each of these considerations were clearly laid down by Akbar himself to avoid unnecessary delays on the part of architects. First and foremost, the interior function of an individual building, whether it is a residence, an office, a workshop, a mosque or a bazaar being easily determined, its plans were accordingly and most forthrightly prepared. Its overall function, too, naturally determined its location in the layout plan, which itself was a flexible document ordaining some broad zoning concept. Service areas, such as the water-works, serais, and guards' quarters, were located on the outskirts. Public area like the courts, the Dewan-i-Am, and the Jami Masjid formed a ring around the private audience chambers of the King and the Queen's residences, which were located at the very heart, astride the top of ridge. Orientation was one aspect rigidly adhered to and so one finds all important structures located along the cardinal axis. While the buildings of a secular nature were installed along the N-S axis, the Jami Masjid naturally was symmetrically erected around the E-W axis.[30]

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30. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.233-234
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.233-234
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VISUAL UNITY

It would appear that the topography of the undulating rocky ridge was to be least disturbed for practical reasons of economy and viable considerations of environmental control. Thus the existing natural level of the land chosen for the installation of any building was generally maintained, care being taken only to link it with the adjoining apartments by means of ramps, platforms and staircases. Though the aesthetics of a building project were left largely to the individual group of craftsmen employed in a particular structure yet overall visual unity was ensured through various simple strategy. The first and most essential dictate was that pertaining to the use of building material for floors, walls, roofs, lintels, beams et al. The rich red hue of the stone could be offset only here and there by bands of expensive white marble or at times by blue glazed tiles. The rest of the aesthetics and embellishment was left to the interior decorators of the individual occupants who no doubt "covered the floors with rich carpets, elaborate silken bolsters and filled the many alcoves with coloured bottles of perfumes and feminine keepsakes." What is more, the building technique to be followed was to be the quickest possible. Thus sandstone, cut to shape in the form of lintels, columns, brackets and roofing tiles, was used much

like precast concrete beams and panels or even timber in modern building construction. The sandstone building constituents were cut in large stonecutter factories and quickly assembled, often dry, without the aid of mortar. No wonder then that the buildings of Akbar's Fatehpur Sikri appear "to be wooden houses made of stone.[31]"

TAJ, THE UNIQUE

The uniqueness of the Taj lies in some truly remarkable though elementary design innovations carried out by Shahjahan's garden planners and architects. In the true Mughal traditions it was a foregone conclusion that the tomb would be laid out in a garden enclosure. However, for the first time in Islamic India a tomb building was more logically placed at the head of a formal garden rather than planted in the middle of one. With this one strome of genius, the planners added rich depth and perspective to the first

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31. Satish Grover, The Architecture of India (Islamic Period)Vol.II p.235
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.235-236
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distant view of the monument standing at the end of an avenue of marble platform, water channels and trees. Next, it is the location of the four free-standing minarets at the corners of the platform on which the Taj stands that added a hitherto unknown dimension not only to Mughal building but to the very vocabulary of architectural design. Theoretically speaking, the four minarets provide a kind of spatial reference frame for the central structure. The function of the minarets is akin to that of providing a three-dimensional version of the plane rectangle within which an artist frames his paintings. It is precisely this reference that dissolves what may have been massive oppressiveness into comprehensible beauty. So much so that one does not even notice that the Taj in height is more than that of a modern twenty-storey building. The true design miracle of these minerets, however, can only be realized when one understands their dual function. On one hand they sequester the huge monument to impart to it a comprehensible scale, on the other they prevent its huge mass from amorphously disintegrating into the horizon. Thus while both the Humayun's and Khan Khanan's tombs stand "out somewhat abruptly and isolated against the surrounding plain," the

Taj alongwith its minerets produces an "outline that forms a part of a rhythmic undulating total effect."[32]

A COMPLETE ARCHITECTURAL EXPERIENCE

It may be redundant indeed to add any more eulogies to the voluminous laudable writings of historians, architects, literati and poets. What would be more relevant to note here is the fact that the Taj is amongst the very few works of architecture that has invited comment and attention from people of all walks of life - from the intellectual, visionary and poet, Sahir, writing on the Taj Mahal, beseeches his beloved to meet him elsewhere since to him Shahjahan had mocked their humble love through such an ostentatious offering to his beloved. Nevertheless, middle and all classes of lovers continue to throng the Taj. Aesthetes and commoners too continue to visit it inspite of Huxley's warnings to the contrary. Why ? Simply because in many ways the Taj is that

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32. Satish Grover,The Architecture of India(Islamic Period)Vol.II pp.236-238
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.237-239
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ideal and complete a work of human architecture that it cannot but fail to arouse emotions in just anyone. The secret here lies again in the fact that absolutely nothing - and truly absolutely nothing - has been left to chance. Every aspect of design - be it spatial, architectonic, landscaping, surface decoration or interior design - has been comprehended and meticulously detailed and executed.[33]

From a distance, the intriguing skyline of onion domes, canopies and elegant minarets entice and beckon further investigation. An investigation that at the outset confronts one with the much recorded and splendid view of the Taj as seen from the entrance gateway, a 1000 feet away from the tomb. It would be indeed a souless person who could turn down the invitation to explore the mysteries of the floating marble vision ahead. And as one walks closer to the monument, across the long marble causeway, one discerns that the seemingly plain marble facades of the monument are actually alive with further intricate and sumptuous schemes of decoration that needed to be seen at closer quarters. Even the

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33. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.239-241
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.240-242
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burden of the 1000 feet walk to the monument is enlivened by the changing vignettes of reflections of the Taj in the still waters of the central pool and channel, framed by the upright sentinel like somber rows of chinars on either side. Having reached the foot of the monument one ascends 22 feet to arrive at the platform over which loom the arched marble facades of the Taj.[34]

It is from here onwards that the discovery of the finesse of the Taj begins. The marble casing of the tomb in appropriate panels has been diligently chiselled and polished into delicate reliefs of life like rose bushes drooping lovingly in salute to the Emperor's beloved. At the same time the consummate art of Islamic calligraphy is employed to define and border the soffits of the stately arches in continuous bands and elsewhere an intersia of pietra dura work of coloured stones appropriately embellishes and softens the inherent lustre of the pure white marble. The visitor then either descends into the gloom of the lower crypt containing the graves or walks to the replicas of the same at an upper level.

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34. Satish Grover, The Architecture of India (Islamic Period)Vol.II p.242
Percy Brown, Indian Architecture (Islamic Period) Vol. II p.243
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Here he is immersed into an atmosphere as sombre and mysterious as the cave and temple sancutuaries of the Buddhists and Hindus. The journey, a complete experience in architecture, thus seems apparently concluded.[35]

A TEAR ON THE FACE OF ETERNITY

Yet the perceptive viewer immediately realizes that the Taj has even more visual delights to offer. To partake of these, he must return to the Taj often again. The marble in which the Taj is encased is "of such a nature that it takes on incredibly subtle variations of tint and tone" as to virtually mirror "the passing colour of the moment. For every hour of the day and for every atmospheric condition the Taj has its own colour values; from the soft dreaminess of dawn, and the dazzling whiteness at midday to when it is softly illuminated by the brief Indian afterglow to assume the enchanting tint of some

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35. Satish Grover,The Architecture of India (Islamic Period)Vol.II pp.243-244
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.244-246
Bhartiya Vidya Bhavan, The History & Culture Of The Indian People
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pale and lovely rose." However, it is on a bright moonlit night that the Taj acquires an almost unearthly quality.[36]

STATISTICS OF THE TAJ

However, for the sake of record, the statistical and architectural facts need to be described. The plan of this whole conception takes the form of a rectangle aligned north and south and measuring an impressive 1900 ft x 1000 ft, with the central area divided off into a square garden of 1000 ft. side. The entire composition is enclosed within a high boundary wall with broad octagonal pavilions at each corner. The piece de resistance, the Taj itself stands on a square 187 ft side and 22 ft. high platform. It is flanked on either side by two similar structures; the one on the western side is a mosque, and its traditional "jawaab" on the eastern side served the purpose of a "mehman khana" or guest house. The mosque and its counterpart of identical design thereby maintains the strict symmetry of the entire composition.[37]

36,37.Satish Grover,The Architecture of India(Islamic Period)Vol.IIp 245
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.247-248
Bhartiya Vidya Bhavan, The History & Culture Of The Indian People
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The plan of the tomb itself is both a rationalization of the rather loose diagonal arrangement of the Humayun's tomb and an enriched though softer version of the plan of the Khan Khanan's. Laws of geometry are strictly adhered to in building up the plan, consisting of a central octagonal chamber surrounded by a continuous interlinking corridor, each junction of which is punctuated by a subsidiary octagonal chamber. While the interior with its tunnel and cave like passage and chambers recaptures the ancient Indian ideals of dark and cavernous spaces, the 187 ft high external marble facades of the Taj refreshingly reflect Persian ideals. The designer of the facades judiciously relied on a minimum number of elements. Eschewing all redundant plastic treatment, the architect decided discreetly in favour of a completely non-gregarious elevation. In its vast two-storied treatment, a large central portal arch and a subsidiary smaller arched recess are the only two elements repeatedly and symmetrically woven together into a "facile grouping, rhythmical disposal and skillful interrelation of each part in the total unity.[38]" The crowning glory of the external visual is, of course, the shape and volume of the dome. It appears like a "clouds

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38. Satish Grover, The Architecture of India(Islamic Period)Vol.II pp.246-250
Percy Brown, Indian Architecture (Islamic Period) Vol. II pp.249-250
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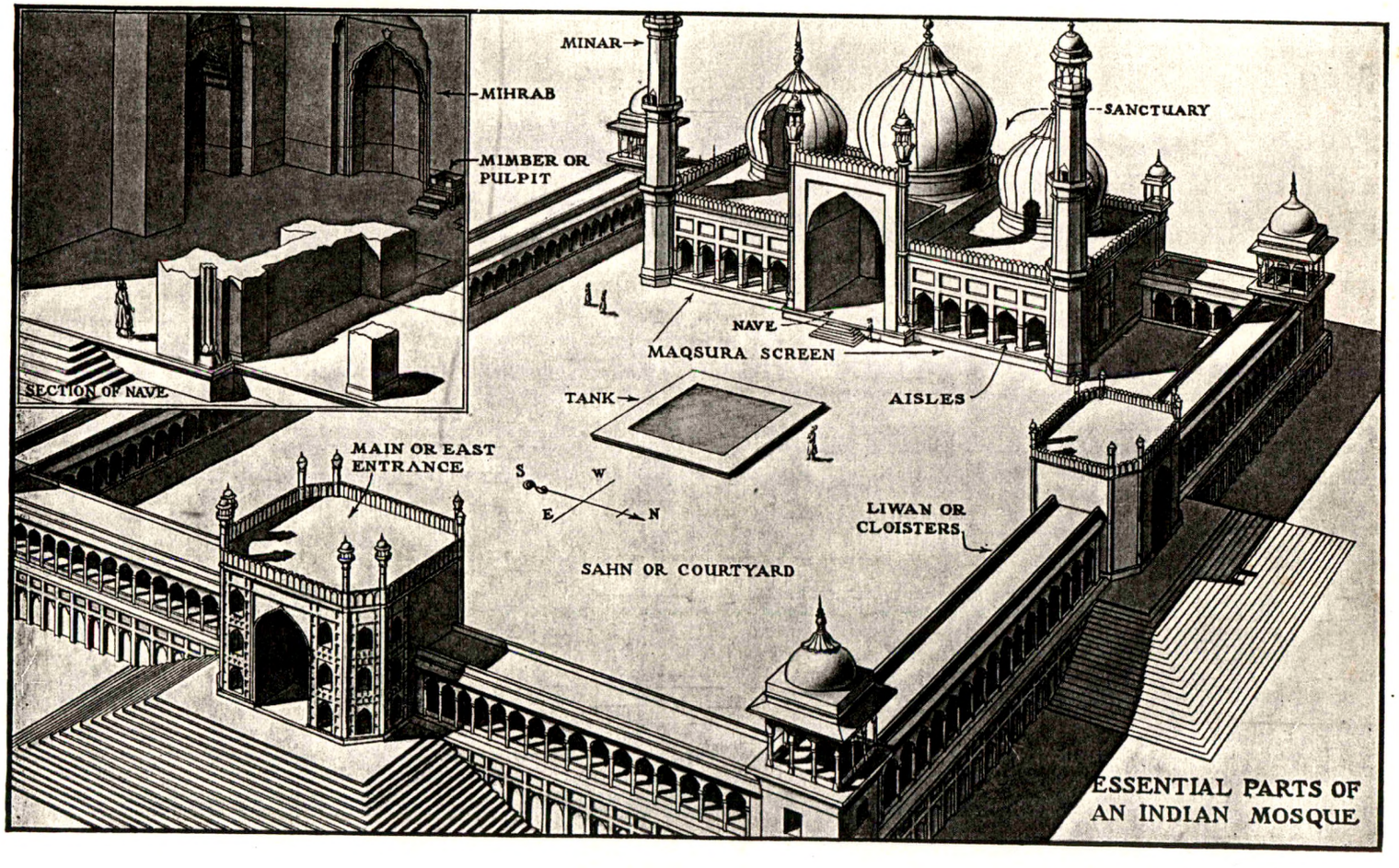
reclined upon his airy throne." This double dome of the Taj is probably the most refined version of the so-called onion dome already described in referring to the architecture of Bijapur. However, adequately flanked as it is in the Taj - by four domed canopies at each corner - this grouping constitutes probably the most sensual such combination in the entire range of Indo-Islamic architecture.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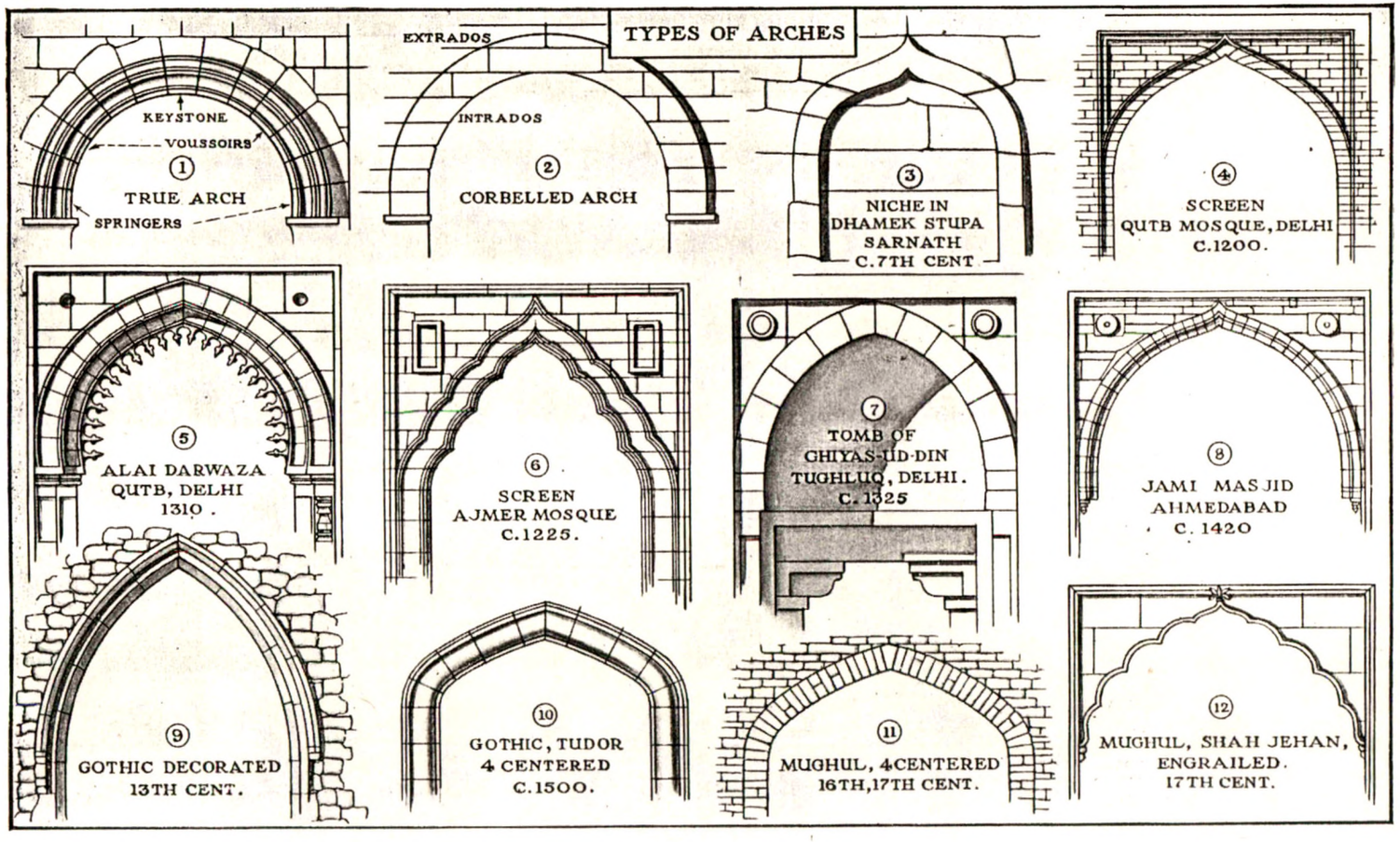
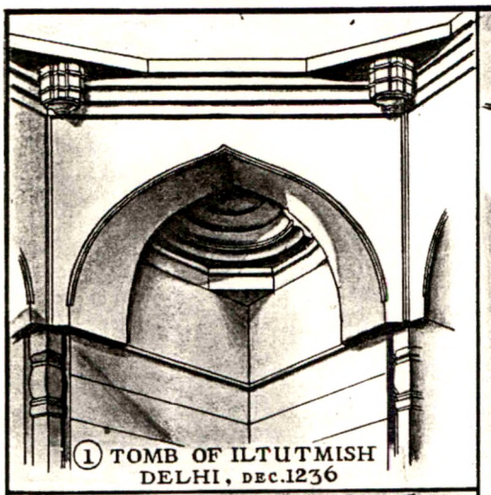
SAHN OR COURTYARD
ESSENTIAL PARTS OF AN INDIAN MOSQUE

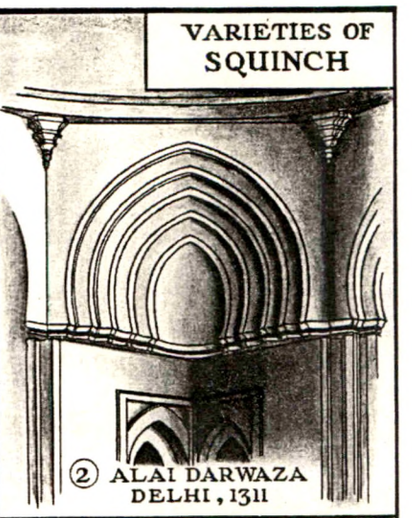
TYPES OF ARCHES



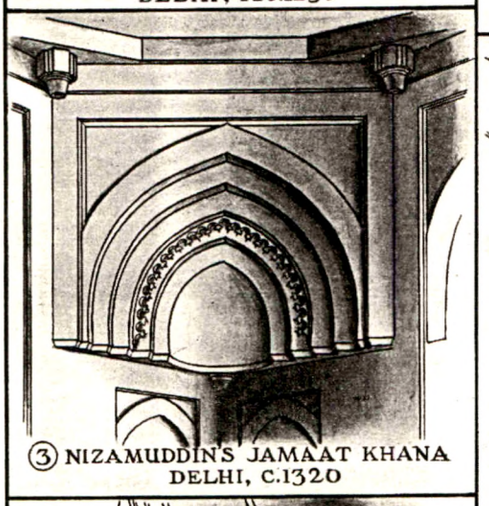
VARIETIES OF SQUINCH



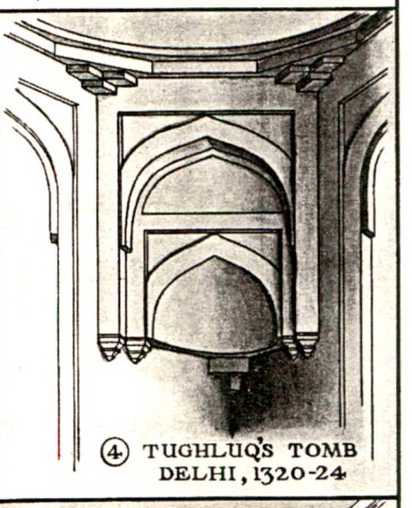
① TOMB OF ILTUTMISH
DELHI, DEC.1236



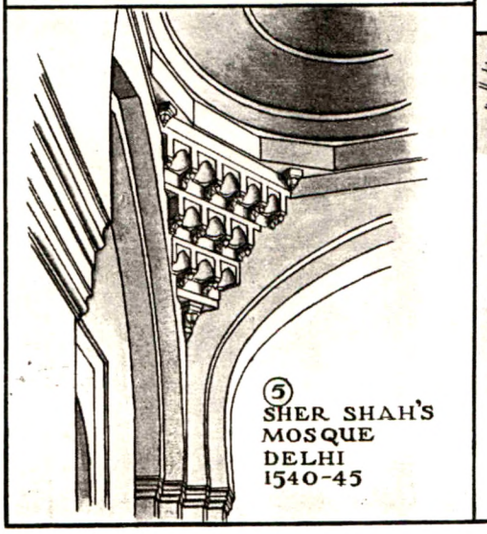
② ALAI DARWAZA
DELHI, 1311



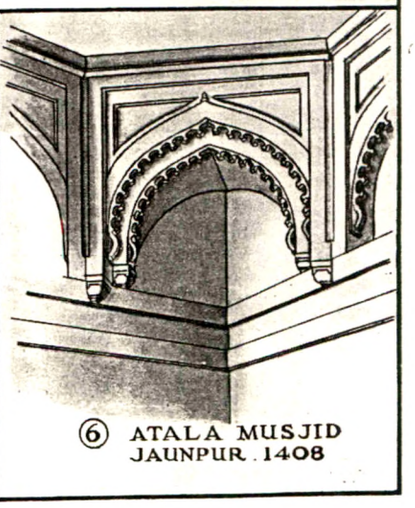
③ NIZAMUDDIN'S JAMAAT KHANA
DELHI, C.1320



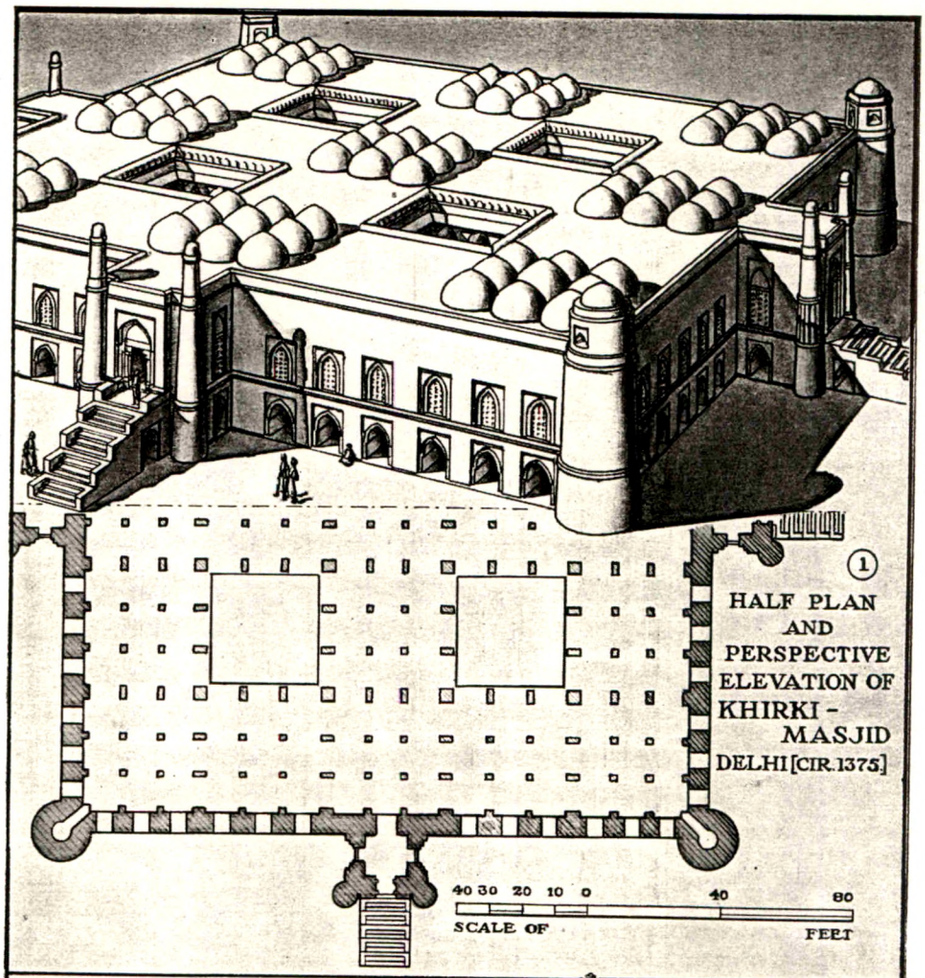
④ TUGHLUQ'S TOMB
DELHI, 1320-24



⑤
SHER SHAH'S
MOSQUE
DELHI
1540-45

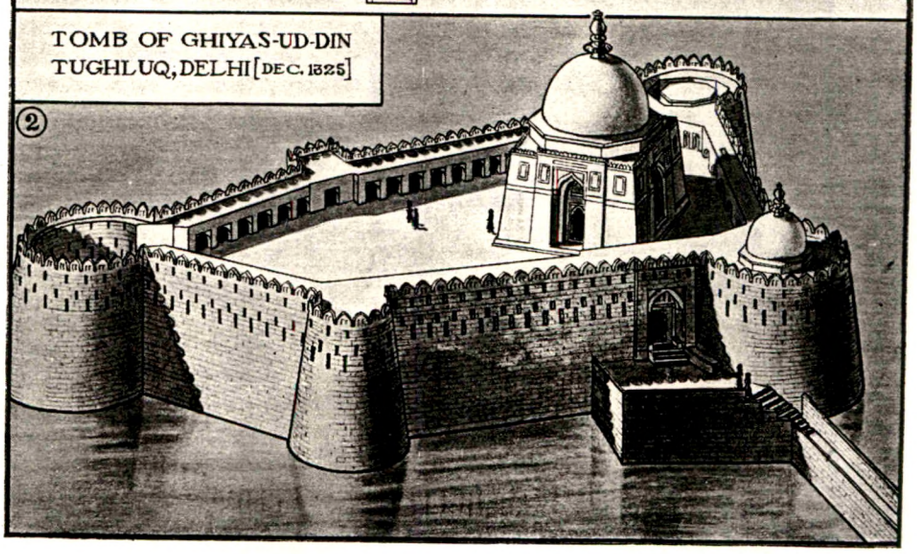


⑥ ATALA MUSJID
JAUNPUR. 1408



① HALF PLAN AND PERSPECTIVE ELEVATION OF KHIRKI - MASJID DELHI [CIR. 1375]

TOMB OF GHIYAS-UD-DIN TUGHLUQ, DELHI [DEC. 1325]



②

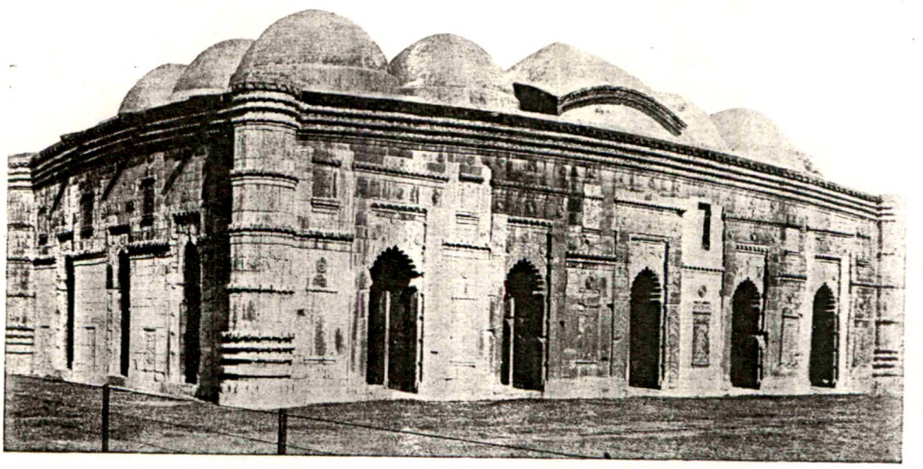


Fig. 1

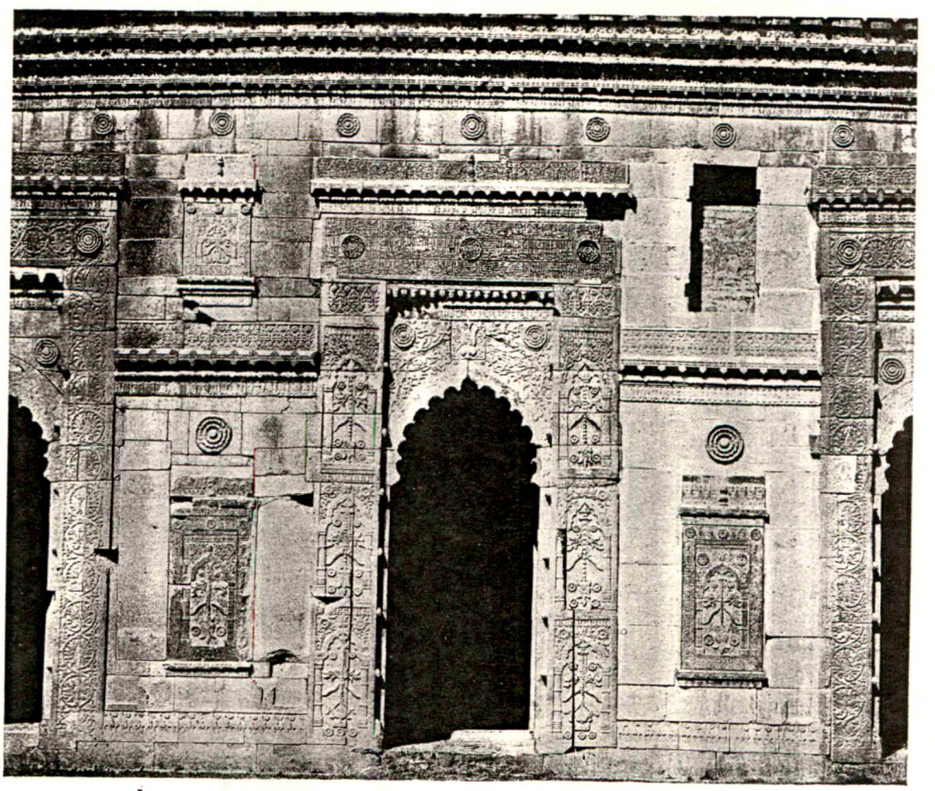
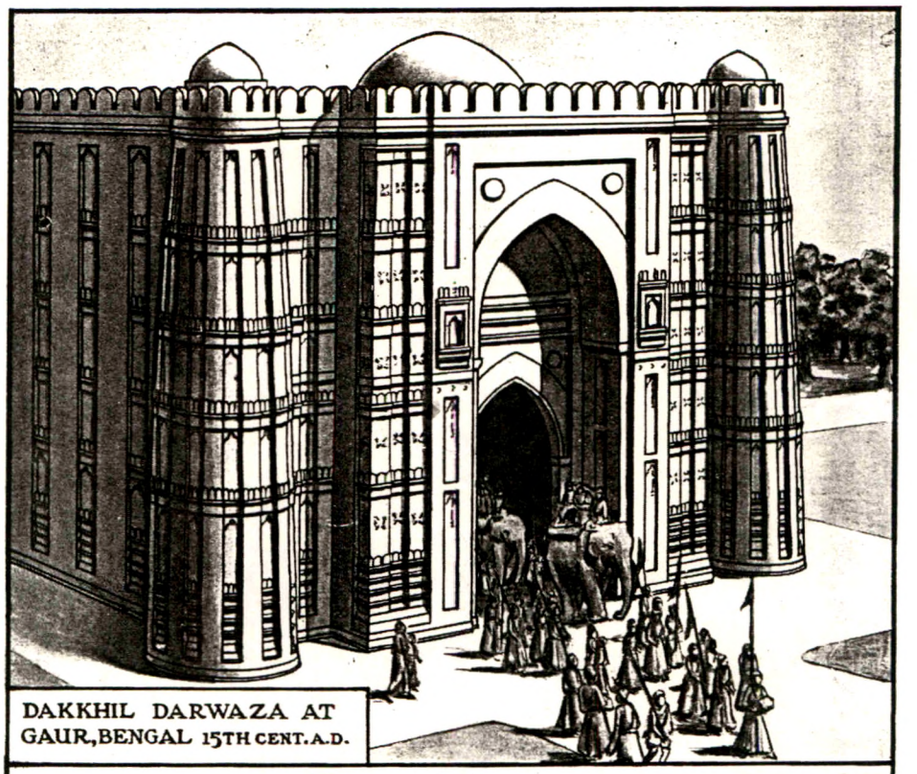
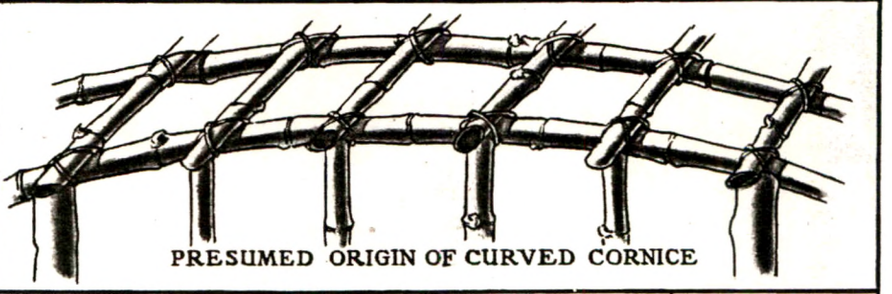


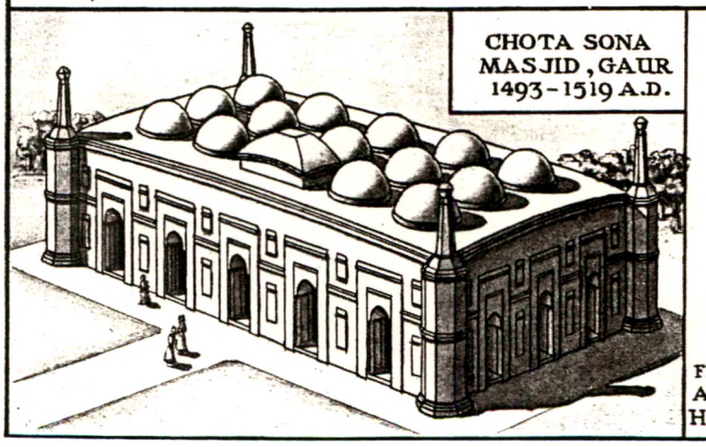
Fig. 2 Gaur, Bengal : Chota Sona Masjid (1493-1519)



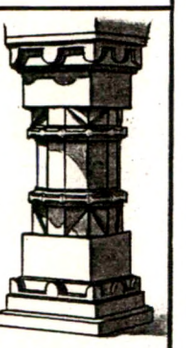
DAKKHIL DARWAZA AT
GAUR, BENGAL 15TH CENT. A.D.



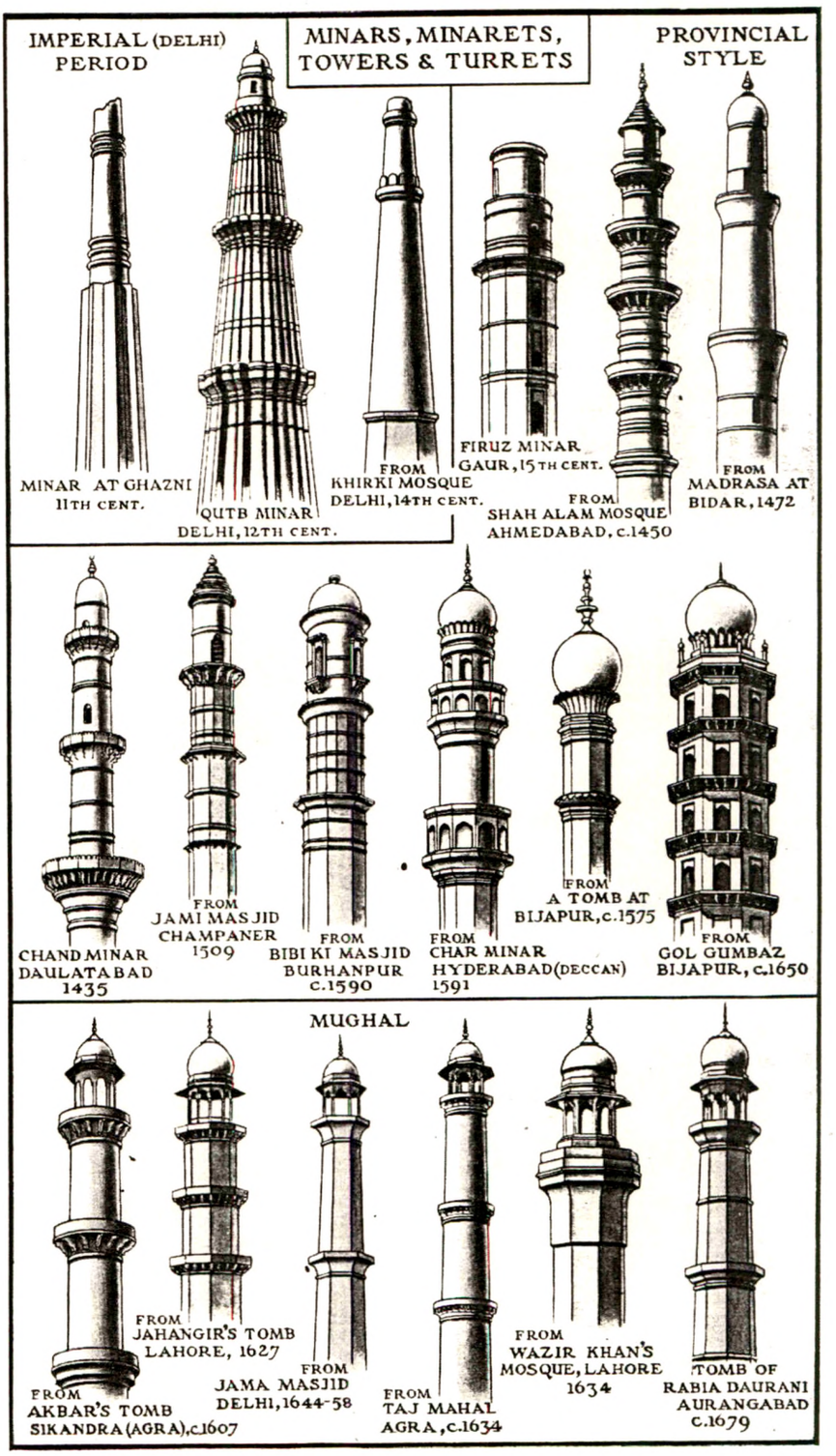
PRESUMED ORIGIN OF CURVED CORNICE

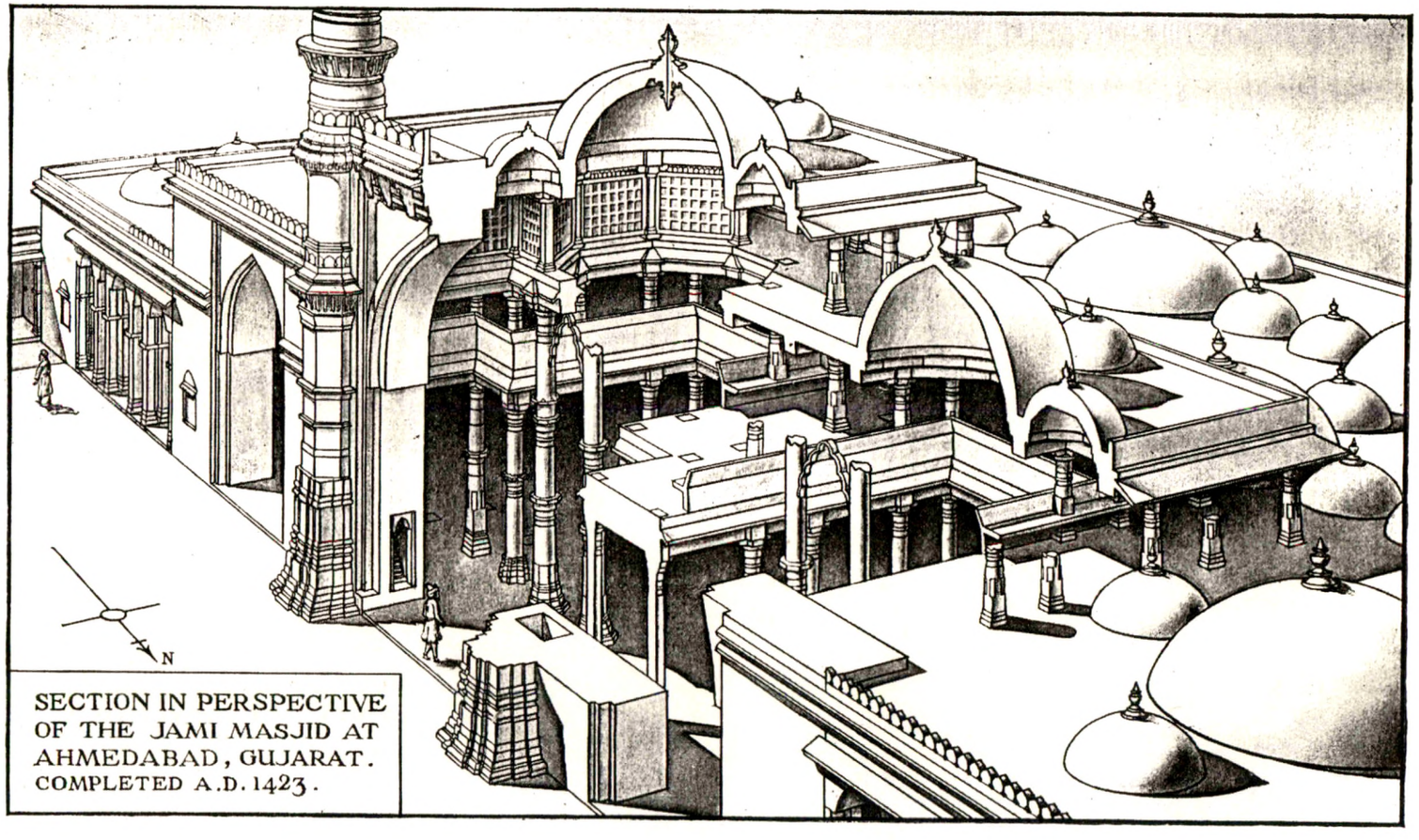


CHOTA SONA
MASJID, GAUR
1493-1519 A.D.



FROM MOSQUE
AT TRIBENI,
HOOGHLY, (1298)


IMPERIAL (DELHI) PERIOD
MINARS, MINARETS, TOWERS & TURRETS
PROVINCIAL STYLE
MINAR AT GHAZNI 11TH CENT.
QUTB MINAR DELHI, 12TH CENT.
FROM KHIRKI MOSQUE DELHI, 14TH CENT.
FIRUZ MINAR GAUR, 15TH CENT.
FROM SHAH ALAM MOSQUE AHMEDABAD, c.1450
FROM MADRASA AT BIDAR, 1472
CHAND MINAR DAULATABAD 1435
FROM JAMI MASJID CHAMPANER 1509
FROM BIBI KI MASJID BURHANPUR c.1590
FROM CHAR MINAR HYDERABAD (DECCAN) 1591
FROM A TOMB AT BIJAPUR, c.1575
FROM GOL GUMBAZ BIJAPUR, c.1650
MUGHAL
FROM AKBAR'S TOMB SIKANDRA (AGRA), c.1607
FROM JAHANGIR'S TOMB LAHORE, 1627
FROM JAMA MASJID DELHI, 1644-58
FROM TAJ MAHAL AGRA, c.1634
FROM WAZIR KHAN'S MOSQUE, LAHORE 1634
TOMB OF RABIA DAURANI AURANGABAD c.1679



SECTION IN PERSPECTIVE OF THE JAMI MASJID AT AHMEDABAD, GUJARAT. COMPLETED A.D. 1423.

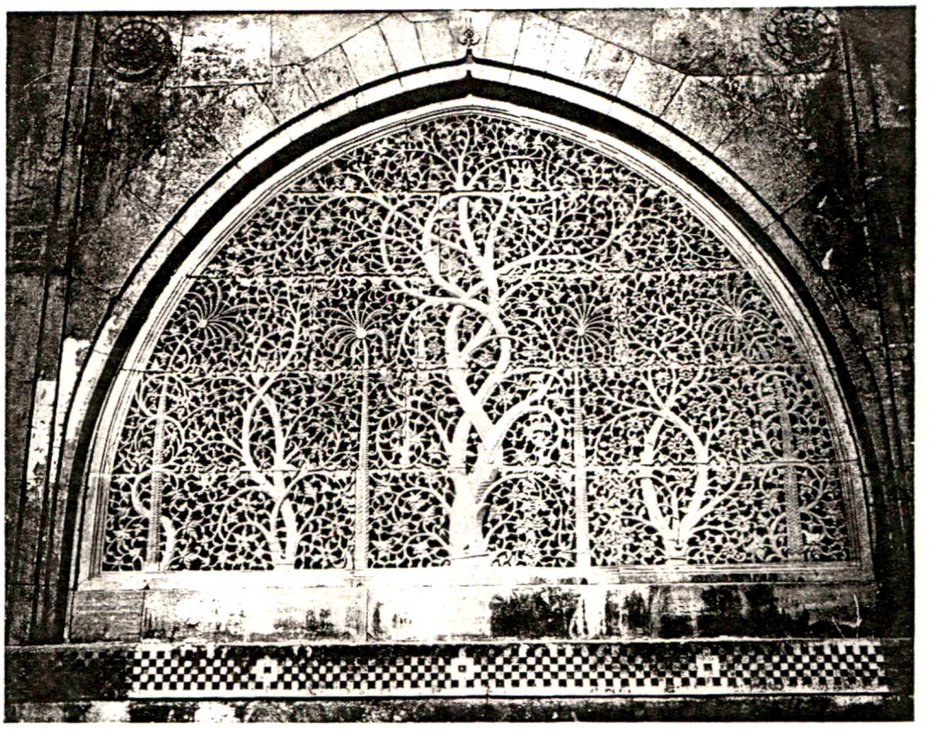


Fig. 1 Ahmedabad : Screen in Sidi Sayyid Mosque (cir. 1515)

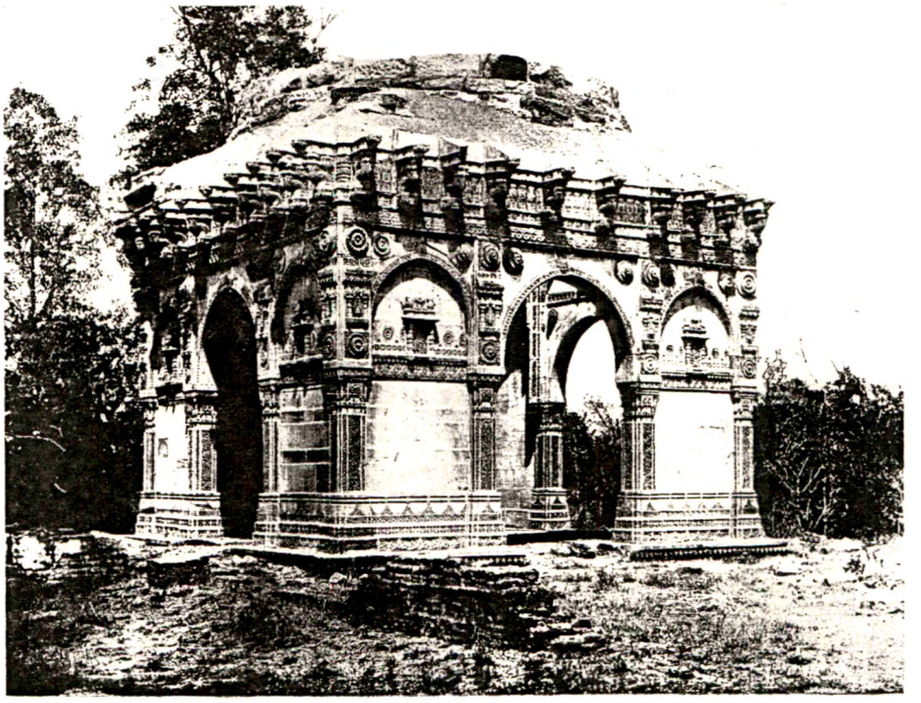


Fig. 2 Champanir : "Nagina Masjid" Tomb (cir. 1525)

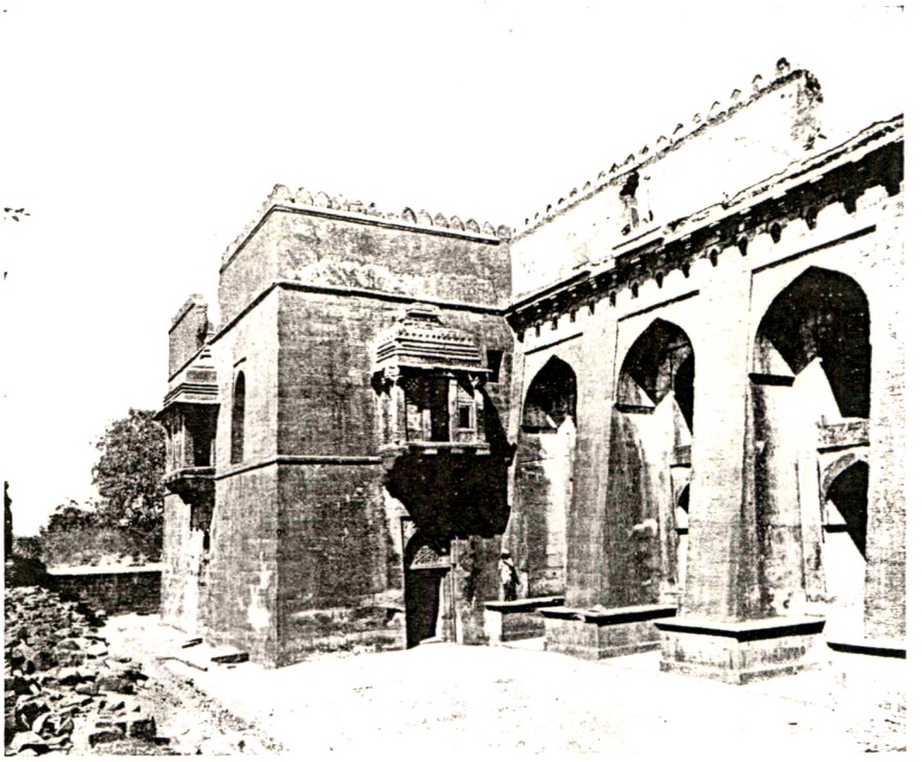


Fig. 1

Fig. 2 Mandu : Hindola Mahall (cir. 1425)

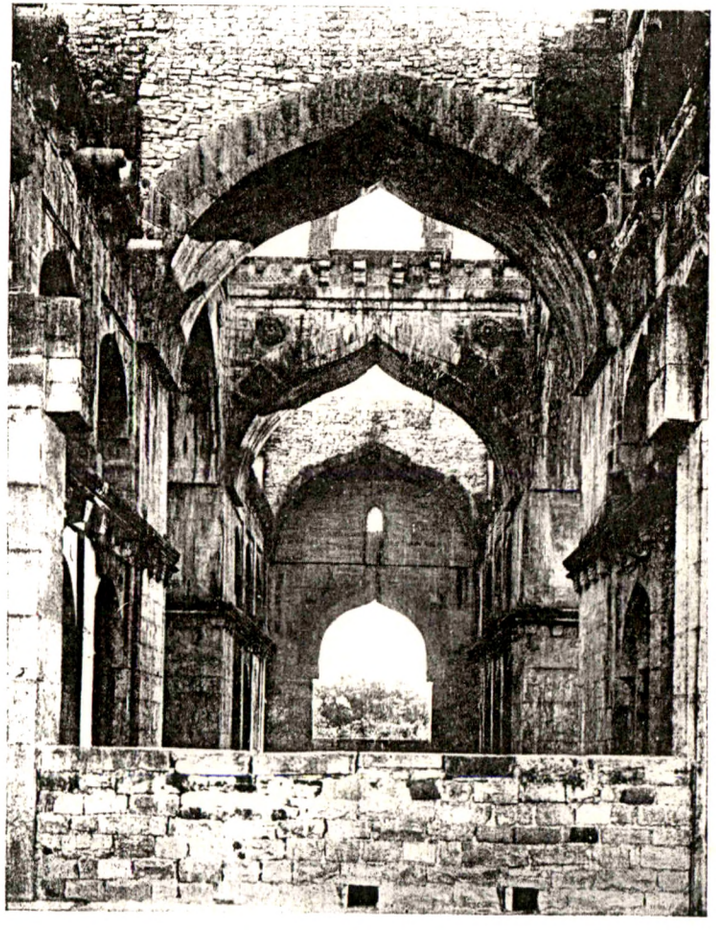


Fig. 1 Kushk Mahall (1445)

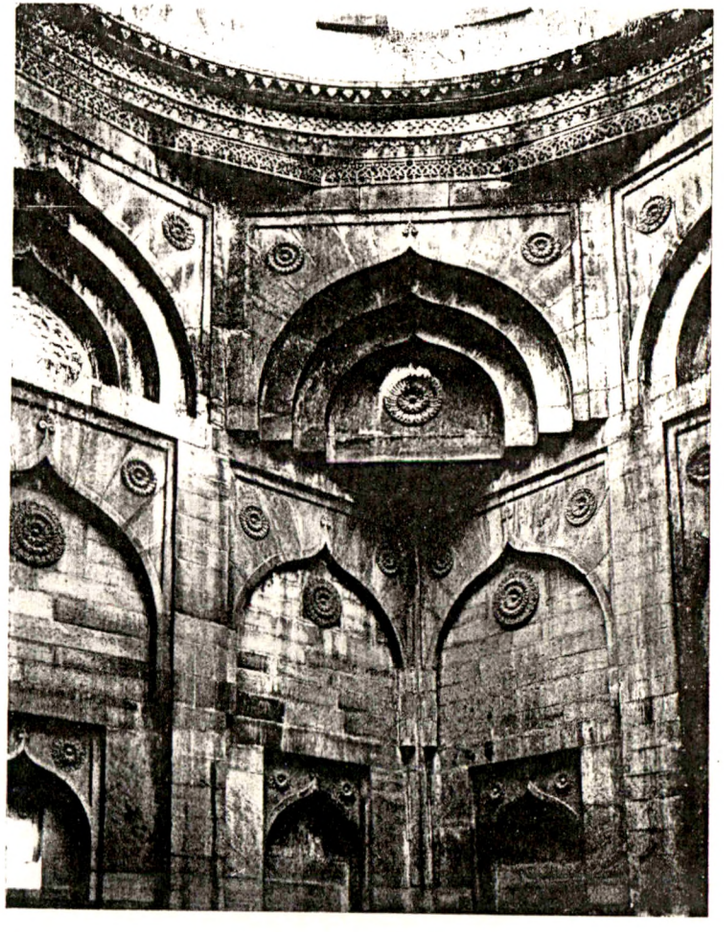


Fig. 2 Shahzadi ka Rauza (cir. 1450)

Chanderi, Gwalior State

Fig. 1 Exterior Facade

Fig. 2 Interior Facade
Fatehpur Sikri : Buland Darwaza

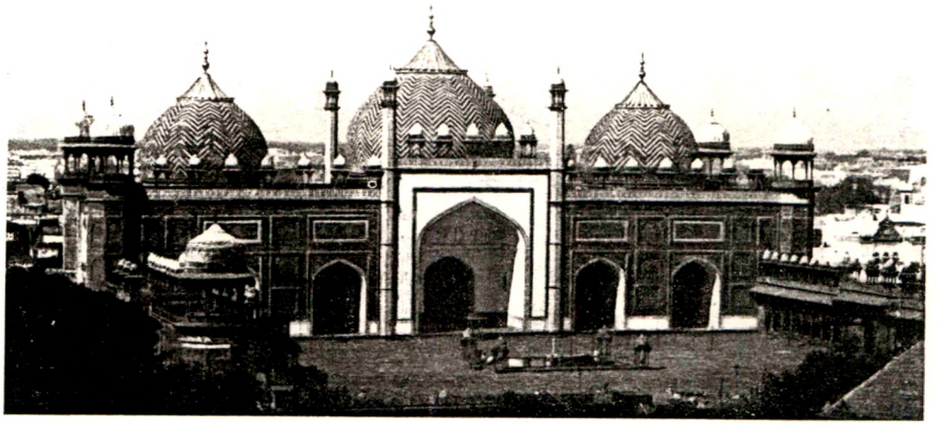


Fig. 1

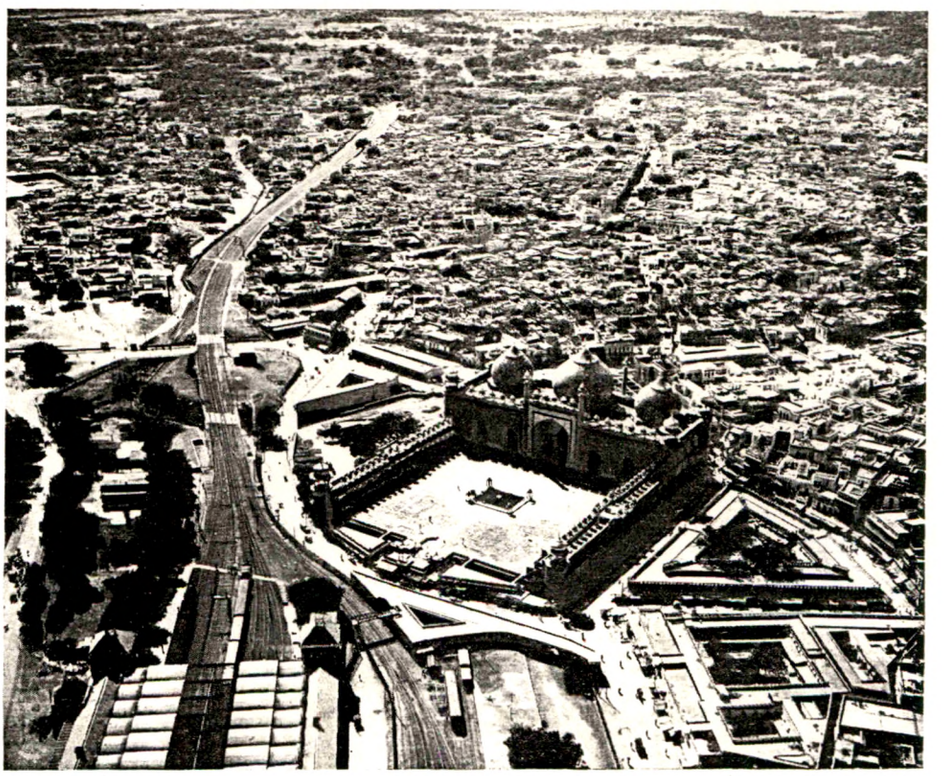


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Fig. 2 Agra : Jami Masjid (1648)

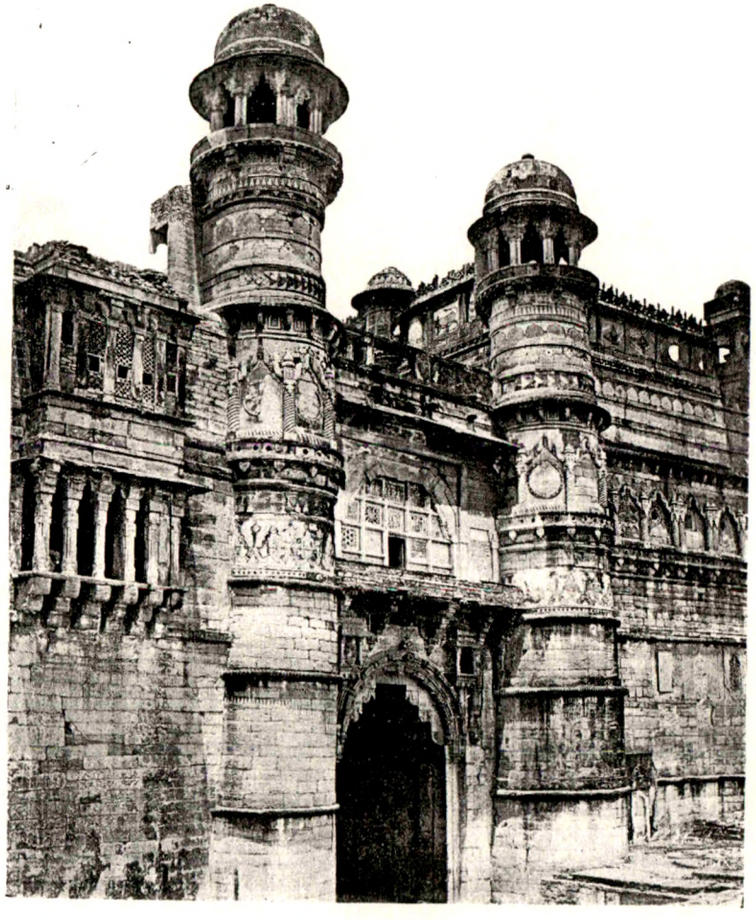

Fig. 1 Gwalior Fort : Elephant Gateway of Man Mandir

Fig. 2 Jodhpur : Street Scene

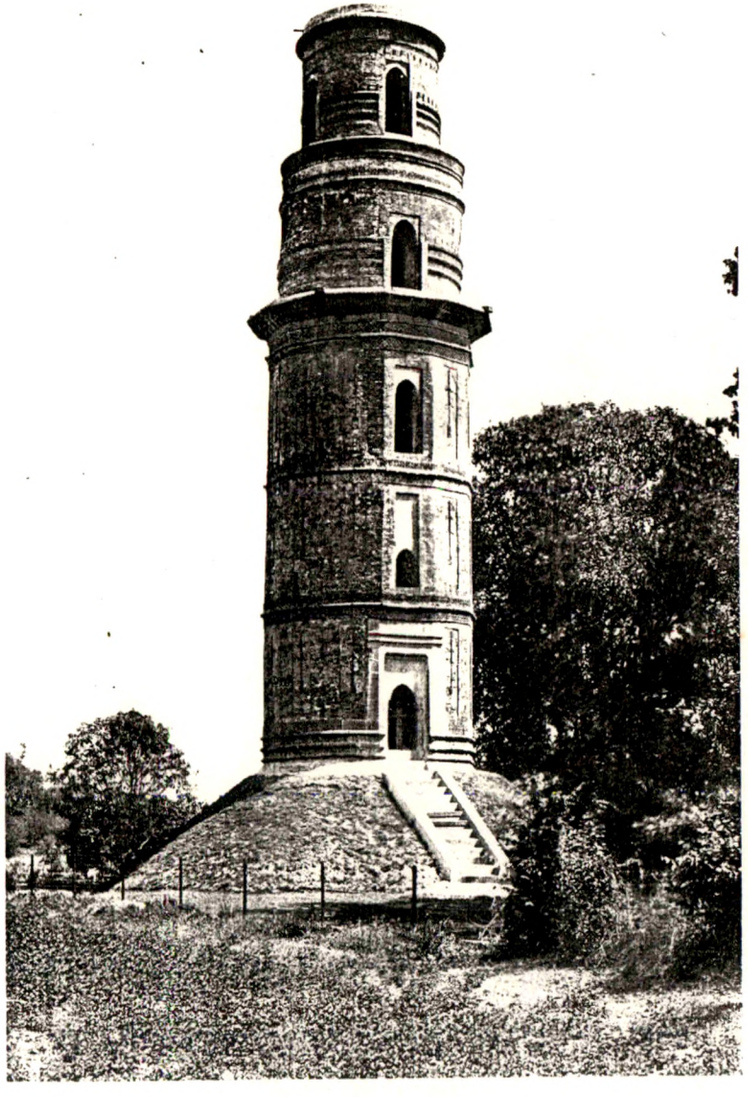

Fig. 1 Gaur : Firuz Minar

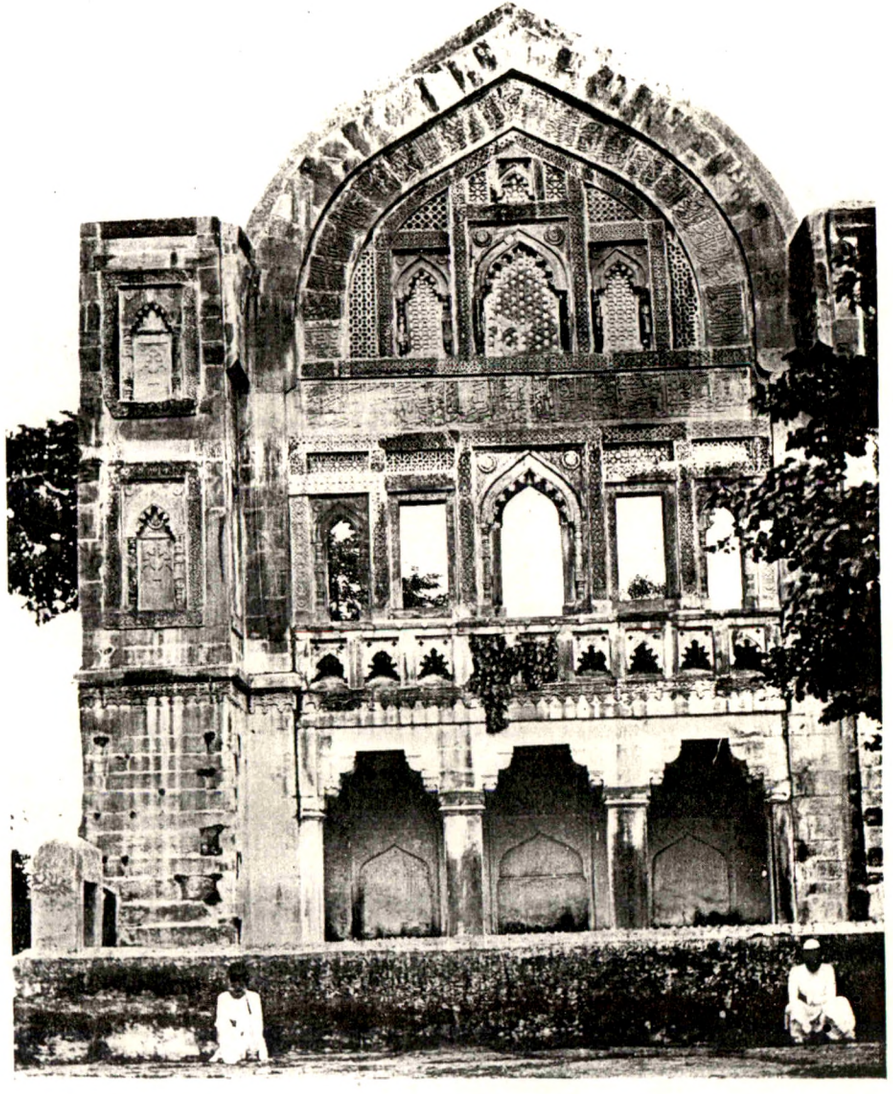

Fig. 2 Jaunpur : Jahangiri Masjid