

CUZCO IN PERU

By G. H. S. Bushnell, M.A., Ph. D.

CUZCO is a place of unusual interest to lovers of ancient buildings, and it is unique in containing notable remains of pre-Columbian work incorporated in buildings of Spanish colonial times. It lies high up in the southern Andes of Peru, about 11,000 feet above sea-level, at the head of a pleasant, relatively sheltered valley, where three streams, descending from steep-sided tributary valleys, come together. Indian villages are scattered about the neighbouring countryside, surrounded by their fields and sheltered by eucalyptus trees, which were only introduced within the last hundred years. Crowning a steep hill overlooking the city is the great Inca citadel of Sacsaihuaman, an elongated quadrilateral protected on two sides by the steep fall of the hill and on the others by a great triple rampart of closely fitted polygonal blocks of hard limestone. From here one may look down on a sea of red tiles, broken here and there by church towers and cupolas, and by a lamentable but ever-growing rash of corrugated iron sheets. The population has increased extremely rapidly in the last twenty years, so many new houses have been built and the lorry drivers sometimes find the older streets narrow and inconvenient, both of them factors which tend to promote the destruction of buildings which deserve preservation. A serious earthquake occurred in 1950 and this raised the question of preservation versus modernisation in an acute form, but I was there in 1938 and again in 1951 for short visits, and the essential character of the place had not changed very much in the interval. The photographs which illustrate this article were taken during my first visit. Just before my second visit, a U.N.E.S.C.O. mission under Dr. George Kubler of Yale had examined the damage, and has since produced a most interesting and informative report.¹ If its recommendations are carried out, the city will be able to expand in a reasonable way, without serious loss of those features which make it one of the most remarkable places in the world.

¹ *Cuzco*. Reconstruction of the town and restoration of its monuments. U.N.E.S.C.O., Museums and Monuments Series III. H.M.S.O. 8/6.

Cuzco was the capital of the Inca Empire, which in its heyday just before the arrival of the Spaniards in the third decade of the 16th century, reached along the Andes from northern Ecuador to central Chile. The growth of the Empire was remarkably quick; until shortly before the middle of the 15th century, the Inca tribe lived obscurely in the neighbourhood of Cuzco, but at that time (1438 is the date given by a recent investigator) it embarked on a career of conquest which carried it to its limits in about 80 years. The Incas are believed to have settled at Cuzco about A.D. 1200, so they were late-comers to Peruvian prehistory, which is known to extend back to at least 2500 B.C., and it is probable that all the visible remains of their buildings date from their great period in and after the 15th century. After the arrival of the Spaniards, much damage was done to the city during the Indian rebellion in 1535, and thereafter many buildings in the neighbourhood were used as quarries for material for churches and other buildings. The Spanish buildings themselves suffered various disasters, of which the worst were the earthquakes of 1650 and 1950, and the effect of the latter at least was accentuated by jerry-building and monumental neglect.

INCA CUZCO

Remnants of Inca walling prove that the city was laid out on a rectangular plan, wherever the lie of the land allowed it, and many of the existing blocks of buildings had their form determined by this. In some streets Inca masonry survives on either side, so that they are barely wide enough to take the wheeled traffic for which they were not meant, for the wheel was unknown to the Incas (plate 1). In Inca times these blocks of buildings appear to have consisted of enclosures, each surrounded by a massive wall with a single entrance, containing long narrow dwellings built against the outer walls, leaving a court in the middle. Such a plan can be seen on several Inca sites outside Cuzco, and the chambers grouped around the cloister of the Dominican convent, formerly the principal temple (popularly called the Temple of the Sun), follow the same arrangement, so that it has been happily described as "a dwelling of the gods patterned after the dwellings of men."¹

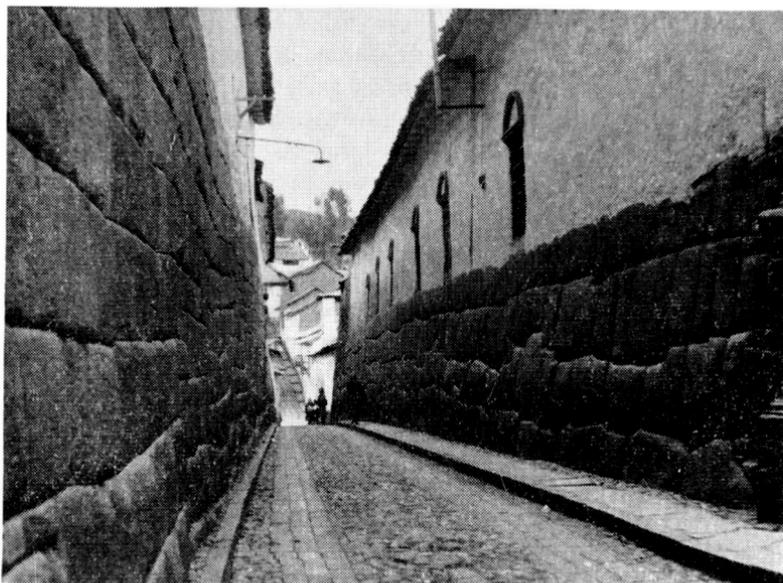
Inca masonry takes various forms and at one time it was believed that they indicated differences of age, but recent research shows that they can be correlated far more readily with differences of function. There are two main types, one composed of polygonal blocks,

¹ *An Introduction to the Archaeology of Cuzco* by J. H. Rowe. Papers of the Peabody Museum, Harvard University. Vol. XXVII. No. 2. 1944. \$2.50.

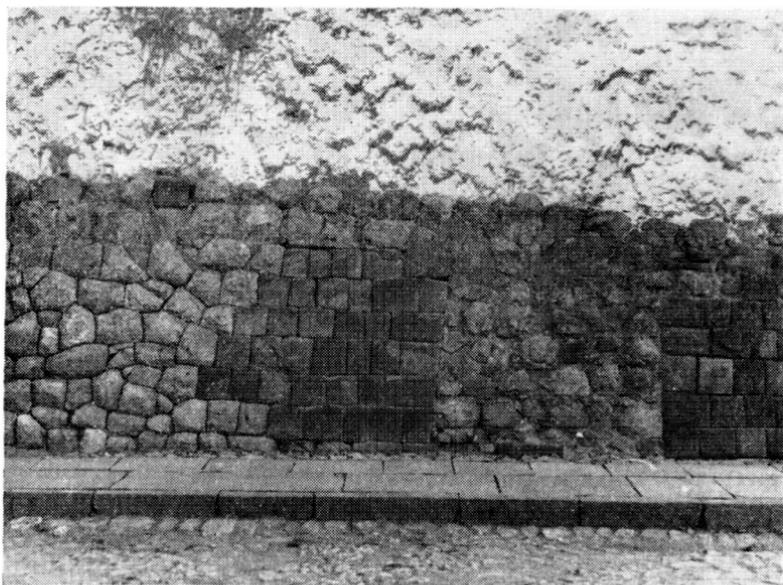
generally of large size, and the other of regular courses of rather small rectangular blocks with sunk joints, giving a rusticated effect. The polygonal type, which in the best example, the ramparts of Sacsaihuaman, contains stones up to 20 feet in height, is used largely for the massive enclosure walls and for the main retaining walls of terraces, and the rectangular type is generally used for buildings. A modification of the polygonal type is made of much smaller polygonal stones, and is sometimes described as cellular. The finest masonry of all is derived from the rectangular type, and is flat, without the sunk joints; an example is the famous curved wall (plate 3) which lay beneath the sanctuary wall of the Dominican church, until the earthquake of 1950 relieved it of that load. More than one type may be seen in juxtaposition in a single wall, as in plate 2, where fine rectangular masonry is used on either side of a blocked door in a generally cellular wall, merely as a matter of convenience. There is no reason to suggest that there is any difference in age between the two types. Some walls, indeed, which are classed with the polygonal type, show a tendency towards rectangularity, and are therefore transitional (plate 1).

This fine stone building, of whatever type, was used mainly for public buildings, such as the palaces of the Incas, temples, and the house of the Chosen Women, generally called the Virgins of the Sun, of which the remains are, appropriately enough, incorporated in the convent of Santa Catalina. The average dwellinghouse was probably of irregular field stones and boulders set in mud, of sods laid in courses, or of sun-dried clay (adobe), all of which are still in common use in the district. It has indeed been suggested, with a fair degree of probability,¹ that the polygonal masonry was an elaboration of the irregular stone walling, while the rectangular type with sunk joints was inspired by the sod construction. In all the fine masonry, the stones fit perfectly together at the surface of the wall, in spite of the fact that the softest stone used is comparable in hardness with the carboniferous limestone of Yorkshire, and a good deal of it is diorite prophyry or andesite, both of which are much harder. They are believed to have been worked roughly into shape with stone mauls, and finally ground in with blocks of sandstone, but whatever the method, the story that not even a knife blade can be inserted between them is no exaggeration. The walls depend for their effect on their massiveness and fine finish, and most of them batter to some extent, which increases their appearance of solidity.

¹ ROWE, *of cit.*



(1) Street known as Hatunrumiyoc, after the building on the right, now the Archbishop's Palace. Inca masonry on either side.



(2) Base of Inca wall, showing cellular passing into rectangular masonry near the jambs of blocked doorway.

There is little in the way of ornament beyond trapezoidal niches similar to the doorways, and these are rare on exterior walls, one of the few instances being the ruin known as Colcampata, near the church of San Cristobal, overlooking the city on the way to Saccsaihuaman (plate 5). Representational carving is extremely rare, and a very few small pumas and snakes in relief, confined to two or three buildings in the city, are the exceptions which prove the rule. Many Inca walls do not stand to a great height, which may in some cases be due to demolition, but there is also evidence from surviving fragments that the Spanish habit of building superstructures of adobe on them was not new. The roofs were of thatch, very finely laid.

SPANISH CUZCO

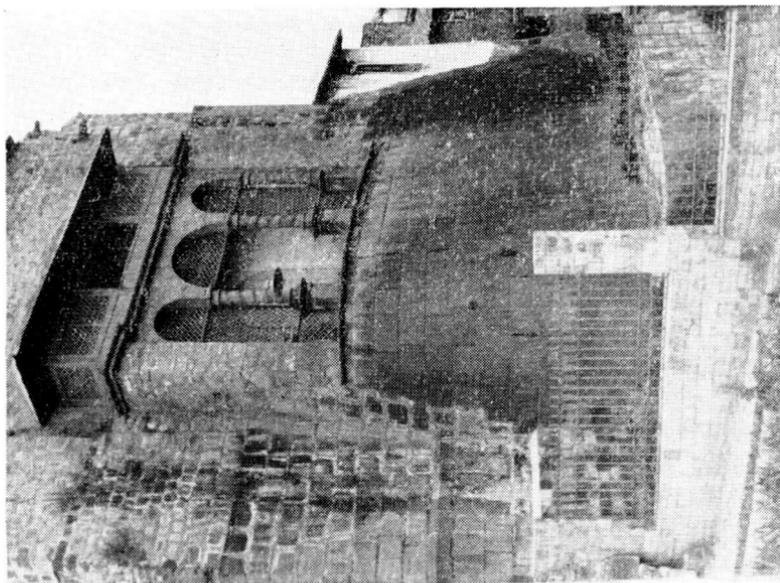
The coming of the Spaniards naturally brought a great change, but a certain continuity arose from the adaptation of the old plan to new needs. Various plans showing the remains of Inca walling have been published, the most accessible being that in the U.N.E.S.C.O. report already referred to, and they show very clearly to what a great extent the old walls were re-used. They are now surmounted by Spanish walls of mud brick and, as has previously been suggested, it is probable that in most cases these replace Inca ones of the same material, though these may have been lower and the thatched roofs undoubtedly weighed less than the present tiled ones. In some cases the extra weight seems to have been responsible for some cracking of the Inca walls in the recent earthquake, but in general they suffered little damage. There was of course a great deal of demolition, and none of the old buildings was suitable for permanent adaptation as a church, so it is natural that a lot of Inca stones were re-used in the building of the churches. A further element of continuity is, indeed, the constant re-use of old building material, a point to which I shall return.

The best work always went into the churches, cloisters, and the doorways of the more important houses. Here we find well-built ashlar walling, brick vaults, domed drums on pendentives, stout towers crowned by arcaded belfries, and rich baroque façades. All too many of the houses on the other hand, and many of the conventual buildings and lesser churches, were poorly built of adobe. This material consists of clay mixed with chopped straw, shaped in the form of bricks in wooden moulds, and sun dried. In some cases the material is moulded in place in larger units, using movable wooden forms. When an adobe wall is demolished, the material is

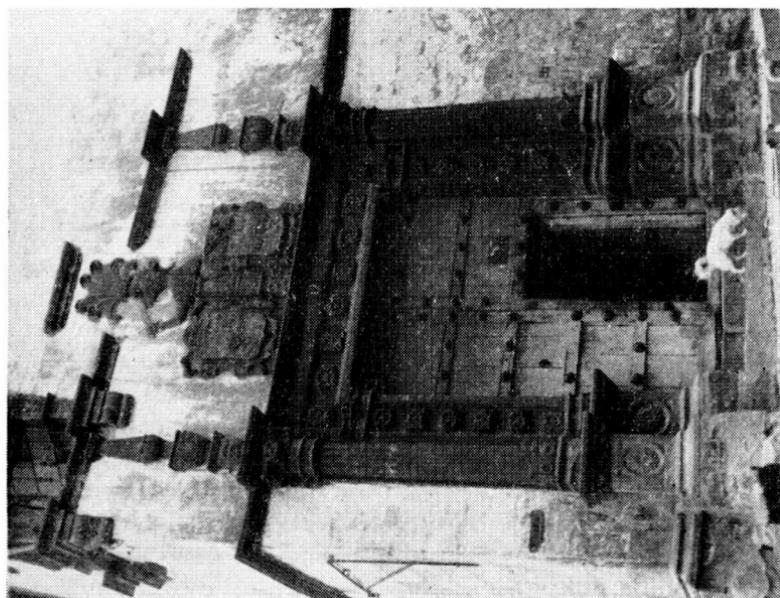
generally used again and this may continue indefinitely, so the substance of much adobe walling may date back to Inca times though it was built but yesterday. Thin adobe walls are built to an excessive height without any bonding at the corners, except that in some cases diagonal beams are inserted and they are not very effective. Stones, where available, are built into the walls at random, and being far harder than adobe, they tend to work out and weaken the wall. The framing of the roof is now generally of eucalyptus, a poor timber for the purpose, but in former times cedar was extensively used, and owing to its scarcity pieces of insufficient length were often spliced together and lashed with thongs. The timber is covered with mats or straw, earth, grass, and finally half-round tiles, a singularly perishable combination which is too heavy for the framing, so that this tends to sag. Normal weathering and neglect can easily cause this sort of building to fall into ruin and the effect of an earthquake on it needs no comment, except that it is cause for wonder that so many of the streets retained much of their ancient appearance in 1951. In the monasteries, the cloister arcades, generally of two stories, are of more substantial construction, brick, stone or both, but in many cases they are backed by adobe buildings which have shared in the ruin. The U.N.E.S.C.O. commission has pointed out that adobe, if properly used, can be a sound building material, and it is aesthetically desirable that it should continue in use; it is relatively cheap, since there is a shortage of fuel for making bricks, and cement has to be transported from the coast, so it is likely to do so, without much general improvement in construction.

The heart of the Spanish city is the great square, the Plaza de Armas, of which one side is occupied by the Cathedral flanked by two small churches, and a second by La Compania, formerly the Jesuits' church, and the University, formerly their convent. The remaining sides have houses and shops, the first floors projecting forward and supported on arcades, forming a covered way beneath, a most picturesque and convenient arrangement which formerly existed also in front of the University, but has been destroyed, largely, I suspect, because it is considered old-fashioned.

The Cathedral is one of the few buildings which date mainly from before the earthquake of 1650, and it suffered little in the recent one, except for the arcaded belfries on the towers, which everywhere in Cuzco showed themselves very vulnerable. The façade with its twin towers is of similar general form and appearance to the later and smaller one of San Sebastian (plate 6) and is very characteristic of the Cuzco district. This provokes the comment



(3) Chancel end of church of Santo Domingo, showing 19th century building, now destroyed, standing on Inca wall of fine rectangular masonry.



(4) Casa del Almirante

that Latin-American baroque architecture tends in many places to develop a marked local character which may persist over a considerable period of time; these twin-towered façades do not occur for instance in Arequipa, another south Peruvian city, where a much greater profusion of ornament is combined with less dignified proportions, and twin towers are not found. The Cathedral has a brick vault with moulded brick ribs, supported on massive stone piers, and it retains the Spanish arrangement with the canons' choir near the entrance, unlike Lima where it has been moved to flank the high altar. The choir is enclosed by high solid screens richly carved with two tiers of figures of saints in high relief, forming the backs of the stalls, the whole an admirable example of mid-17th century work. On either side of the choir, on a gallery above the stalls, is a small organ, one of them believed to be Flemish work of the 17th century. Both have features of considerable interest, though the sounds extracted from one of them by a bad performer on a Sunday in August, 1951, were far from pleasing! The side of the choir towards the high altar is enclosed by a great gilded wooden grille, and similar ones enclose the side chapels which open out of the aisles. One of these contains a great crucifix "The Christ of the Earthquakes," which appears in a panorama of Cuzco painted shortly after the earthquake of 1650, showing a service being held in front of it in the Plaza. The retable of the high altar, which is largely of silver, dates from early in the 19th century, and it stands forward one bay from the end wall, leaving an older altar and retable against the wall behind it, in a neglected condition.

The village church of San Sebastian (plate 6), a short distance outside the city, whose façade resembles that of the Cathedral so closely, was begun after the latter had been finished, and it shows the conservatism of the local builders. The Cathedral was begun in 1582 and its structure was finished in 1654, just after the earthquake. At San Sebastian one tower was built in 1664 and the other as late as 1799, though they were identical in appearance until the recent earthquake, when one belfry fell and the other had to be taken down. Fortunately the individual stones have suffered very little and the belfries can be rebuilt. Apart from the facade, the church presents a contrast to the Cathedral since, like many parish churches, the walls are of adobe and the roof is of the usual Cuzco type, with tiles supported by a wooden framework, formerly hidden by an imitation vault of wood and plaster which fell into decay long ago. Like many other churches in the neighbourhood, it contains a good baroque retable and a series of interesting contemporary paintings

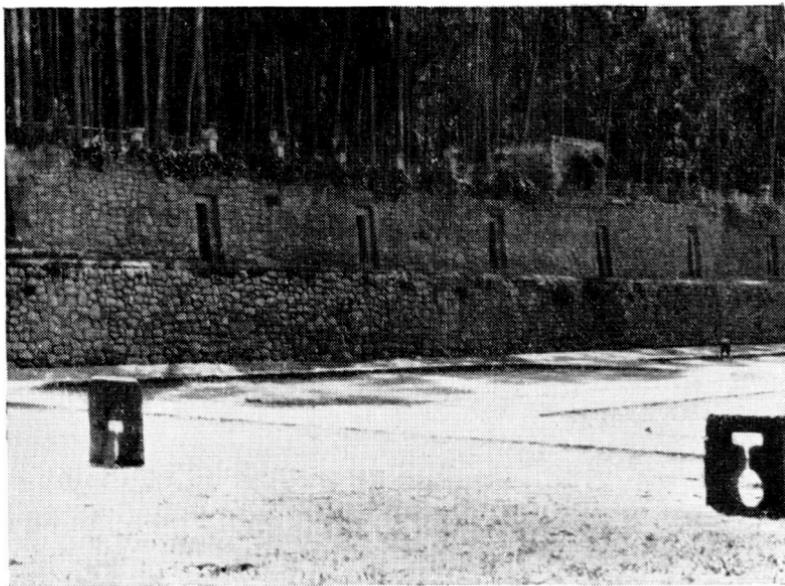
in richly carved and gilded wooden frames, which deserve greater care and protection than the dilapidated structure affords.

Returning to the city, it is only possible to mention a few of the more notable monuments. One of the best is the church of La Compania, which has a noble twin-towered façade of greater height in proportion to its width and more sophisticated appearance than that of the Cathedral, which it adjoins. Both the towers and the dome over the crossing were badly shaken by the earthquake, a contributory factor being the presence of subterranean vaults of Inca date under part of the church, which may have been partly responsible for the fall of its predecessor in 1650. This church retains some original windows made of translucent plates of gypsum, mined at Huamanga not far away, which was formerly used very largely for this purpose, a use which deserves revival.

Santo Domingo, another post-1650 church, is more notable for the Inca associations of the monastery than for its own architecture and it suffered considerable alteration in the 19th century, particularly at the sanctuary end, over the curved Inca wall (plate 3). It has a single massive tower, crowned until 1950 with an ornate arcaded belfry of early 18th century date, which fell in the earthquake, but owing to the incoherent state of the mortar and the presence of a lot of adobe dust, the fall of the individual carved stones was cushioned and few of them were damaged. Like those of many other belfries in Cuzco, they are stacked in the roadway below, awaiting reinstatement.

Another good monastic church is that of the friars of La Merced, and in this case it is the choir to which I would call attention. Like other monastic choirs, it is situated in a deep loft at the entry end of the church and, above the double row of stalls ranged round it, is richly carved panelling bearing a row of the saints of the order carved in high relief, between columns each of which is surmounted by a bust of a saint in a cartouche. These stalls and panelling are very similar to those of the Cathedral, but the carving is more florid and they are believed to date from thirty to fifty years later, namely about 1710.

San Francisco, the church of the Franciscan friars, was built about the time of the 1650 earthquake, and though shaken, it was finished shortly afterwards. The construction of the roof is of some interest, since it consists of a series of domical brick vaults about one metre thick, carried on transverse stone arches. The vaults consist of three layers, the inner one of thin bricks set on edge, above which is a mixture of clay and lime, surmounted by an outer layer



(5) Inca wall with niches adjoining the church of San Cristobal, overlooking the city. The wall is known as Collcampata.



(6) Church of San Sebastian, near Cuzco

of the same bricks laid flat. The main cloister formerly had a panelled ceiling of cedar and other rich furnishings, of which little remains, and it gave an impression of departed glory and of decay in 1938. It was further damaged in the earthquake.

There are still some interesting colonial mansions, but for the most part they have fallen on evil days. The visitor may pass through an imposing heraldic doorway into a charming arcaded patio, with a gallery on the first floor, but in all too many cases he finds it turned into an overcrowded slum. The street front is generally blank on the ground floor though it may be of Inca masonry, but the first floor windows may be protected by carved wooden grilles and there may also be a richly carved wooden balcony beneath the broad eaves. One of the finest examples is the Casa del Almirante, with a magnificent doorway (plate 4) which is believed by Prof. Kubler to date mainly from before 1650, with later additions. The arms are those of a 17th century Conde de la Laguna, who is believed to have rebuilt the house after the earthquake. The adjacent corner of the house was faced with stone and on the first floor it had a charming corner window or miniature balcony, also of stone, but all this was shaken loose from the adobe structure in 1950 and had to be dismantled. It was a sorry sight in 1951, but there are plans for its proper restoration, possibly as a museum.

It has only been possible to touch on a few of the ancient buildings of Cuzco, but they have been chosen to give some idea of the scope of the architectural types and of the abundance of interesting material. Other things which make up the charm of the place—the clear atmosphere, the colourful and picturesque dress of the Indians, the market, the llamas, the Inca ruins in the surrounding countryside, the taste of the superb corn-on-the-cob—have not been mentioned. In the quality of its colonial furnishings and statuary Cuzco is, I believe, inferior to Quito in Ecuador, and in their state of preservation it is undoubtedly worse, but in its colonial architecture and the association of this with Inca remains it is second to none. A wise programme of repair and development exists; if it can be consistently carried out, the city will remain a delight to future generations.
