portions, its small court, and its extensive but routine use of tile mosaic.

A distinctive type of congregational mosque developed in Yazd. Between 1225 and 1234 a local notable, Shams al-Din Nizam, ordered a new courtyard mosque in which the dome chamber and iwan were flanked by halls. This arrangement became standard for mosques in the region. A much restored monumental portal [17] provide a link between the old mosque and the new. Shams al-Din had spent much time in Tabriz, as he had married Rashid al-Din’s daughter, and such new features of the Yazd mosque as tribunes and the easy flow of space between the sanctuary and the side halls were probably copied from now lost buildings in the capitals in north-west Iran.42 The prosperity of central Iran can be seen in the other mosques built in the Isfahān basin along the Zayandeh river at Dashī, Kāj, and Arīhan. In plan, each comprises a square dome chamber flanked by subsidiary structures including corridors, a monumental entrance, and a forecourt, and together they testify to the rapid expansion of Isfahān under the Ilkhanids.43

Not all Ilkhanid buildings were monumental in scale. The tradition of freestanding tomb towers continued. A good example is the Imamzāda Ja'far in Isfahān [18], built for an ‘Alid shaykh and descendant of the fifth imam who died in 1325. The octagonal tomb measures seven meters in diameter and eleven meters high and is more refined in proportion than earlier examples. The terracotta and three colors of tile that decorate the exterior have been heavily restored, but the attenuated proportions of the blind arching on the exterior show the elegance and grace of Ilkhanid architecture at its prime. Its general appearance and architectural details are so close to the tomb known as Chelebi Oglu at Sultanāyeh, built for the Sufi shaykh Burq (d. 1308), that the workers probably came to Isfahān from Sultanāyeh. In this period teams of the finest artisans are known to have moved from site to site: those who made the tile revetments for Natanz in the first decade of the fourteenth century, for example, then made those for Sultanāyeh in the second. Typically, the interiors of these small Ilkhanid shrines were decorated with lustre tiles, and pieces could be added by different patrons at different times. Most lustre tiles have been preserved in Shī‘ite shrines because these tombs continued to be venerated over the centuries. As late as the nineteenth century, the Imamzāda Yahya at Varamin, for example, had splendid tiles on the mihrab, dado, and tomb. Over one hundred and fifty star and cross tiles decorated with arabesque, geometric, or floral designs, now dispersed in some two dozen collections, were produced between October and December 1262. The main mihrab was made by ‘Ali b. Muhammad b. Abu Zahir in May 1265; forty years later his son Yusuf and a partner ‘Ali b. Ahmad made a cover for the cenotaph in the shape of a mihrab [19]. The frieze, unusually made of carved plaster rather than lustre tile, is dated 1307. The interiors of other tombs from the Ilkhanid period in Qum and Kashan indicate that the one hundred and forty years of continuous production of lustre tiles ceased in 1350–60, to be replaced by revetments of carved and painted plaster.
ARCHITECTURE UNDER THE ILKHANID'S SUCCESSORS

After Abu Sa'id's death in 1256, political power became so fragmented and squabbling for the throne so intense that the pace of architectural endeavor slackened, although sporadic work continued through the middle of the fourteenth century under the patronage of amirs who had broken with the Ilkhanids to found their own dynasties. The most important were the Muzafarids (1314-93), who controlled central Iran, and the Jalayirids (1356-1422), who controlled north-western Iran and Iraq. Muzafarid architecture is best seen in the large congregational mosque at Kirman (1350). The plan exhibits many of the features introduced at Yazd, such as the tall portal and the integration of the prayer halls behind the court arcades with the four iwan's of the court.

A notable feature is the extensive four-color tile mosaic decoration found throughout the mosque, and especially on the portal [20], which it envelops in a sparkling web of exquisite color. Buildings from the beginning of the fourteenth century had a continuous surface of tile mosaic only in restricted areas and a limited number of colors. The tomb at Sultanbaly, for example, had complete tile mosaic in light and dark blue only on the muqarnas cornice and in the squinches of the gallery arcade. Fifteen years later, on the Imamzada Ja'far at Isfahan, white had been added to the traditional palette and the surfaces were completely covered with tile mosaic. By the middle of the century, the evolution was complete and tile mosaic covered broad surfaces and entire units. Geometric designs also evolved into increasingly naturalistic vegetal and floral arabesques.

In the last quarter of the fourteenth century, work was resumed on the new congregational mosque in Yazd. Covered halls connected the new portal to the south iwan and much of the present tile revetment was added, for example in the sanctuary chamber and on the façade of the north iwan [21]. Here, too, the building was draped in a many-colored cloak of tile mosaic. Interlocking arabesques are exactly fitted to the reveals and the squinches, and inscriptions frame the main spaces, clearly displaying the high quality of the tilecutter's art. The similarities between work at Kirman and Yazd suggest once again that teams of specialized workmen moved from one important job to another.

The most important surviving Jalayrid building is the caravanserai built by the governor of Baghdad, Mîrân b. 'Abdallah, in 1259 to support the endowment of his funerary-religious complex nearby. Constructed in brick, the rectangular building comprises two stories surrounding a long central hall. The hall, measuring fourteen meters high, is spanned by eight transverse arches which support stepped vaults crowned with domes on squinches [22]. The sophisticated roofing system allows light to reach the interior and shows that the governor must have considered this commercial construction a par with the other parts of his complex, which have not survived.

Transverse vaulting was one of the most important innovations in fourteenth-century architecture. In the period before the Mongol conquest, architects had been interested in structural experimentation, developing innovative ways of using ribs over bays or of breaking up the squinches and
elaborating the zone of transition. After the Mongol invasions, architects shifted their interest to space, particularly the problem of covering rectangular areas. The simplest masonry covering for a rectangular space is a barrel vault, but its continuous walls create a dark interior often unacceptable for a public space. The continuous barrel vault can be interrupted by a series of cross-arches which in turn support transverse filler vaults. This scheme was used in south-western Iran and Iraq in such early Islamic buildings as the palace at Ukhaydir, the congregational mosque of Shiraz, and the fire temple at Survistan. In all these early examples the crown of the vault is horizontal along its entire length. Fourteenth-century architects developed this system by introducing rampant transverse vaults in which the springing lines of the vaults curve upward parallel to the profile of the cross-arches. A rampant transverse vault appears already in the south iwan of the mosque at Natanz. The barrel vaults in the galleries at Sultaniyra have shoulder-arched profiles; varying vaults on pendentives connect the cross-vaults. Other examples appear in south-western Iran, including Yezd, Abarquh, and Isfahan. From there the technique would be adopted in north-eastern Iran, where Timurid architects developed its decorative possibilities by reducing the load-bearing elements and opening the room to increased light and applied decoration (see Chapter 4).

21. Yezd, Congregational Mosque, tilework on the interior of the south iwan, late fourteenth century.

The Mongol conquest in the mid-thirteenth century changed the balance of artistic production in Iran. In the preceding century the decorative arts – textiles, pottery, metalwork, jewelry, and manuscript illumination – were “perhaps at their most inventive and brilliant.” These “basic” crafts continued to be produced after the Mongol conquest, but the arts of the book took on a new role as the central focus of artistic production and the means by which new ideas and motifs were introduced to the other arts. The pivotal role of the arts of the book, particularly illumination, is one of the most important developments of Islamic art after 1250, as it characterizes the later history of the arts not only of Iran, but also of Turkey and India. The widespread availability of paper was one of the primary reasons for this development; paper had been known for centuries, but it seems to have become available more readily and in larger sizes. Designs executed on paper were easily transferred from one medium to another, and professional designers (naqqâl) signed works in such other media as inlaid metal, carved stucco and wood, and glazed tile.

**THE DECORATIVE ARTS**

Textiles continued to be a major industry and underpinning of the economy, but only onegold and silk textile can be attributed with certainty to Ilkhanid Iran [23]. It bears the name and the titles that the Ilkhanid sovereign Abu Sa‘îd (r. 1317–33) assumed after 1319. This sumptuous textile is woven in lamps, with areas of compound weave in tan and red silk with gold wefts made of strips of gilded silver wound around a yellow silk core. The striped pattern consists of a wide band of staggered polylobed medallions and ornamental diamonds with peacocks in the interstices, flanked by narrow bands of running animals and wide epigraphic bands. The official inscription indicates that it was woven in a state factory, probably in Tabriz, and was not a commercial trade good produced for export. The clear provenance of this textile allows a group of related silk and gold lamps textiles to be attributed to Iran in the period from before the Mongol conquests to the fourteenth century. Carpets are also depicted in contemporary manuscript paintings under enthroned sovereigns, but these floor coverings must have been quite rare and no Ilkhanid examples have survived.

Ceramics from the late thirteenth and fourteenth centuries are far less varied in technique than earlier examples. All works of artistic pretension have bodies of a white paste whose softness precluded the subtlety of shapes used earlier. Overglaze decoration was generally replaced by the cheaper technique of underglaze painting which did not require repeated and complex firings. Lustrewares continued to be produced, but the quality of the decoration declined as painting was simplified and stylized. Designs were less detailed and drawing was cruder, although new Chinese motifs such as simurghs and lotuses were added to the repertory. The few lustre-painted vessels made in the second half of the thirteenth century have somber and heavy decoration. Although lustre tiles for architectural revetment were produced until 1310 (see Chapter 2), the production of lustre vessels declined after 1295 and ceased after 1284.

Kashan remained the major center of lustre production, where the traditional craft was handed down in families. The best-known potters belonged to the family descended from Abu Tahir. One member, Yusuf b. ‘Abî b. Muhammad b. Abu Tahir, signed a chlorite dated 1305 from the Imamzada Yahya at Varamin [109], frieze tiles dated 1309–10 in the British Museum and Cairo, and a large chlorite dated 1324 taken from the Dar-i Bihshat in Qum to the Archaeological Museum in Tehran. He and his fellow lustre potters worked in other ceramic techniques as well, for he signed a molded blue-and-black underglaze tile containing the foundation inscription of the Qâ‘a Mosque in the village of Qâshrud outside Kashan. Yusuf learned his craft from his father, who had signed lustre millelubs between 1242 and 1265, but his brothers chose other professions. One brother, I‘zz al-Dîn Mahmûd, became a mystic at the Shahrawardi khanâqah attached to the tomb complex of ‘Abî al-Samad at Natanz [8–11]. Another brother, Jâmî al-Dîn Abu’l-Qâsim ‘Abdallah, became a scribe and accountant in the imperial bureaucracy; he composed a biography of Sultan Ujayl and a treatise on gems and minerals, which is the major source for mediaeval Baghdad.

for the art of making ceramics in medieval Iran. It gives information on where potters' materials were found, how they were prepared, and how vessels were fired, glazed, and enameled. A group of enameled and gilded bowls and tiles attributed to the late thirteenth and fourteenth centuries is known as ḡigandina ware, from the Persian word for lapis lazuli, because of the deep blue glaze that characterizes many of them. Some are glazed in a lighter turquoise, blue color. The pieces are leaf-gilded and overglaze-painted in red, black, and white. These wares, which apparently replaced the mina'-e wares of the pre-Mongol period, must have been extremely expensive because they are costly materials and require a second firing in a special kiln. They were produced for some time: Abruq Qasim describes the technique in his treatise, and a fragmentary star tile is dated 453. A bowl dated 534-5 is a late piece which must be made near the end of production. Vessels have a coarse grayish body and chunky shapes. Bowls [24] often have radial patterns decorated with scrolls, circles, and dots. Dishes of star and cross tiles in alternating dark and light blues were set below a frieze of rectangular tiles with inscriptions and borders of phoenixes and dragons, designs that may have been copied from Chinese silks. During this period, potters shifted their production to underglaze-painted wares. The major type is known as "Sultanabad" ware after the city on the road from Hamadan to Isfahan where many pieces were found, but as it was founded only in the 1808 and no klin sites have been discovered there, the name is only a convenient, if misleading, label. A few of the more finely potted pieces transfer hauer designs into the underglaze technique and have been attributed to Kashan, but most of the pieces have coarse and clumsy potting with a thick glossy glaze which forms greenish pools and drops. The typical shape [25] is a deep conical bowl with a wide rim overhanging the interior and exterior. The rim is decorated with a pearl border, while the interior has a design of animals or birds with spotted bodies on a ground of thick-leaved foliage. The greenish or grayish-brown slip covers the surface a bumpy texture. A similar interest in texture is apparent in a group of molded monochrome wares, including large jars, bowls with vertical sides, jugs, figurines, and models. They are glazed in either cobalt blue or turquoise and molded in relief with vegetal, epigraphic, and figurative motifs. As with textiles, the surviving pieces of metalwork that can be attributed clearly to Ilkhānī Iran cannot adequately reflect contemporary production. Mahmūd b. Sunqur's penbox inlaid with silver and gold of 1281 shows that earlier styles and techniques continued, although he replaced the copper inlay used earlier with gold. Contemporary authors, such as Hāmidūllāh Mustawfi Gazzwini, mention many centers of metalwork production, and metalwares and architectural fittings are represented in contemporary manuscript painting. One of the most common objects depicted is a large candlestick meant to stand on the floor. An example in Isfahan, which is missing its socket and neck, was given in 1308-9 to the shrine of Bayāzīd Bāstanti by a Karim al-Dīn Shūgānī, a vizier of Sultan Uljaytu [26]. Its size makes it the largest candlestick to survive from Islamic Iran. The truncated conical base has narrow vegetal bands at top and bottom, which have lost most of their silver inlay. The body is decorated with four roundels inlaid with floral designs alternating with four cartouches inlaid with the dedicatory inscription, but is otherwise plain. The complex arabesque cartouche on a plain ground recalls the decoration painted on the interior of Uljaytu's tomb at Sultanīyā and may ultimately be traced to contemporary manuscript illumination. The presence of peony and lotus motifs on the candlestick is one indication of the close diplomatic and commercial relations in the Ilkhānī period which led Iranian artists to look at the arts of Yüan China. Although the place of manufacture is not stated, the candlestick reflects the highest level of patronage and may well have been made in the capital, Tehran. Most of the other candlesticks attributed to the period have all-over decoration, and many bear figurative representations. A group of about fifty candlesticks with concave sides and decorated with princely themes and the labors of the month were traditionally attributed to north-western Iran under Ilkhānī rule, but an attribution to Anatolia under the Saljuqs is more likely. The other pieces clearly attributable to the region in this period are bronze bulb-joints for window-grilles (diameter: 7.5 cm), inlaid with gold, silver, and a bituminous material. Three bear the name of Uljaytu and may well have come from his tomb at Sultanīyā [4-6]; they are decorated with cartouches, arabesque scrolls, and T-fret designs. A related piece (diameter: 9 cm) bears a representation of a mounted falconer set against arabesque scrolls in the central medallion and peony scrolls outside it. Common stylistic features allow the attribution of several basins, caskets, and boxes to workshops active in the orbit of the Ilkhānī court. The city of Shiraz in south-western Iran was another center of production of brass inlaid with gold, silver, and a black bituminous material. A key piece is a bucket (height: 48.7 cm) made in 1332-3 by Muḥammad b. Aḥmad al-Shirazi, who identifies himself as the servant of the Jundal ruler of Shiraz, Shafar al-Dīn Mahmūd, during the reign of an anonymous sultan who carries the title "heir to Solomon's kingdom" (Pers. kārīq-i muḥāfaz-i ālamkhan). The title refers to the Achaemenid monuments of Fars province (which were considered to be inhabited by the spirit of Solomon) and was adopted by rulers of Fars. The pear-shaped bucket has a ball handle, and decorative zones on the body and neck contain epigraphic cartouches alternating with roundels filled with geometric and arabesque ornament. Triangular- and T-fret patterns fill the ground and interstices. The distinctive titulature, script, and stylistic features are characteristic of the school of Shiraz metalwork that flourished in the fourteenth century. The most characteristic type of metalware produced at Shiraz in the fourteenth century is a low, rounded bowl decorated with epigraphic cartouches, including the title "heir to Solomon's kingdom," alternating with polychrome medallions with figures of hunters, riders, or enthroned figures. Many examples are decorated on the neck with a band of running animals and on the base with a radiating sun on the exterior and a fish pond around a sun on the interior. These solar symbols were deliberately placed so that when the bowl was filled, the celestial light in the center was evident and when the bowl was tilted for drinking, the image of the sun in the heavens was visible to the viewer. The bowls were made as early as 1325, to judge from an example in Modena signed by Aḥd al-Qadir Shirazi.