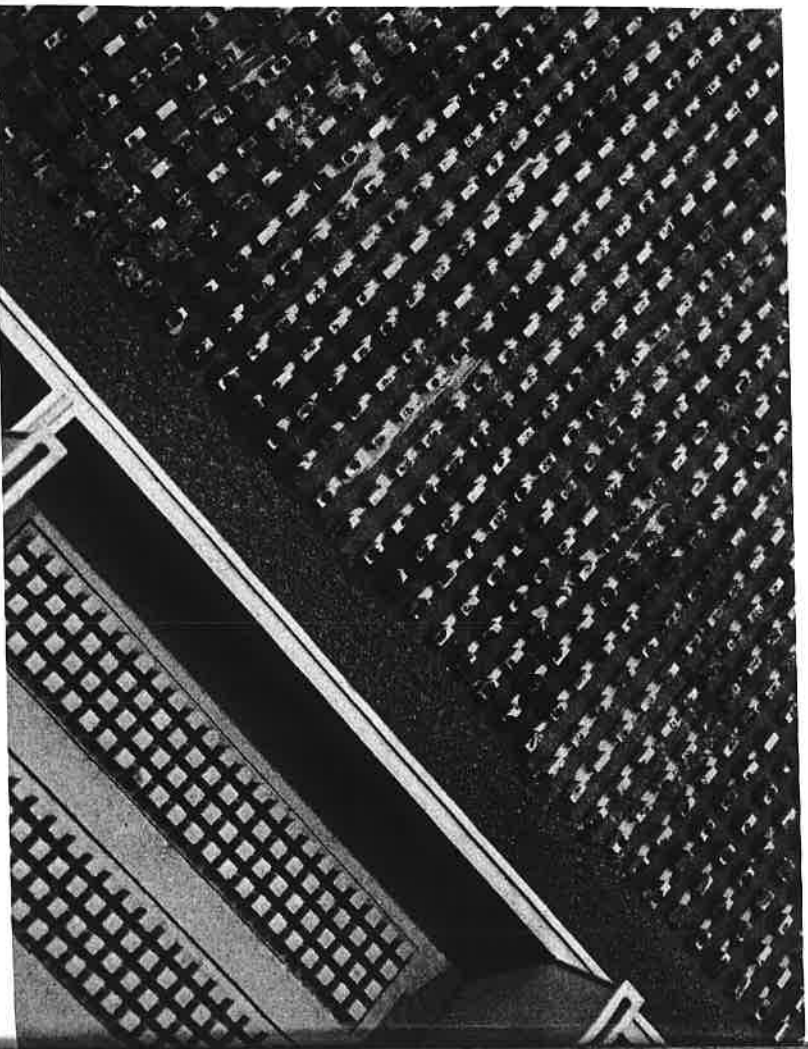


NEW ASPECTS OF ANTIQUITY

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BARRY KEMP

The City of Akhenaten and Nefertiti AMARNA AND ITS PEOPLE

With 287 illustrations, 53 in colour

 **Thames & Hudson**

THE QUALITY OF LIFE

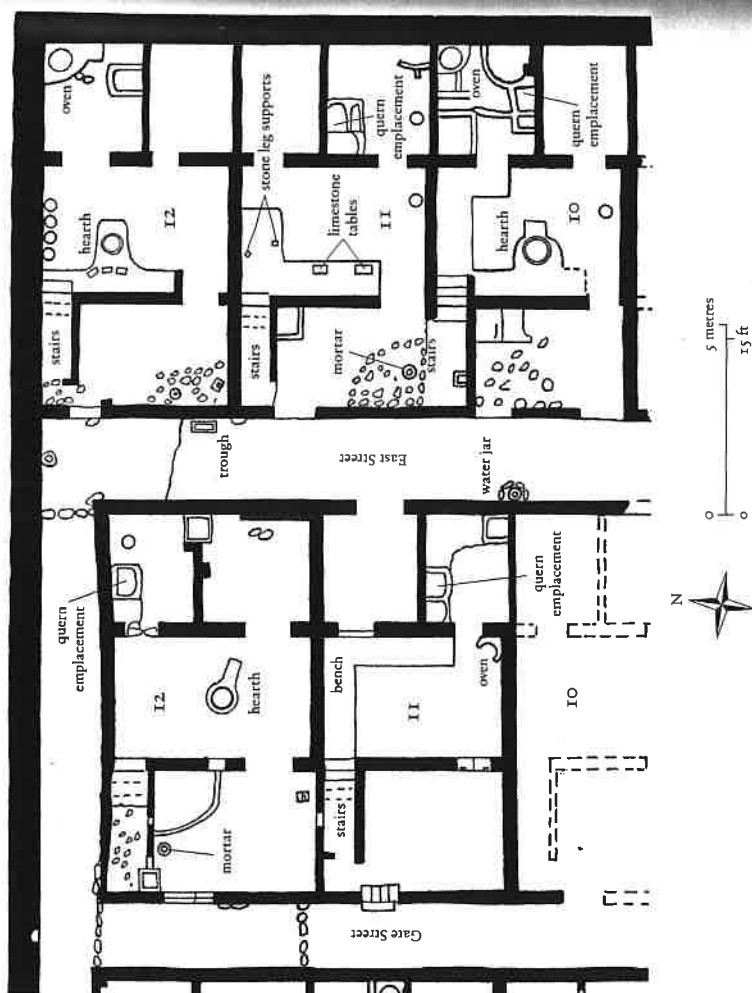


Life from Objects

Amarna the city speaks to us mainly through the ground plans of its excavated buildings. Even though the houses are ruined and sometimes no more than foundations, we can, when working with ground plans, be fairly sure that we have a relatively complete outline of what was once present. Some information will be missing, especially if the buildings rose to more than one storey, but ground plans do supply a kind of basic currency of description. They offer a snapshot of life that requires relatively little commentary. Houses were also provided with 'firings', minor elements constructed from mud brick or made of stone, and these, if they survive, can help us to understand how the different parts of houses were used [6.1].

With portable objects that were left inside and around the buildings, however, the picture is different. The evidence has widely differing characteristics and generally requires far more study to extract meaning. As a result, much more has been written about the architecture than the objects. Some of the difficulties are intrinsic to the material itself. Whole categories were simply too precious to their owners to throw away or leave behind, and some materials, even if abandoned, had poorer chances of long-term preservation. The excavated record of artifacts is therefore far more fragmentary, and heavily biased towards certain kinds of things. For example, because pottery was cheap, disposable and resistant to decay it has survived in huge quantities, sufficient to make us believe that, from studying large samples, we can derive conclusions about matters of trade and domestic economy that are fairly reliable.

Bronze, however, was valuable even as pieces of scrap. People did not throw bronze items away. Excavation at Amarna has produced sufficient bronze articles to show the range of things that were made in this material (e.g. 3.19-3.21), but it will never be possible to know if one kind was more common than another, or if certain utensils were more likely to occur in kitchens or bakeries or temples than others. In the case of wood, papyrus and textiles, the basic material is itself subject to destruction through environmental factors, especially the eating habits of colonies of white ants or termites that live along the desert margins in Egypt. Thus at the Workmen's Village, far enough into the desert to be less affected, wood was the commonest material of the spindle whorls used in the making of yarn for textiles. In the main city, however, most



6.1 Plan of the northeast corner of the Workmen's Village, one of the least disturbed parts of Amarna. For the location of the houses, see figure 5.30.

of the spindle whorls found are of stone, but this is only because termites must have eaten nearly all of the wooden ones and, in the process, have probably destroyed the bulk of examples.

Archaeological practice has also had an effect. Excavators in the first decades of the twentieth century, funded by private donors or museums, tended to be very selective in what they kept and recorded, and even more selective in what they found space for in their publications. Whole categories of objects – especially various kinds of stone tools and pieces of industrial waste – were largely ignored. The parsimony of their attention paid them dividends. They were able to cover large tracts of ground fairly quickly and so increase their chances of major discoveries. That will not do any more. By following acceptable modern practice and adopting the simple combination of passing all the dirt through a sieve and of keeping everything that was manufactured (apart from bricks), the number of finds seems to have increased by at least one hundredfold over the rate of recovery of the earlier days, with a consequent major change in the pace and character of the archaeological work as a whole. If one counts potsherds as 'finds' the total has to be multiplied several times more, and beyond 'finds' lie other categories of potentially useful material, such as plant remains (including charcoal fragments), animal bones, organic jar residues, the waste products of manufacturing and the remnants of insects. They all have a tale to tell, a contribution to make to a fuller picture of life at Amarna.

Modern archaeology exchanges the broad view for the intensely detailed, and at the same time expects more to be done with the material found than dismissing it with brief and incomplete listings. At Amarna, any attempt at serious analysis of what has been found has to accept that much of what earlier archaeologists recovered is still not properly documented, and that certain categories of material are still lying in their old spoil heaps. These are a stable part of the landscape, and modern archaeology will gradually address them (for an example, see 4.5).

The various categories of archaeological material open up innumerable pathways for study. One possibility is to track how they are distributed across the site with a view to explaining why they are evenly spread or not; another, related possibility is to seek the geographic origin of a class of material and thus its source, an aspect of trade and other forms of supply. The close examination of objects, of tools and of waste products serves the history of technology; how things were made.

The most elusive aspect of objects, however, is how they contributed to the texture of ancient life. From the time of waking in the morning until sleeping at night the occupants of our Amarna houses constantly brushed, physically and metaphorically, against all these material things. How objects were experienced could be their most important aspect, yet it lies outside the field of scientific enquiry, being available only through imaginative insight and the dangerous lens of empathy: the varied weights of pots and the touch of their often rough surfaces; the slight tastes they must have imparted to the liquids

they held; the feel of linen of different qualities on the skin and the unthinking habits that came with wearing it with dignity, loosely draped and fastened by knots. And the judgements! On visiting a house that was not your own, what would you pick out as significant, which might mark that person as richer or poorer, or well connected to the court, or lacking in taste and perhaps indicative of humble or even foreign origins?

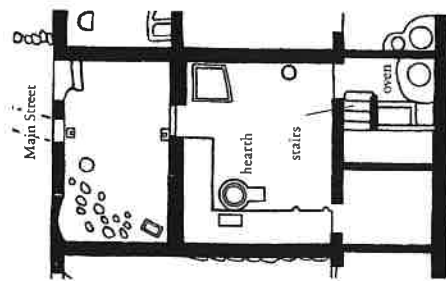
These are physical sensations and social cares, and much of this chapter is devoted to the range of things that will have shaped the outward experience of living at Amarna, albeit elements common to ancient Egyptians of all periods and elsewhere. But as explored in the next chapter, in Egyptian eyes the house and the neighbourhood and the world beyond will have had spiritual resonance as well, in which material objects had their place.

Living the Low Life

No matter what the plan of a building, furnishings profoundly influence how people see and use it. In our own homes, the arrangement of tables and chairs, fireplaces and television sets and the placement and design of rugs give a room its character. Furnishings are, however, a category of evidence often missing from archaeological sites. The ground plans of Amarna houses tell only a part of the story of how space was sub-divided.

The portion of an Amarna house most amenable to study from this point of view is the central hall. Two common features create an internal orientation from the sides of the room facing towards a central focus. That focus was commonly the hearth made from a broad pottery bowl sunk into a low mud surround [6.2, 6.3]. In many of the smaller houses (including those in the Workmen's Village) a low bench, the height of a single brick, ran along one or two of the walls, and people sat or squatted on this, facing towards the room centre. In the larger houses, the bench was single, either on the wall facing the main entrance or on one at right angles. These are, of course, built-in fixtures. The placings of mats, wooden tables, stools and chests, pots in stands, even cushions, all of which we know existed, are, by and large, lost to us.

Here we also encounter a dividing line in the history of personal behaviour, a difference in height in the horizon of reach. When inside a building, I am most comfortable with a set of surfaces that are between about 70 and 180 cm (27.6 and 70.9 in.) above floor level, the latter being items on shelves, including those towards the top of a large refrigerator and coats on hangers in a wardrobe. Things that are below about 70 cm (27.6 in.) require stooping and reaching down, bringing slight discomfort because I am not so used to it. In an Amarna house, the horizon of reach was lower [6.4], from close to floor level up to around 50 cm (19.7 in.) (wooden tables, the height of wooden storage chests), because people were at ease when squatting and kneeling. A valuable pointer to the range of reaching-height is given by the domestic altars, places where you displayed, probably only from time to time, items charged with special meaning [7.16]. They were often close to the floor.



3 metres
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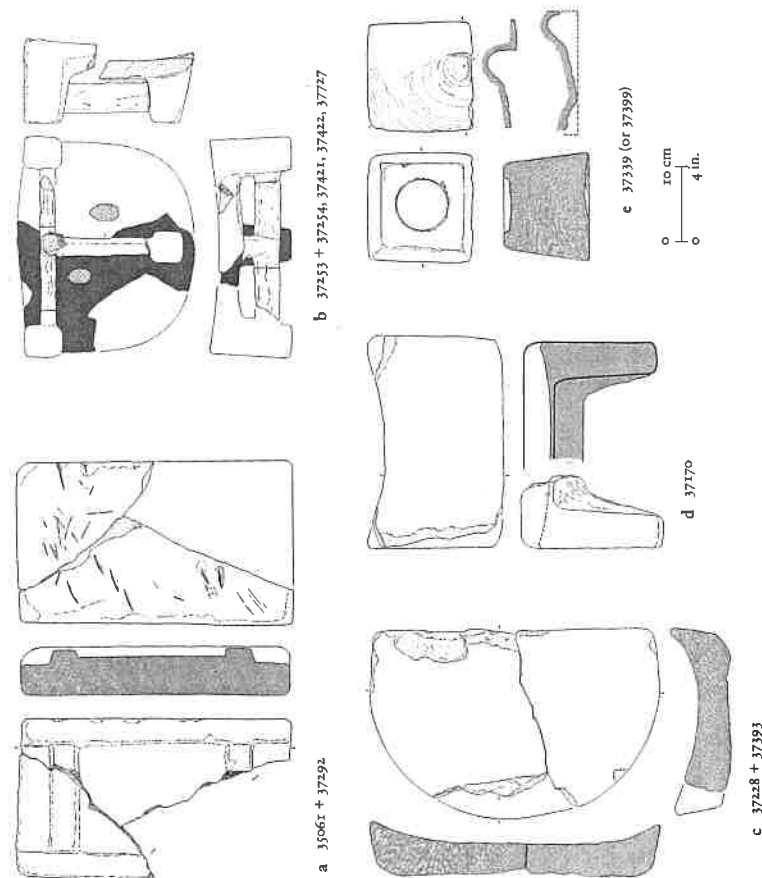


6.2, 6.3 (left) Plan of one of the houses at the Workmen's Village, Main Street, house 8. Compare figure 5.30. (right) View of the central living-room of the same house at the time of excavation in 1922, with a workman posing as one of the original occupants.

6.4 (below) At home in Amarna, mostly close to the ground. A series of ancient pictures showing Amarna people. From left to right: palace women tending their hair (tomb of Ay, no. 25); man warming his hands over a charcoal hearth (tomb of Mahu, no. 9); girl taking a snack in the palace (tomb of Ay, no. 25); two men, seated on wooden chairs, being waited upon by two women (design on a small stela from the city house of Panehsy, R.44.2); female musicians in the palace (tomb of Ay, no. 25).



How people rest their bodies (when not actually sleeping) is an important cultural marker. The way that Egyptians wanted to be remembered – husbands and wives as well as kings – was, if not standing or striding, sitting on a chair that was roughly calf height. Two statuettes from Amarna depict men seated (in one case on a wooden chair with a back) holding the stem of a lily flower to their chest [7.17]. Fragments of chairs have sometimes been found. Nonetheless, squatting on the floor was not necessarily a less dignified alternative. Senior officials still had statues of themselves made in the posture of the squatting scribe [7.6], and this is how the gods of the Otherworld assembled when judging the dead, seated on a mat that was itself a symbol of authority in this context.



6.5 Limestone furniture recovered from the excavation of the small houses of Grid 12. a Table scored with cut marks; b seat with carved support bars modelled on wooden furniture, the plan view being the underside; c concave seat to be placed directly on the floor; d seat slightly raised on two narrow supports; e block with sloping sides and circular recess on the top surface, originally intended to support the wooden leg of a bed or chair, and later (when turned upside down) used as the pivot block for a wooden door.

Between normal chair height and the ground, any intermediate level also gave an acceptable height. One painted ivory leg of a chair was 19 cm (7.5 in.) high, for example; and a preserved lattice stool reached 30.5 cm (12 in.) in height. In a painting from the King's House [Pl. XX], Nefertiti relaxes on a thick, richly decorated cushion spread out on the floor (her husband on a seat seemingly placed on the cushion). The lower height created scope for a range of stools made from limestone, carved with a concave seating surface, fragments of which are common at Amarna (though under-reported by the older excavations; 6.5). One example copied a wooden design, in having an underlying framework of separated struts carved in the stone. The height of some chairs, however, was increased by standing them on little stone supports (see below).

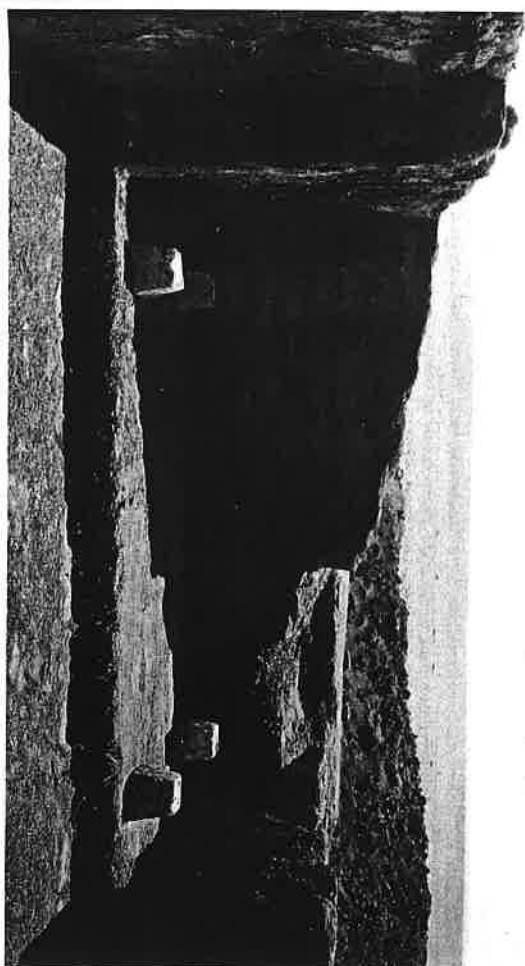
Ancient pictures often show people eating while occupying a full-height chair. They reach for the food set out at elbow-height on a wooden table with thin latticework legs. When squatting on the ground, however, people might have chosen an option that archaeology also reveals: flat rectangular slabs of limestone carved with supporting bars on the underside (6.5; another is present in 6.3). They, too, are common finds. Mostly the top surface is smooth, but a few examples show diagonal scorings from blades, perhaps because the tables had a use in preparing food as well, although they could also have served as work-benches for the making of things.

The central room in many houses was provided with a low brick bench, rising by only the thickness of a brick (no more than 10 cm, 3.9 in.) above the floor. This was the height of the small throne dais at the rear of the North Palace (4.10). One location, for a version wide enough to take two wooden chairs side by side on the bench, was in the middle of a wall in the central hall, sometimes placed to face the main entrance. The natural interpretation is to see the householder and his wife sitting rather stiffly on chairs to receive their guests (as so often shown in tomb paintings and on memorial stones), implying that the longer, narrower 'reception' hall in the larger houses was really there to give the sense of making a procession into the heart of the house.

In smaller houses, more of the wall space of the central room was taken up with low brick benches, which sometimes turned a corner between two walls (6.2, 6.3). They were equally suited to wakeful squatting while eating and talking, and to sleeping at night. There is an archaeology of sleeping. Huya counted a made-up wooden bed as a desirable item for his tomb equipment (7.23). Some of the pictures of the royal palace likewise include a carefully delineated royal bed complete with soft bedding, head-rest and short portable steps (4.20). It is generally accepted that the beds of the elite, including the king, stood in an alcove on a low dais at the back of a fairly long 'bedroom' that also offered ample space for keeping, for example, chests of personal possessions (5.26, 6.6). Most large houses had only one such alcove on the ground floor, and they occur sparingly in royal buildings.

By a very old custom, perhaps to guard against termite infestation, the four bed legs rested on stone supports shaped like steep-sided pyramids with flat or recessed tops (6.6). Actual beds are rare discoveries. One, of simple design, was found upturned in the narrow street outside one of the Workmen's Village houses (Main Street 3, 6.7). It measured 153 by 61 cm (60.2 by 24 in.), was 23 cm (9 in.) high and the frame was filled with a mesh made from tough grass. The length is short even for Amarna adults, whose heights (measured from their bones) were, on average, 164 cm (5 ft 4 in.) for men, and 154 cm (5 ft) for women. It should be noted that the standard Workmen's Village house did not have a bed alcove in a specially constructed 'bedroom'.

The distinctive stone leg supports, which would have helped to protect against termite infestation (though this was very much a desert problem), are a fairly common find at Amarna, including among the smaller houses in



6.6 (above) Bed alcove with four limestone supports in place, in house V37.1, viewed to the southeast. Compare figure 5.26.

6.7 (right) Wooden bed found upside down at the Workmen's Village, in the narrow street outside the house, Main Street 3.



the Main City and at the Workmen's Village. It might seem, therefore, that although special bed alcoves belonged only in larger houses, the wooden beds themselves were more widespread. Not all leg supports were for beds, however. In two Workmen's Village houses (East Street 11, 6.1, and Long Wall Street 7) stone leg supports were found neatly placed on the brick benches in the middle room. In the latter instance, the set of four was set out in a square of 60 cm (23.6 in.), which would fit the dimensions of a wooden chair better than those of a bed.

When depicted, the king's bed, like Huya's, is shown covered with a rounded shape that has to be the bedding, which could have been a mattress or just a thick pile of blankets. Egyptians raised flocks of sheep, and therefore had access to wool. Preserved woollen textiles are, however, very rare, and it remains uncertain to what extent the Egyptians took advantage of the thermal properties of wool during the cool of winter. They did have an alternative. This was to add

weight to linen sheets by threading lengths of linen yarn closely spaced across the surface, to create the effect familiar nowadays in bath towels (though the 'pile' was longer). We know from a fully prepared bed found in a Theban tomb (Kha) that lengths of linen prepared in this way served as blankets. Many such fragments (as well as a small amount of woollen textile) occur in the textile collection from excavations at the Workmen's Village.²

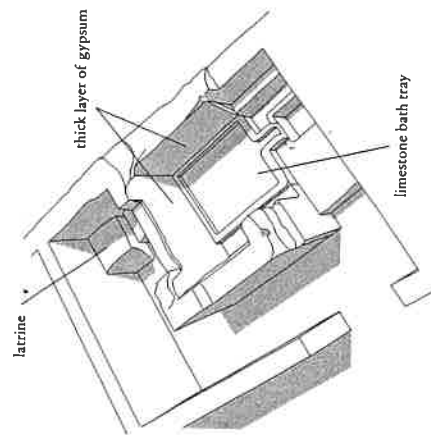
Because beds were made of wood, and wood does not preserve well, we have no idea how many individuals owned one. It might have been a social marker. Lying down on a mat-covered floor or low bench, closely wrapped in one of the large rectangles of heavy linen cloth that the Egyptians made as a matter of course, could have been the nightly experience of many people, as it is among poorer people in Egypt today.

Another determinant of personal behaviour and the use of domestic space was toilet practice. In common with ancient Egypt generally, Amarna had no drains or sewers, and it was a topic that Egyptian art and writing avoided, apart from spells in religious texts aimed at the avoidance of contact with excrement. The larger houses made some provision, at least for the family head. A private suite of rooms at the back of the house included a specially designed bedroom, bathroom and toilet [5.21]. The design of the bedroom was illustrated in 5.26. In the bathroom, the floor was often covered with a large stone tray provided with a shallow raised rim and a spout [6.8].

In the absence of evidence for bathing tubs (even shallow ones), we have to picture water being poured over the bather, draining from the spout into a small stone tank (which had to be emptied by hand) or into a pottery vessel sunk into

6.8 (below left) The bathroom and adjacent latrine, as found in house Q48.1.

6.9 (below right) Bathroom and adjacent latrine, as found in house Q45.1.



6.10 (right) Bath slab with adjacent brick latrine in house Q45.1, looking north.

6.11 (below) Limestone slab, presumed to be a latrine seat. On the underside are the remains of gypsum plaster used to embed it firmly onto a pair of supporting mud-brick walls. From house T35.22, obj. 30/182. Dimensions: 55 by 45 cm (21.6 by 17.7 in.).



the ground. To protect the surrounding walls from the effects of splashing, they were covered with a sloping layer of plaster coated with gypsum. In one house (Q45.45), the top surface of the side wall of the bathroom contained three rounded hollows or small basins [6.9]. Were they to hold scented oils for the skin? In the case of a stone version found in house T36.11, the excavators remarked upon 'traces of grease' still present within the receptacles. They continued: 'whether ointment or oil was poured into the cups, or whether the cups merely served to steady vessels which were put on the block, we cannot decide. The grease in the cups was not very extensive or deeply sunk in, so that the last assumption is perhaps the most probable.'

Beside some of these bathing places is an unmistakable toilet on which one sat at a height of 20 to 30 cm (7.9 to 11.8 in.) above the floor, over a space that must have contained a removable vessel, for there is never a trace of a latrine pit underneath [6.10]. The size of the space would allow for a bowl with a diameter of no more than 25 cm (9.8 in.). Concern for cleanliness dictated that human waste must be removed altogether and not 'stored' in an underground pit. From another house (T35.22, not a particularly large one) was recovered a limestone seat, the concave surface of which was pierced with a central hole and wide slot to the front [6.11]. It was, at the time of discovery (and ever since), identified as a lavatory seat, and presumably spanned a similar little construction. Although they were simple, built toilets have not been common finds. A few examples

have survived from other sites, however, of what are clearly toilet frames made from wood, with pierced seat and for use with a portable vessel. If they were a common household item at Amarna we would not know, because so little wood has survived.

It is natural to think of poorer people squatting to relieve themselves on areas of wasteland, and this must have been the custom for those who left their houses during the day to work outside. It was a less feasible option for the walled Workmen's Village, for example, especially if you lived at the further end of one of the streets. It might have been particularly unacceptable at night to head for the outside ground, especially given Egyptian fears of malevolent night-time spirits almost besieging people's houses. It is a near-inescapable conclusion that a bowl, of metal or of pottery and perhaps used beneath a wooden seat, was the standard temporary receptacle for human waste.

Imagining how people adapted to their houses begins with the assumption of good health, such that, for example, beds were for night-time sleeping. Yet the same houses and furniture also served the same people in sickness, injury and old age, and must have led to common rearrangements of routine and how things were placed in rooms.

The Smell of the Air

One benefit of the hot rays of the sun, especially when they touch the desert, is that they rapidly dry out moisture, including the moisture content of organic waste. In an index of unpleasant smells, ancient Amarna, which must have remained pretty dry for much of its brief existence, probably registered a fairly low score.

Where archaeological excavation uncovers floors of mud or mud bricks inside buildings they are generally clean and firm, without obvious accumulations of rubbish, although a build-up of earthy layers that is sometimes observable beneath a floor surface is a likely sign that the floor has been remade, perhaps more than once. As mentioned above, human waste did not accumulate in latrine pits, either inside houses or in their courtyards. In open spaces, including here and there along the main streets, deposits remain that are rich in broken pottery, small stones and pieces of charcoal, and they look like the remnants of rubbish heaps. Often, however, houses are so closely packed as to leave little space free for the dumping of rubbish, and some places where one might expect it, especially along the eastern edge of the city, show no signs at all. People were not in the habit of walking regularly from their houses out to the edge of the city and emptying baskets of rubbish. Perhaps it was forbidden.

The North Palace must have been the source of substantial waste, from the animals (including cattle) kept in special pens on the north side, and from an area on the south set aside for cooking and the making of faience jewelry. Yet the desert outside is clean, without adjacent buildings of any kind or signs of dumped rubbish. The only realistic explanation is that rubbish, including the dung from the cattle quarters, was carried away. The main residential areas of

the city are not as clean as this, but still the limited amounts of rubbish imply either an organized system of disposal or a requirement for households to undertake this, in either case in the direction towards the river bank, leaving the surrounding desert untouched. One indicator of volume of waste is the amount of animal bone present. It gives the impression of being nowhere near as abundant as is to be expected. Since marks of gnawing by dogs or rodents are rare, animal scavenging is not likely to be the answer.⁴

If there was a policy of waste disposal, it was not universally followed. The most obvious exception is the Central City (Pl. XXXV). The bakeries saw the accumulation of huge amounts of discarded pottery bread moulds within the buildings and over the desert behind, while to the south, two large dumps developed on the city edge, comprising a mix of pottery (excluding bread moulds, but including many imported Mycenaean vessels) and industrial waste from demolished kilns that must have stood elsewhere. A second exception is the Workmen's Village (which lay out of sight of the city). The practice there was to carry domestic waste outside the walled village and to dump it over ground to the east and south, and especially into abandoned pits and quarries, which had been used to supply desert clay for bricks.

Among familiar smells such as those considered briefly at the end of the last chapter, one would have been of wood smoke from ovens, open fires and occasional kilns for pottery and glass. Another would have been from incense: aromatic resin that, in the Amarna period, was imported in large quantities from the eastern Mediterranean, derived from the tree *Pistacia atlantica* (the incense now called mastic).⁵ It was the normal accompaniment to the presentation of food-offerings in the temples. Potsherds coated with incense resin – either pieces of broken transport containers (amphorae) or sherds used to hold a patch of the substance – are also a common find in houses large and small. The Grid 12 group of small houses yielded fifty-nine resin sherds, for example. Incense, the substance 'with which the gods are placated', perhaps brought to the home a feeling of contentment and of enhanced separation from the outside world. At the Workmen's Village, where textile preservation was better than in the main city, many twisted wicks of linen have been found, some of them smeared with incense. They presumably took up oil and burnt in simple lamps, sputtering, fizzing and giving off their own smell.⁶

Material Signs of Success

Egypt in the New Kingdom was organized towards the large-scale production of goods: household, military and ritual. Amarna as a whole acted as a giant factory. What happened to this vast output of busy hands; what was its destination? The centre of consumption was the court. It must have become a repository of fine objects, both on display and in storage, within magazines. It is likely that the bulk of the items found in Tutankhamun's tomb were the result of a rapid trawl at the time of his death through palace magazines (no longer at Amarna) stuffed with fine objects many of which, inevitably, bore his name.

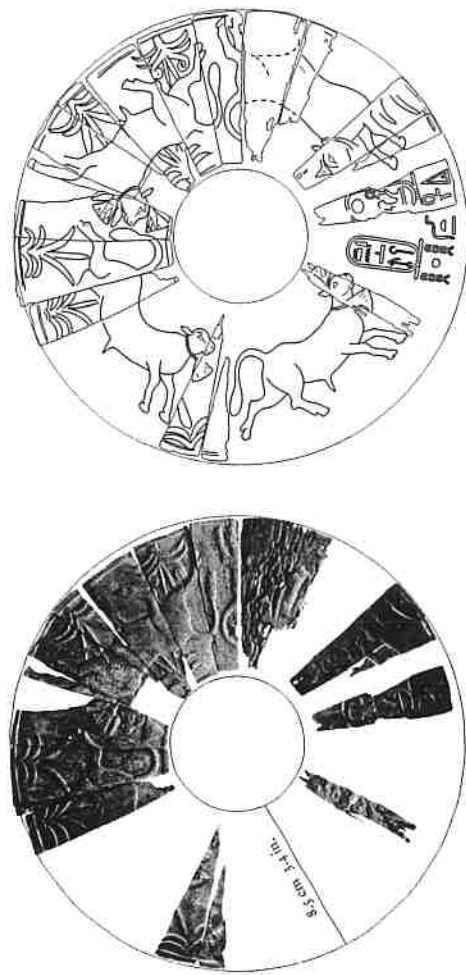
The over-production to which the country was geared could not be contained and inevitably spilled out into society at large, especially within a leading royal city like Amarna. The class of officials was responsible for control of the workshops, to the extent that they were integrated into the large households. Officials expected and received a flow of fine things directly from the palace as a reward for their services [1.13]. The larger Amarna houses are also likely to have become destinations for a portion of the goods manufactured on the premises.

In the small shrine at the rear of the tomb of the 'Chief Steward of Queen Tiye, Huyu' (no. 1) are carved the outlines of the property that Huyu wished or imagined would accompany his burial [7.22]. It includes a variety of storage chests or boxes (probably of wood) and vessels (including two Canopic jars to contain his embalmed organs), a chariot complete with bow case slung along the side, a wooden bed with its bedding, two chairs with cushions on each of which rests a staff from which hangs a pair of sandals, two or more upholstered footstools and a pair of tall shrines, the bases of which constructed like sledges.

Most of the objects we can recognize as markers of a successful life, the upholstered chairs and stools and the bed bringing comfort, the chariot denoting prestige, the chests there to contain items of value to be packed away, including folded linen. The shrines should have contained sacred images (Tutankhamun's tomb provides examples), which at Amarna might have been statues of the king, of Huyu himself or even of household gods (for example, Bes, see 7.12). As mentioned in Chapter 2, the faience models of bunches of grapes often found in the city [2.15] probably decorated small wooden shrines with partially open sides (and thus somewhat different from those shown in Huyu's tomb), which would have been attractive objects within the house.

Surviving pieces of wooden furnishings have been very rare and seem mostly to have belonged to boxes. Examples are part of a cylindrical wooden box with an incised design of an antelope and a tree picked out in white;⁷ geometrically decorated panels of ivory that once covered a box with a curving lid;⁸ the lid from a circular box delicately carved with calves running in vegetation [6.12]. They show a variety of design and a manufacturing skill that hint at a richness and sophistication in domestic furnishings easily underestimated from the small number of surviving examples. On some wooden objects, the decoration took the form of inlays in glass and carnelian, each piece in the shape of a hieroglyph or an element in a feather pattern.

Another glimpse of the things that people held to be precious is given by the tomb scene of the king rewarding the god's father Ay [1.13]. The king tosses down gifts for Ay to catch and then heap on the ground, and to pass to servants for carrying away. Much of it is jewelry in the form of broad collars, necklaces and armlets (presumably of gold), drinking-vessels and signet rings, also perhaps of gold, and a pair of (leather) gloves that Ay puts on. 'Look at that stool and that bag' calls out a retainer as he hands them to a companion, introducing examples of less spectacular gifts. 'They [Ay and Tey his wife] have

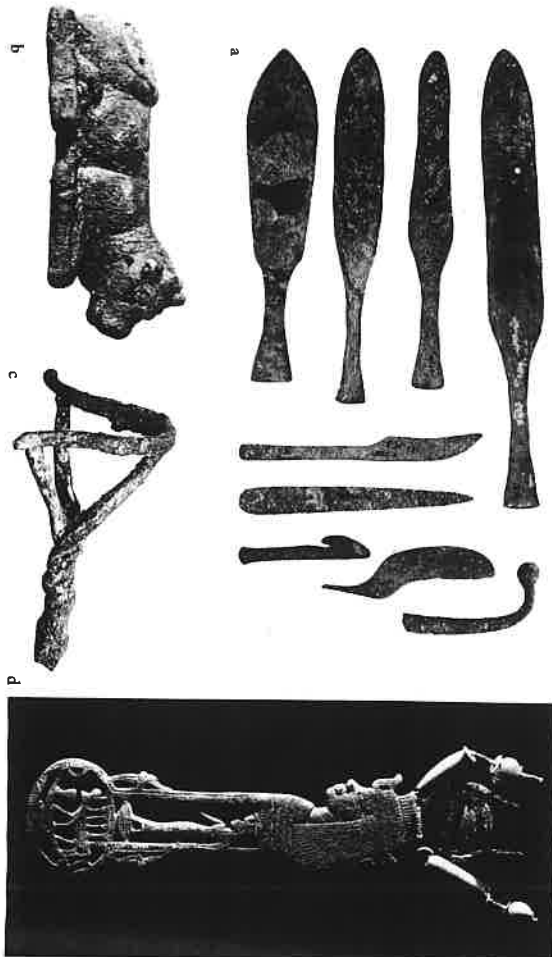


6.12. Lid from a wooden box found at Amarna (obj. 33/256), made from separate strips placed side by side and carved in low relief. There are traces of gold leaf over gypsum. It depicts young bulls, garlanded with lilies, running among vegetation. The decoration also included the cartouches of Amenhotep III. The hole in the centre is for a separately made knob.

become people of gold' states another.⁹ The similar reward scene in the tomb of the cup-bearer Parennefer (no. 7) adds a crowd of his retainers carrying off bulkier commodities in amphorae, sacks and heaped baskets, suggesting that the king's rewards were not confined to ostentatious gifts.¹⁰

Though rarely found, an important part of daily life were articles of metal. The most widespread would have been made of a copper alloy approximating to bronze, although the most valuable would have been of gold (which could also be alloyed with copper). 'In my brother's country, gold is as common as dust' wrote envious foreign kings to pharaoh at this time.¹¹ Slightly later records show that a given unit of gold had at least 200 times the value of its bronze equivalent¹² and, as the furnishings in Tutankhamun's tomb show, its glitter could be spread further by covering wooden objects with gold leaf laid over a thin coat of gypsum.

Individual items illustrate the versatility of metal [6.13]: knife blades, long tongs, axes and adzes, chisels, needles, arms and pans from pairs of scales, weights used in weighing, mirrors, bowls and drinking-cups, razors, a tool for branding a design on cattle hide, tweezers, rivets, spoons and (made of lead) a decorated right-angled tube with strainer from which one drank beer [6.14]. A tomb picture of treasures held in a store includes vessels decorated with stand-up images of animals arranged around the rim. Temple cult was served by metal vessels [3.19-3.21]. Metal objects, whole or in fragments, their value determined by their weight, were a common form of currency.

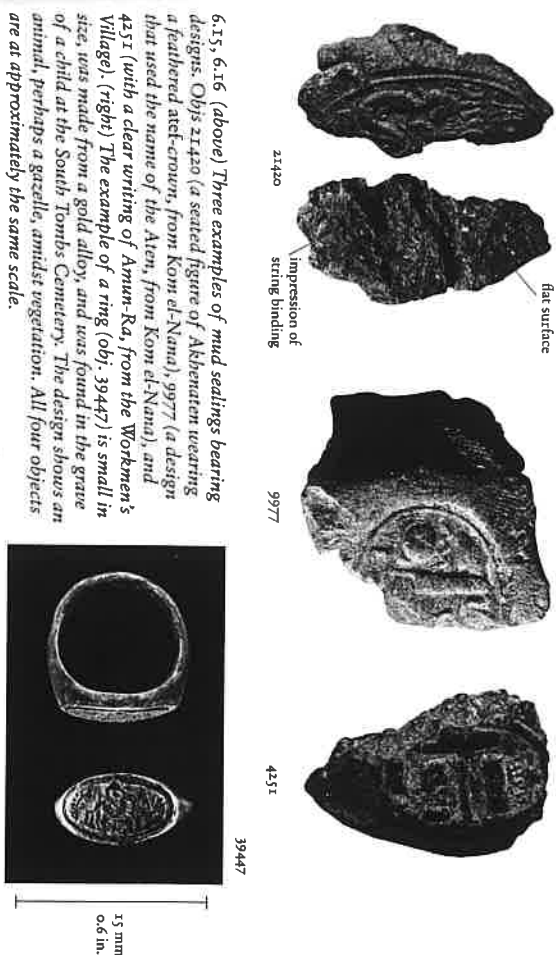
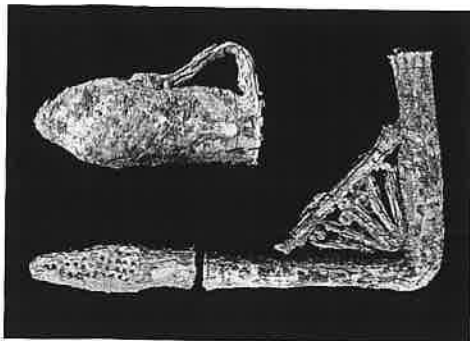


Most families probably owned some metal objects, particularly bowls for cooking, that were more suitable than their equivalents made from pottery, but examples are rare and not particularly large.¹³ When the royal family is shown drinking, they use beakers or wide bowls with feet and a sharply angled profile, the same shape seen among the rewards given to Ay at the Window of Appearance [I.13]. Examples of this shape are fairly common in stone, but it is to be expected that the best ones were of precious metal.

A sign of status was the signet ring. These were made of metal (bronze, gold or electrum – which was a naturally occurring alloy of gold and silver) and

6.13 (above) Metal objects from Amarna. a A selection of flat blades from the 1923/4 excavations in the Main City. b Obj. 33/289, bronze weight in the shape of a bull, length 5.8 cm (2.3 in.), marked '1 aben', and weighing 92.9 g (3.3 oz.). c Obj. 26/321, cattle-branding 'iron', length 8.2 cm (3.2 in.), from house V37.5. d Obj. 29/118, bronze plate with traces of gold leaf, made as a menak-counterpoise to a heavy necklace. It features images of the goddess Hathor. Height 19.5 cm (7.7 in.). The beads were found beside it, but are not necessarily resting in the correct order.

6.14 (left) A drinking kit made from lead. It comprises three pieces: (left) 21/476, a tall vessel with handle; (below right) 21/477, a filter; (above right) 21/478, a right-angled length of tube (length of each limb of the tube, 10.6 cm, 4.1 in.). The last two were presumably fitted with tubes of a different material (wood?), one of them shaped to fit more easily between the lips.



6.15, 6.16 (above) Three examples of mud sealings bearing designs. Obj. 21/420 (a seated figure of Akhenaten wearing a feathered atef-crown, from Kom el-Nana), 1977 (a design that used the name of the Aten, from Kom el-Nana), and 4251 (with a clear writing of Amun-Ra, from the Workmen's Village), (right) The example of a ring (Obj. 39447) is small in size, was made from a gold alloy, and was found in the grave of a child at the South Tombs Cemetery. The design shows an animal, perhaps a gazelle, amidst vegetation. All four objects are at approximately the same scale.

sharply engraved with a design that could be impressed into mud sealings on the string that bound a papyrus document or was wound between the knobs of a box and its lid [6.15]. A few have been found,¹⁴ one (of gold alloy and suitably small in size) in the grave of a child. Their designs are frequently encountered pressed into mud sealings. They might allude to the royal family, but they do not name the owner himself. Innumerable mud seals must have been broken from their string, as letters were received and boxes opened. Pieces of discarded seal impression are not uncommon among the finds from the excavation of houses, but only very rarely in groups, and none of those particularly large. Clusters can include several examples from the same ring¹⁵ or impressions from several rings or seals.¹⁶ Only limited numbers seem to have come from the offices in the Central City where there ought to be thousands.¹⁷ The reason might be simple. The mud that was used for sealing had been prepared for the purpose, consisting of fine particles and able to dry hard and not crack. It would have been sensible to throw old sealings into a receptacle of water so that the mud could be re-used.

In addition to a signet ring, other accessories helped to convey the rank of a senior official. Again we know of these primarily from the tomb scenes: a long staff was one, another was the scribe's kit of ink palette and brush-pen. The god's father Ay holds in one and the same hand an ostrich-feather fan, a shepherd's crook and an axe; fan-bearer Ahmose carries slung over his shoulder the ostrich-feather fan to which an axe is tied. One finely made object (found in a private house) that could have signified status in a particular craft is a slate measuring-rod incised with multiple divisions of the cubit.¹⁸

Storing Possessions

In the developed world, richer people's assets are in part notional, statements of promised value – money and share certificates – and people (sometimes mistakenly) take for granted that these will always be honoured as a means of exchange for goods and services. In ancient Egypt, however, the concept of notional assets was barely developed. Assets were mostly things – bronze and gold, grain, cattle and textiles, and slaves, too – that had a tangible existence and could also be used in transactions for other things. The cautious or affluent person kept in the house a store of items that could be used as a means of exchange (forms of currency), as well as providing a sense of security against reversals of fortune. A married woman would also maintain an interest in the items of property that her husband had given her as her future security. In the absence of banks, where did people keep such things?

For some commodities, the answer was a special building: stalls for cattle, round silos or long vaulted chambers for grain [2.6, 5.27]. Smaller things needed smaller receptacles and greater watchfulness. Egyptian houses held nothing that could be properly locked. As far as we can tell, many of the things of value were kept in the wooden chests and boxes described earlier, which stood on the floor. In one of the scenes of reward at the Window of Appearance (the tomb of Parennefer) we actually see servants packing the smaller gifts from the king into a wooden box. In his tomb scene [7.23], Huya displays at least three chests, made from a wooden frame with infilled wooden panels and a separately made lid that could be, for security, tied down to the body of the chest by means of string wound around a pair of knobs, the knot sealed with a lump of mud into which a personal seal was pressed, as described above. Other tomb scenes show sacks and baskets in common use, and baskets have occasionally been found [6.17].¹⁹ Sacks or bags were not necessarily cheaper substitutes for chests. Ay's artist, in his reward scene, considered a bag to be among Ay's prize gifts from the king, a valuation reflected by the fact that Tutankhamun originally used one for the storage of valuable objects 'when he was a boy'.²⁰

The means of storage that has left the most abundant remains was the pottery jar, which came in a variety of shapes, sizes and wares.²¹ We might suspect a degree of correspondence between type of vessel and what it was used for, but, if that were so, the boundaries seem not to have been strictly maintained. Scribes wrote ink labels on the shoulders of some vessels (mostly the two-handled slender amphorae, 6.18) and these generally state the contents and other information, revealing a wide diversity of materials that could be put into them, but such labelling was far from being a universal practice. Many jars, including amphorae, remained uninscribed and so whatever information one gleaned from the labels may not be representative of the full picture. It was often important to close the vessel mouth, the standard practice involving first a bung (perhaps of grass) or lid and then a cap of mud or, less commonly, gypsum plaster, its lower edge pressed around the shoulder and its top neatly moulded. A seal stamped on the mud while it was soft left the impression of a design that



6.17 Basketry containers: a a shallow, circular basket made with coils of bound palm leaf of the kind used to contain fruit (obj. 22/128; dia. 40 cm, 15.7 in.). Other pieces of basketry shown are: b a wide brush (22/150; length 40 cm, 15.5 in.), c narrower brushes for painting (22/167B, 167A; lengths 11 cm, 4.3 in., and 15 cm, 6 in.), d a pot stand (22/146; base dia. 15 cm, 5.9 in.) and e a ring (22/165; dia. 13 cm, 5 in.) that could also have supported an object with a round base; f a broad basket of woven palm leaf strips provided with rope handles, its base mended in antiquity with a piece of coarse cloth (obj. 22/19; length c. 45 cm, c. 18 in.). All are from the Workmen's Village.

might again contain information on what was inside and where it had come from. Opening a vessel of honey or fat needed care to prevent the friable mud of the broken seal from dropping in.

Pots, especially amphorae, could be re-used, at least for the carrying of water, and their broken-off bases were useful as makeshift containers. The storage of water, however, was better done in larger and wider jars made from porous Nile-silt fabric that allowed the water to percolate to the outside and, through its evaporation, to cool the jar as a whole. Outside the Workmen's Village, an area was set aside for what looks like a communal water supply held in these vessels (which approximate to vessels in modern Egypt that are called *zirs*, hence the *zir*-area of the map, 5.30).

In common use was a big-bellied, wide-mouthed jar with short thick rim that was about as much as a person could readily carry empty. Some of them bear ink labels, and these labels are more or less exclusively for meat (which would have made them very heavy; 3.26). It was also, however, a favoured jar for burying up to its neck in the floor to act as a form of secure storage, part of the attraction presumably being a mouth wide enough to receive a hand easily.



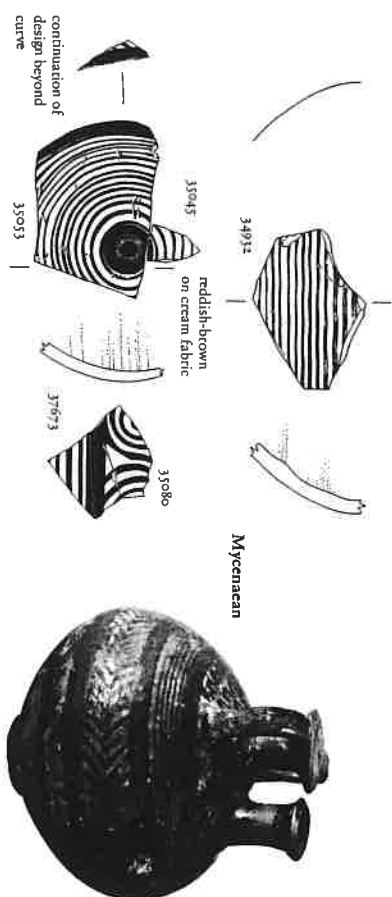
6.18 Pottery amphora (obj. 6843, from the Workmen's Village), on the shoulder of which is written, in ink hieratic characters, the word *baq-oil*. Height: 65 cm (25.4 in.).

The standard amphora shape had been borrowed by the Egyptians from the area of Palestine and Syria. Amphorae continued to be imported, but the Egyptians also manufactured them on a large scale, always from desert marl clay, which fires better than Nile silt to produce a hard and relatively non-porous fabric that can be burnished before firing to seal the surface even further. Equipped with vertical handles for carrying and a thick pointed base that could withstand the shock of being set down heavily, they were the standard means of conveying and storing a wide variety of commodities. Contents identifications come from ink labels on the shoulders of amphorae and impressions of hieroglyphic seals in mud jar-stoppers. They include wine, beer, incense, honey, fat, ducks, oil, dates, grapes, and various plant derivatives of uncertain identity.

Amphorae display variations in their shape and fabric that can, through analysis, point to their origin. Thus the clay in the thick distinctive walls of amphorae that are almost like drain-pipes in shape has been identified as coming from the western oases, implying knowledge of a desert route that, presumably by pack donkeys, brought wine to the Nile valley almost 400 km (248 miles) distant.³² Sharp-shouldered amphorae from Syria similarly conveyed to Egypt the aromatic resin (incense) that was used in temples, shrines and houses. To judge from its ubiquitous presence in the soil and stuck to the insides of jars, it must have been imported in large quantities and been available to the whole population.³³

Most Egyptian pottery of the period, although sometimes elegant in shape and with certain forms bearing bright blue decorative patterns [Pl. XI], was relatively coarse and heavy, made to be put to use and not valued. Alongside the Canaanite amphorae, which have the same characteristics, the Egyptians also imported vessels from the Mycenaean world and from Cyprus, though it is hard to be sure if they came directly or via middlemen based in eastern Mediterranean ports. Pieces of these imported vessels stand out from a background of Egyptian sherds by virtue of their fine clays and richer colouring, mostly reddish-brown, beige and black. They were not the preserve of the rich. They have been found in mixed housing neighbourhoods [6.19-6.21] and the Workmen's Village, as well as in the 'palace' rubbish heaps of the Central City. Mostly they are enclosed, flask-like vessels that were probably used for carrying oils or unguents, in the case of the little Cypriote bottles, perhaps a dissolved form of opium.³⁴

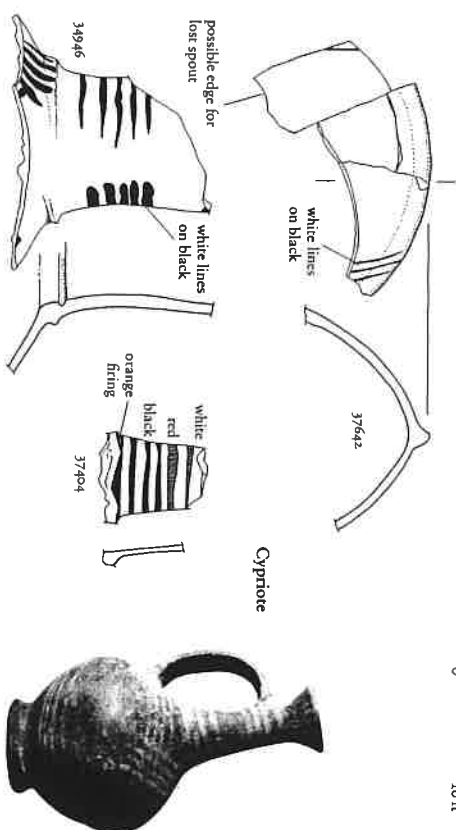
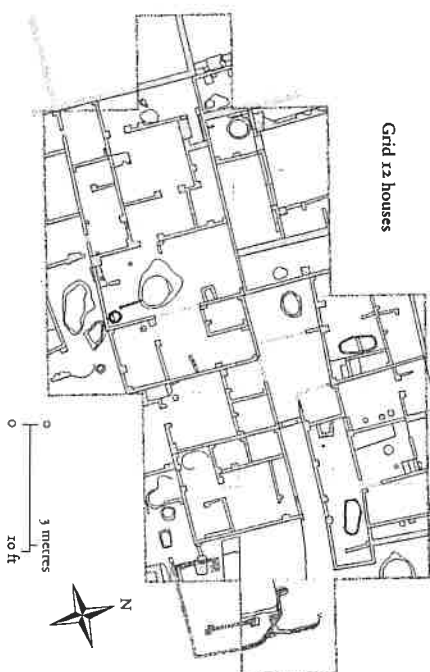
A particularly secure form of storage was burial in the ground, often beneath the floor of a house. Burial took three forms. One was a brick-lined pit or cellar that could be in a courtyard or beneath the floor of a room [6.22, 6.23]. The pits sometimes seem inconveniently placed: in the living-room, for example. They could have contained various substances, including grain, especially when neatly subdivided by a central wall. They could be roofed with a brick vault, a slab of stone or with wood.³⁵ Another form of burial was within a pottery storage jar sunk up to its neck, as just mentioned. Deliberately buried pots are often found, though almost invariably they are empty. An exception was one



Mycenaean

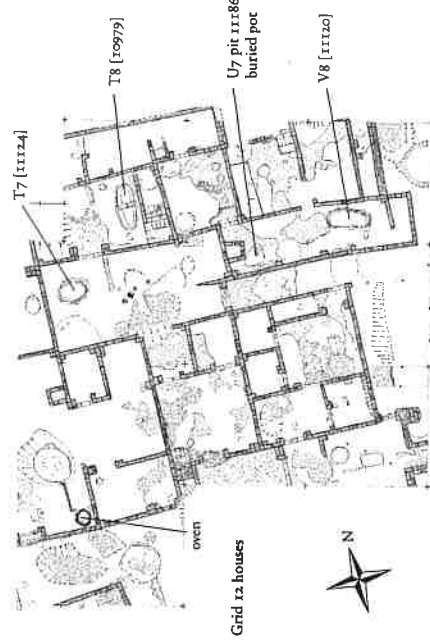
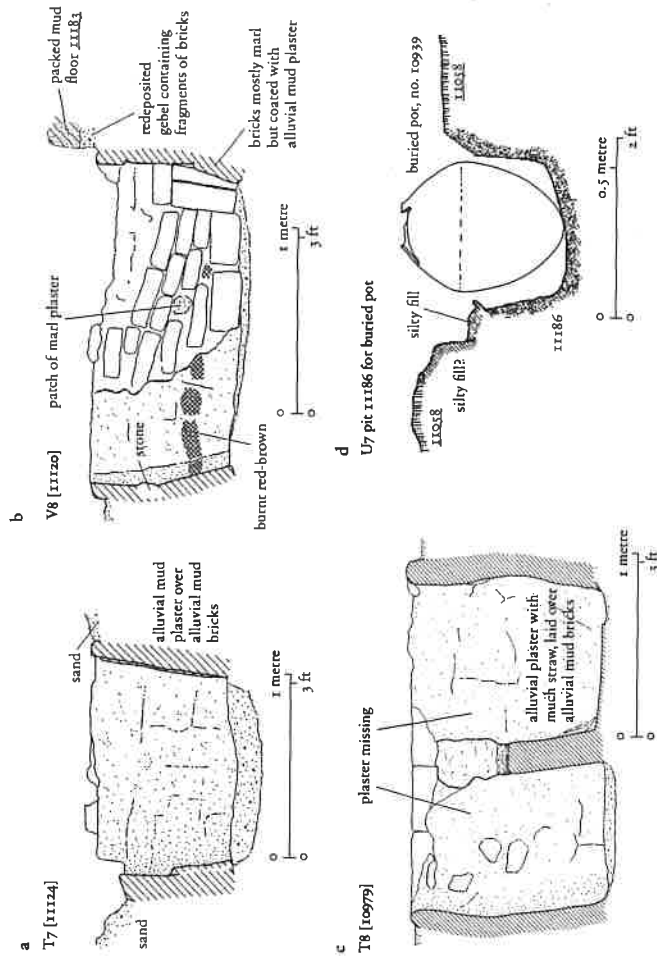
6.19, 6.20, 6.21. Shards of pottery imported from the eastern Mediterranean and Aegean found within the houses (right) of the Grid 12 excavations. (above) Photograph of a complete Mycenaean vase, from the Central City (House of the King's Statue, R43.2), obj. 361164, (below) Photograph of a complete Cypriote juglet, from house U35.17 (North City, unpublished), obj. 361189.

Grid 12 houses

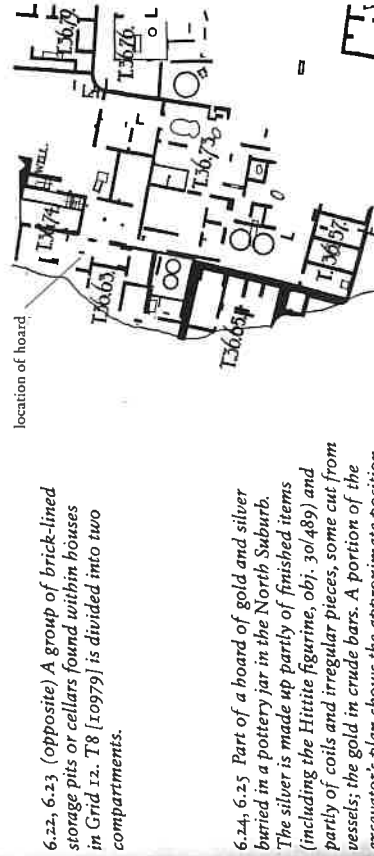


Cypriote

buried in a small room (or possibly a court) in the North Suburb [6.24]. It contained twenty-three bars of gold and a quantity of silver fragments and roughly made rings, as well as a silver figurine of a Hittite god. The gold bars had been made simply by pouring melted-down gold into grooves scooped by a finger in sand. The total weight of the gold was 3375.36 g, equivalent in ancient terms to

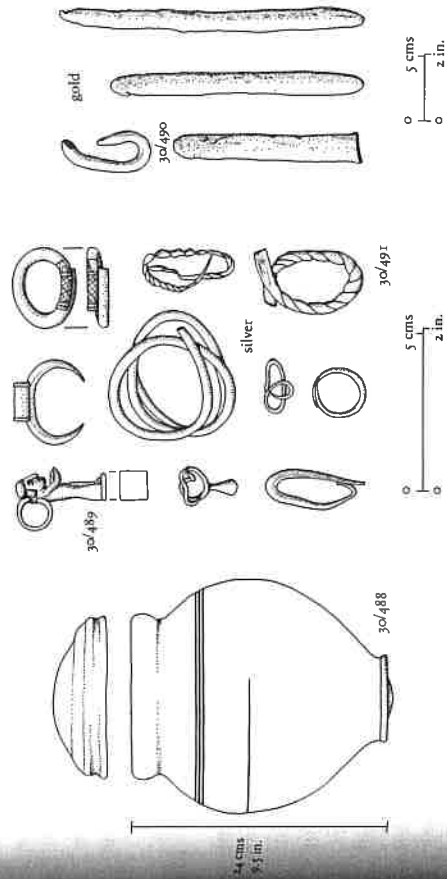


37 *deben* (a unit of weight for metals). The total weight of the silver came to at least 1085.85 g, or 12 *deben*. This represents a fair amount of wealth, though not a staggering sum. Some idea of its purchasing power can be obtained from the ratios of gold to silver (5:3 later becoming 2:1), and of silver to copper or bronze (1:100). The silver could have been used to buy, say, ten or twelve head of cattle. The archaeologist who made the Amarna discovery assumed that it was part of a thief's loot, yet we cannot be sure that the only remarkable thing about the find is simply that someone had failed to recover it. It might have been relatively common to bury valuable goods for safekeeping, with no necessary association of dishonesty. There is an uncanny parallel in a letter from a slightly later period (and unconnected with Amarna) in which the writer gives instructions as to where, in the pigsty beside the house, a mass of bronzework has been buried and, alongside it, a pottery jar containing a hoard of gold and silver items.⁴⁶



6.22, 6.23 (opposite) A group of brick-lined storage pits or cellars found within houses in Grid 12. T8 [10979] is divided into two compartments.

6.24, 6.25 Part of a hoard of gold and silver buried in a pottery jar in the North Suburb. The silver is made up partly of finished items (including the Hittite figurine, obj. 30/489) and partly of coils and irregular pieces, some cut from vessels; the gold in crude bars. A portion of the excavator's plan shows the approximate position.



A third form of burial was in a small and shallow hole cut into the floor of a room or courtyard, at least in the smaller houses. In house N49.20 a group of objects was found 'at the south edge of the room, under a double plaster floor', comprising two glass bottles, a glass bottle in the shape of a fish [Pl. XLVIII] and three vessels made apparently of lead (one of them a strainer, another a drinking-tube, 6.14).²⁷ Beneath the floor of the inner sitting-room in house T34.1 were found 'fragments of copper and silver', three bronze adze heads, a bronze 'fleshing-knife 18 cm [7 in.] long', a piece of gold openwork jewelry, and a spoon with incised design made from travertine.²⁸ The danger for the occupants was that, over time, the locations of buried items would be forgotten, perhaps owing to a death. When, at the end of the Amarna period, the time came to leave the house for the last time, there must often have lurked in people's minds the feeling that things buried beneath the floor had been forgotten.

The floors, even when of mud brick, were soft and easily dug over. It would not have taken a great deal of time and effort to do this as a final check before walking out for the last time. Careful modern excavation of houses at Amarna has revealed extensive and thorough removal of floors, sometimes neatly up to the base of the walls, done while the walls were still standing to some height. If it was not the occupants themselves who did this, it was scavengers shortly afterwards, hoping to find those little treasures that had been forgotten; but it seems more logical to pin the responsibility upon the anxiously departing homeowners themselves.

People stored the things that kept their lives going, but also accumulated 'capital'. Traditionally, an important choice arose from time to time as to what to do with it. People could bequeath their property to their heirs. But they could also, out of respect, donate objects for someone's burial equipment and thus see it go out of circulation. The burial equipment depicted on the wall of Huaya's tomb is an illustration of this ancient practice. He is, however, likely to have been a rich man. One of the cemeteries of ordinary citizens at Amarna (the South Tombs Cemetery; see below) gives a very different picture: of few grave goods or none, even when the graves are found to be undisturbed. People were evidently turning away from the age-old custom of surrendering valuable goods to the ground (they knew that robbers would quickly be searching for them), instead preferring to keep them in circulation among the living.

Eating In

Ancient Egyptian meals and mealtimes (like ancient Egyptian conversation) are hard to envisage beyond banal and universal generalities. But kitchens, at least, leave behind easily identifiable sets of remains. Moreover, we can, from the study of animal bones and plant remains, compile a list of foodstuffs for Amarna, which can in turn be supplemented by written and pictorial sources.

The Egyptian diet was heavily weighted towards cereals, consumed as bread and beer. The cereals came in two varieties: barley and a form of wheat called emmer. Unlike modern wheats, emmer is not free-threshing. The tough ined-

ible husks enclose the edible grain so tightly as to require extra human force to split them off. This was done by pounding the grain in a limestone mortar set into the ground. Both barley and the separated emmer grains were then ground by hand in a backwards-and-forwards motion on a quern consisting of a lower stone (granite or quartzite), set in a box-like emplacement made from mud bricks, and a smaller rubbing stone, often made of basalt, grasped by both hands [6.26, 6.28]. Mortars, lower quern-stones and sometimes the brick emplacements are straightforward to recognize when uncovered by excavation. The processing of cereals also left waste matter (husks and such-like) that accumulated in open spaces and formed deposits found repeatedly during excavations.²⁹

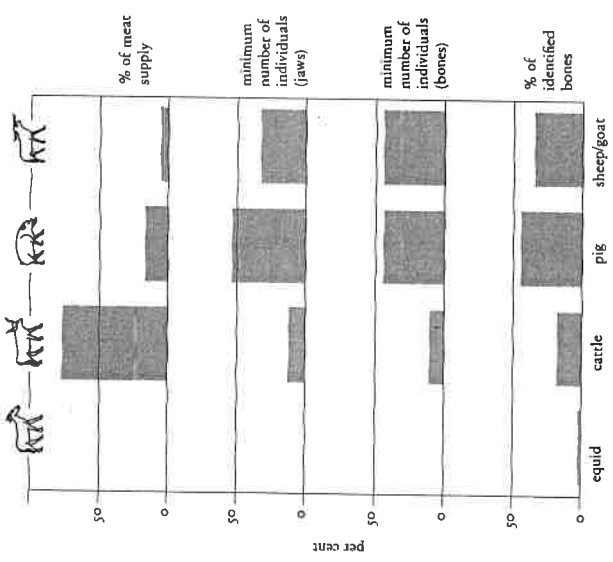
The rhythmic pounding of mortars and the sliding of quern-stones rubbed together must have been some of the regular sounds that accompanied life at Amarna. Experimental replication of the process has shown that reasonably fine flour can be produced, suggesting that the coarse gritty texture of a few loaves preserved as funerary offerings at other sites might not have been typical of the bread that the Egyptians actually ate.³⁰

Meat regularly came from cattle, sheep, goats and pigs [6.27], as well as from geese and ducks, and from fish, too. Pictures of houses from this period show strips of meat hung up to cure [4.16c], allowing it to be stored and transported in pottery jars. In archaeological samples from the main residential part of the city, pig is the most numerous mammal species, making up more than half of those that were killed, although the majority were young animals and therefore not large. By contrast, the bones of cattle were far less frequent, but, especially given the large size of the animals killed, probably represent the main meat component of the diet.³¹ A surprising addition, found at the Workmen's Village and attested by butchery marks on bones, is the striped hyena, an animal that, in the past, scavenged close to human habitation in Egypt (and is less fierce

6.26 Botanist D. Samuel demonstrates how grinding was done, on a replica of an ancient quern emplacement.



6.27 The common domestic mammals at Amarna, expressed in three ways: as percentages of meat supply (dominated by cattle); by the minimum number of individuals represented by jawbones and other bones; and by the percentage of identified bones (in which pigs and goats/sheep emerge as the most numerous animals killed).



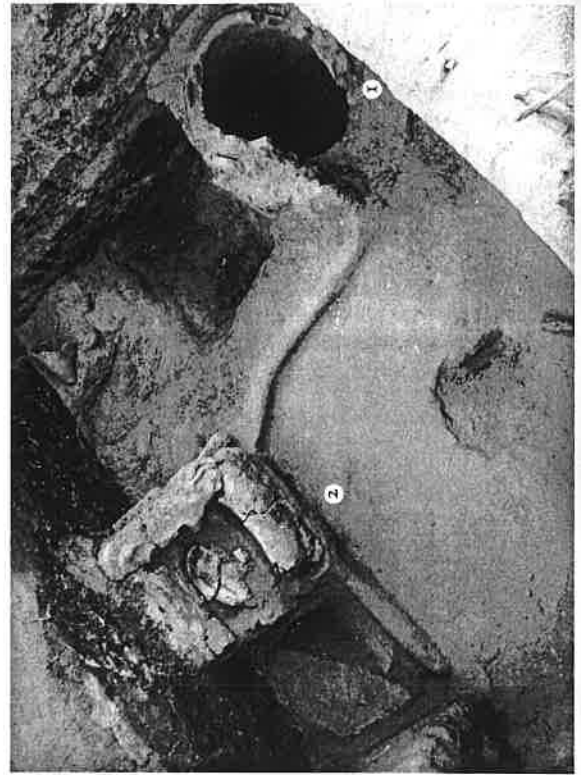
than the spotted hyena of the African savannah).³² Whether this was an animal enjoyed for its taste and possibly reared in captivity (as is attested from tomb pictures of earlier periods) or an opportunistic addition to the diet sought out by hungry people, we do not know.

Pictures of the royal family eating portray a very direct approach towards food. They hold cooked whole birds or long joints of meat on the bone in their hands and devour them [4.21]. Beside them, a supply of food, as whole loaves and whole joints, is stacked on a table, and not far away are rows of closed vessels evidently for drink. These, and the many pictures of private individuals seated in front of tables of 'offerings', and the lists of offerings themselves, give the impression that the main food items were prepared and consumed separately; that Egyptians did not have a style of cooking that blended foods and herbs and so produced 'dishes'. But could this be an artistic convention?

'Dishes' often involve boiling. Lentils have been recovered in excavation, and they would have required boiling – and heating water (though not actually boiling it) would have been a necessary stage in the making of beer. The Egyptians recognized and grew a variety of herbs. The names of many appear as ingredients in remedies for ills recorded in papyrus medical manuals, demonstrating a tradition of mixing ingredients. Then there are the extensive collections of plant remains recovered from excavations at Amarna that include coriander, black cumin, ajowan (a herb that smells and tastes like thyme), safflower and fenugreek, well suited to flavouring food.³³ But whether the

Egyptians used them in this way remains uncertain, and an attempt to write a modern Amarna cookery book would be largely a work of the imagination. The principal source of heat was a plain open-topped cylindrical clay oven, provided with a small round hole near the base, but no internal shelves or floor to separate fire from contents [6.28]. These ovens seem suited to the baking of flat round loaves on the inside, and perhaps for roasting meat and for boiling liquids over the top. Traces of small open fires occur in and around buildings and these, too, could have been used for cooking.

The nature of what was eaten and the presence of querns, mortars and ovens are intimately tied up with the question of how food was supplied. The Central City complex, which incorporated the two Aten temples and the Great Palace, was designed to be a major source of food, including bread and joints of meat. The evidence from the housing areas, however, is that some of the cereals that were consumed arrived not already turned into bread, but as raw grains that needed processing by mortar and quern before being baked in an oven. At the Workmen's Village, many of the houses had their own full set of equipment, implying family autonomy in this area, understandable if the state were paying the heads of households an individual ration of emmer and barley from granaries that lay elsewhere. In the main city, however, where the larger houses possessed their own granaries, instances of mortars, querns and ovens are far fewer.³⁴ Does this point to a greater sharing or pooling of resources, or the provision of certain services by designated individuals, remembering the picture of the urban village, exemplified by Panehsy, described in Chapter 1 (p. 34)? Did a portion of the prepared foods that passed through the Aten temples via the offering-tables find their way into the residential areas via an administered ration system (of the kind well attested from other periods)?



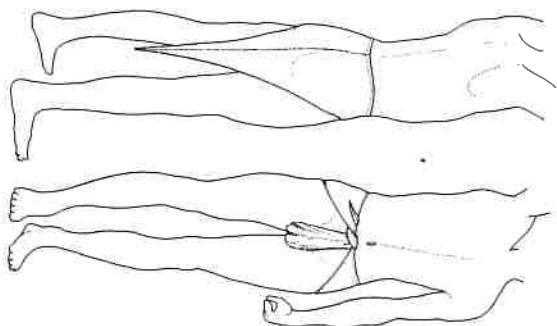
6.28 Kitchen in Workmen's Village house Gate Street 11. 1 = quern emplacement; 2 = oven.

Looking your Best

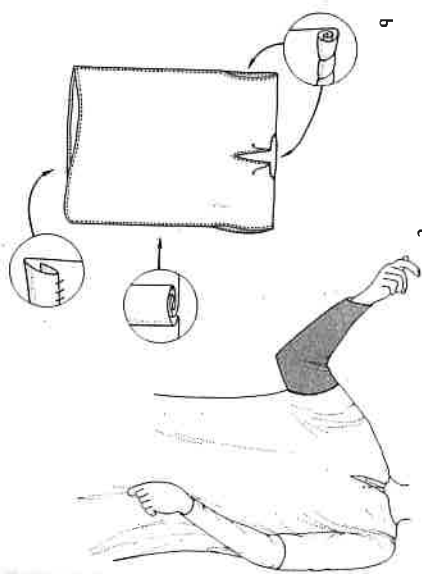
In some societies the elite develop extravagant dress, to the point of passing laws to prevent lesser people from trying to imitate them. Egypt seems not to have been like this. Even in the tomb scenes, which are likely to reflect an idealized view of the world, the rich simply wear more layers. Conversely, fragments of fine-quality textiles were not uncommon at the Workmen's Village.

The collection of 5,000 small textile fragments excavated at the Workmen's Village is a rare survival, brought about by unusually good conditions of preservation.³⁵ It offers a picture of dress that matches evidence from the tomb scenes and a few remarkably well-made statues of the royal family. Egyptians of both sexes had only a very limited range of tailored garments to choose from. Basically there were two [6.29]. One was a triangular loincloth definitely worn by men, though whether by women is uncertain. The other was a bag-like tunic made by sewing together the two halves of a rectangular length of cloth. A hole and slit for the head and neck were first cut in the centre, and two hemmed gaps served for the arms (although, since the tunics were wide, the arm-holes fell close to the elbow). Separately made sleeves could be sewn on to enclose the forearm. Some of Tutankhamun's tunics were elaborately decorated, but it is hard to judge how unusual this was. One accessory to the tunic was a linen sash that gathered it at the waist.

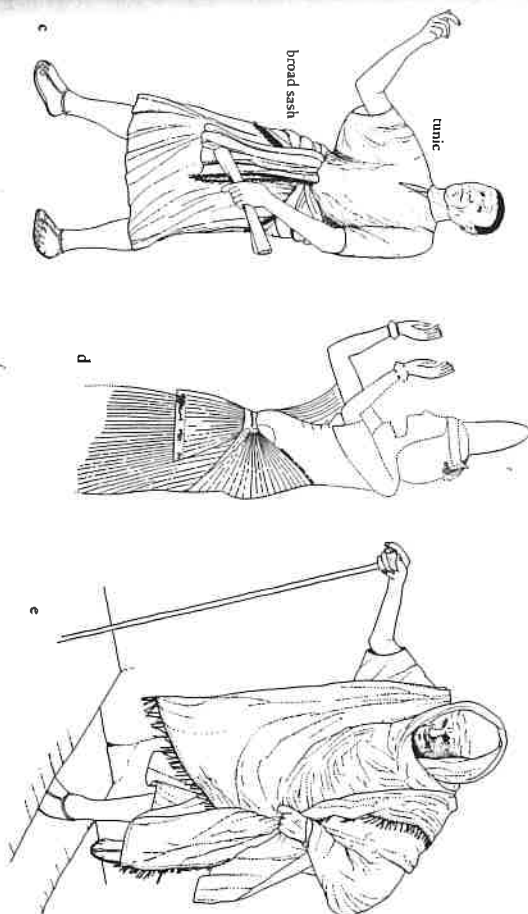
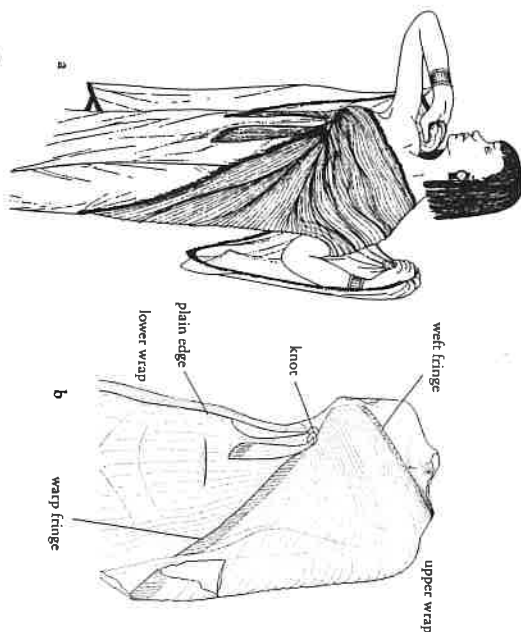
For the rest, Egyptians wound around their waists or draped over their shoulders rectangular lengths of linen of different dimensions and of different qualities [6.30]. Linen has the tendency to crumple and to resist a strong



6.29 Basic male clothing. a A simple triangle of linen provided with draw strings created a loincloth. b A rectangular tunic, much wider than the wearer's shoulders, created a loose, baggy garment, to which separately made sleeves (one of them shaded in c) could be added, perhaps for winter warmth.



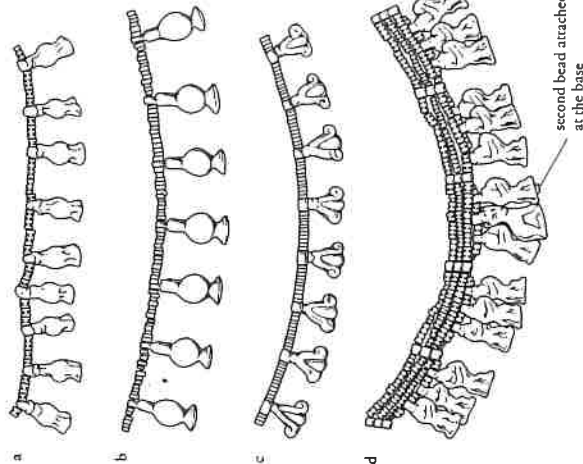
6.30 Clothing styles. a The fashionable style of the times seems to have been based on untailored rectangles of fine linen, often provided with long fringes, that were worn in layers, fastened with knots and not pins. b A female member of the royal family shown dressed in two layers of fine linen, a lower, larger rectangle wrapped around the body and an upper, smaller rectangle, made with conspicuous fringes, worn as a knotted shawl (torso of a statue in the Musée du Louvre, Paris). c How an official might have looked, wearing a baggy rectangular sleeveless tunic, gathered at the waist with a wide, fringed sash. d How artists at Amarna portrayed the dress of an official, probably rendering the natural creases of the linen as if deliberately pleated (tomb of Huya, no. 1). e An older man dressed for warmth, having wrapped around himself a large, fringed rectangle of linen, covering his tunic.



pleat. Artists, in sculpting statues or drawing scenes for subsequent carving or painting, converted the softer shapes that resulted into regular patterns of crisp pleats. Usually, the only form of decoration was a long fringe worn into one side and a knotted fringe along the bottom edge. Even statues of princesses show them dressed like this. Knots rather than pins or brooches held the corners together. Against the relatively cold winter weather at Amarna it would have been sensible to add, as an extra layer, one of the 'blankets' made

with long pile, but we cannot be sure whether people did this. One has the impression from various sources that linen was abundant in ancient Egypt, and manufacturing it was a basic household industry. Stocks of linen, kept in wooden chests, were part of a family's wealth, a useful means of purchasing other things.

The draped whitish linen offered the maximum contrast for much of the jewelry of the time. The reward scenes show gold collars, but another ubiquitous industry at Amarna was the making of small beads and pendants in faience glazes of bright colour – predominantly yellow, blue, green, white and reddish-brown – that were threaded to make broad collars worn across the chest with a counterweight hanging behind the neck [6.31].³⁶ The small shapes imitated plant elements or depicted household gods (Bes and Taweret were popular, but never the Aten). The same range of colours, though primarily blue, was also used for the surface of a myriad small finger rings made from faience.³⁷ Facing outwards from the fingers was a flat plaque (the bezel) bearing a design drawn from a wide range of subjects. Two deserve comment. The most widely preferred was the eye of Horus (*wedjat*, see Chapter 7 and 7.9), which represented wholeness and good health. The other was simply the first cartouche name of the king.³⁸ These were presumably made (in backyard workshops, see Chapter 8) on the accession of the king. The same colours (including white) could also be found at the ears, in the form of thick studs with a broad flat button-like end that was passed through a wide hole that had been made in the lobe (as seen on the reconstruction in 6.32), or in the form of circles of glass or



6.31 Details of surviving necklace designs from Amarna. (a) obj. 30/272. Fifty-nine crudely moulded poppy seed-head pendants are attached with cylinder beads to the necklace string. Between the pendants are groups of segmented beads; (b) obj. 28/366. Sixteen blue poppy seed-head pendants, with red, yellow and dark-blue ring beads between; (c) obj. 26/142. A well made necklace of nineteen yellow Southern-plant pendants, with red, white and blue ring beads between; (d) obj. 28/328. Composed of four strings of yellow and red ring beads. The strings are held together by bead spacers. From the bottom string are suspended seven groups of three pendants in blue faience. These pendants depict the god Bes beating a tambourine, with the exception of the central pendant (arrowed) appears to have a second bead attached at the base.



6.32 Facial reconstruction of Individual 114 from the South Tombs Cemetery, a woman of between 40 and 50 at her death. She was between 161 and 162 cm tall (around 5 ft 3 in.). She had broken her left upper arm, but it had healed to a shorter length. She had suffered a blow to her head that had depressed her skull slightly and brought infection, but that had healed, too. She had been buried face downwards, and this had preserved her long hair plait.

travertine, which, by means of a gap in the circle, could be pressed over the edge of the lobe. In the South Tombs Cemetery (for ordinary citizens), some people were buried with a single scarab or similar object (one group of three had a hippopotamus-shaped back, Pl. XLI), made of glazed steatite, which had been worn on a finger, held in place with thread. These objects look well worn and are carved with traditional symbols of power and protection. Some could have been heirlooms.

For the further cladding of extremities, the god's father Ay received a pair of (probably leather) gloves from Akhenaten at a public ceremony of presentation, but we should regard these as rarities (Tutankhamun had a pair in his tomb). Several examples of leather sandals have been excavated.³⁹ They have been carefully made: two or more thicknesses for the sole are fixed with much stitching using a narrow thong, and an upright strap passes between the big and second toe to reach a circlet that held the sole to the ankle. Some examples have been found among the poorer houses, implying that they were not exclusive to the elite, something confirmed by the finding at the Workmen's Village of a wooden pattern of the kind one would use for cutting out the shape of a sole from a sheet of leather.⁴⁰ A sandal from the same site, the size of a child's foot, had red and green decoration around the edge.⁴¹

For both women and men, the desired appearance for the elite, as codified by art, was to go bare-headed. They could cover their natural hair with a wig, although we cannot judge how many people did this and in what circumstances.

Skulls from the excavation at the South Tombs Cemetery retain their original hair. In some cases, this had been plaited into many short braids, each one carefully whipped at the end to create a small knob. In other cases, the long hair of women was made into a single braid that hung down the back. Pictures of men and women of status (though not members of the royal family) often show a cone-shaped object placed on the crown of their head along with what are perhaps flowering lilies [Pl. XLIV]. The general assumption is that it was made of scented fat or wax. One woman was buried in the cemetery wearing what is probably the only known example on her head (its composition has not yet been determined).

Egyptian culture had long ago adopted the practice of emphasizing the eyes by rubbing a mineral powder (*kohl*) into the surrounding skin. Specimens of *kohl* recovered from the cemetery are of the grey metallic powder galena (lead sulphide). The Egyptians also produced or imported, and then used, a range of scented oils and unguents, known by individual names preserved in hieroglyphic texts. Such things were made to be rubbed into the skin. As noted above, it is tempting to see the cup-shaped depressions formed into a surface beside one of the Amarna bathrooms as receptacles to hold them [6.9].⁴⁵

We have now formed a basis for the image of a successful, healthy Amarna citizen: a clean, perfumed, well-groomed body clad in carefully arranged layers of loose white linen, showing off gold and brightly coloured jewelry. Sometimes perhaps they touched or were close to other objects or articles that glowed with intense colours and intricate patterns, which have barely survived in the archaeological record [Pl. XLV].⁴⁶ Articles of this kind would have added to the contrasts between muted backgrounds and sudden colour areas – a juxtaposition that most Egyptians seem to have liked.

Impressions of a Good Life

The scenes in the rock tombs, and the tendency of modern reconstruction drawings or architectural models to idealize, give to Amarna a pleasing, positive character. It can seem almost like an early precursor to a modern garden city. An image of abundance and prosperity was consciously cultivated. Its symbols – food, drink, jewelry, incense and bouquets of flowers piled on light latticework tables and stands – appear in tomb scenes of palace interiors and in actual palace decoration. The same was true for the Aten, the hungriest of Egyptian gods. The signs of abundance filled the pictures of his temples. Among the many requests in the prayers of the rich officials in their tombs is to be well fed throughout eternity from the Aten's leftovers, a hope reinforced by pictures showing them sitting in front of a feast.

The desirability of foodstuffs in bulk, especially bread and beer, oxen and fowl, is characteristic of ancient Egypt generally. Akhenaten continued the tradition of showing himself as both generous consumer and provider. It would have carried greater weight than it does now. The Egyptian administrative system aimed to buffer the country against famine by maintaining full

granaries. Temples, through food distributions, were a major instrument of implementing this policy. Moreover, Amarna was, in effect, an inland port receiving imports of commodities from elsewhere in Egypt and beyond: oil-based substances in distinctive pottery vessels from the Aegean and eastern Mediterranean, metal ingots (bronze or tin), incense from the region of Syria, wine from the Nile delta and the oases, craft products and also slaves from the courts of the Near East, tribute from Nubia. Yet, as a new city, Amarna also had to manage a major readjustment in its supplies, of foodstuffs as of everything else. Was this successful? Was Akhenaten able to live up to the promise contained in the pictures?

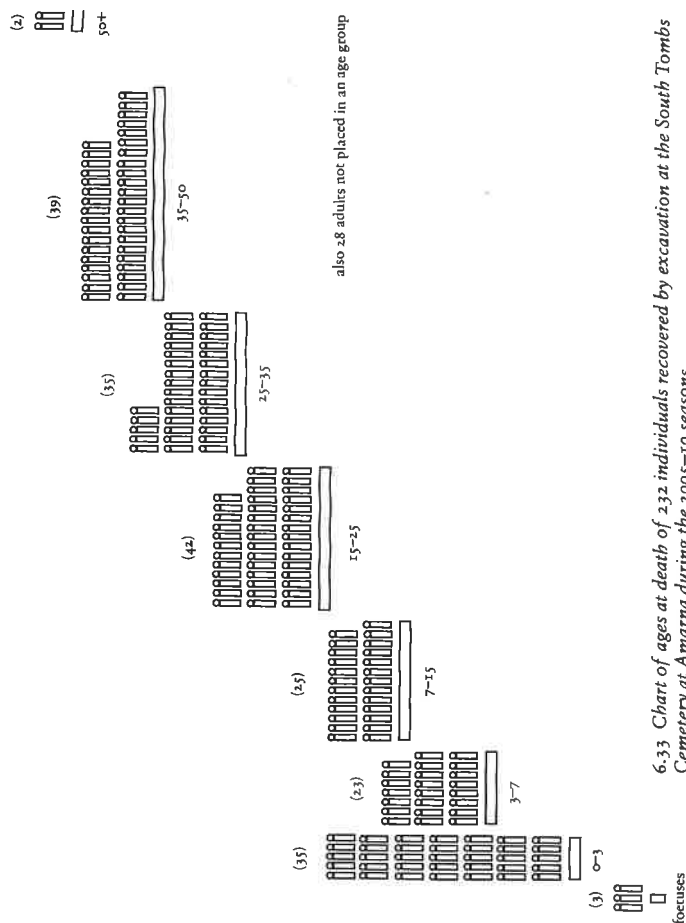
A Darker Side

Since 2006 a new source of evidence has become available for assessing what life was like at Amarna: the bones of the people themselves, excavated from a cemetery that lies in a desert valley behind the southern group of rock tombs [7.26]. As many as 3,000 people (possibly more) are likely to have been buried there. It offers a different, more sombre picture, of a state of health and well-being that is below what one might expect for the ancient past, especially for a population setting up home on a clean desert site at a time of high prosperity. At the time of writing, more than 200 individuals have been recovered and studied [6.32]. These are people who would have been alive at more or less the same time; many will have known one another or have been related. It is very rare in archaeology to have available for study a proper cross-section of a population from such a restricted period of time.⁴⁷

Three characteristics of the group especially stand out: signs of inadequate nutrition in childhood, injuries to the skeleton and early death.

A common feature of the eye orbits of Amarna skulls is a minor distortion of bone growth (which the owners would have been unaware of) called *cribra orbitalia*. It marks prolonged nutritional deficiency up to the time of death. Acute illnesses in childhood have also left their record, in the form of banding in the teeth, which goes under the name of hypoplasia. A few cases of scurvy are known. Given this evidence, it is hardly surprising to find that, overall, the population was failing to achieve the normal stature for the period. On average, men and women were c. 164 cm (5 ft 4 in.) and c. 154 cm (5 ft) respectively, a few centimetres shorter than is expected of ancient Egyptians of other periods.

Injuries varied between those coming from blows and those, especially compression fractures of the spine, from bearing heavy loads. The latter affected young people as well as old. One older man's injuries, which included puncture wounds in the hip area received on two different occasions as if from arrows, identify him probably as a veteran soldier.⁴⁸ Five instances are known of a gruesome practice in which men had been stabbed through the shoulder, at an angle that pierced the muscle, but avoided penetrating the body cavity and endangering life (most easily achieved if the victim is spreadeagled on the ground with arms spread out). A form of punishment comes to mind.



6.33 Chart of ages at death of 232 individuals recovered by excavation at the South Tombs Cemetery at Amarna during the 2005-10 seasons.

In a sample of 232 individuals whose ages have been ascertained, 70 per cent had died before reaching the age of 35 [6-33]. Many people thus had a much shorter lifespan in which to accumulate possessions and experience than is common today, and so many of the scribes, guards, women of the house and people engaged in manufacture will have been in their teens. The same, of course, was true for the royal family. They seem to have suffered a series of early deaths (including eventually that of Tutankhamun).

The abnormally high incidence of death among young people is consistent with patterns of death in populations known to have been victims of epidemics. So those individuals with hypoplasia might have survived one or more attacks of an epidemic, to which others succumbed. Hittite records from a generation later claim that, in Akhenaten's time, Egyptian prisoners of war spread an epidemic of some kind into Hittite society, something perhaps referred to obliquely in one of the Amarna Letters as brought on by the 'hand of Nergal', a Near Eastern god of pestilence.⁴⁶ The graves in the Amarna cemetery were dug into a bank of sand partially filling a narrow valley. They were often packed closely together, and they would have been difficult to open a second time to receive further burials. Where, in a significant number of instances, graves contained more than one individual, it is likely that they had

died at the same time (bearing in mind the absence of evidence for mummification, as many of the skulls excavated retain brain tissue, and the consequent likelihood of very rapid burial after death).

Advances in analytical techniques, especially the growing confidence with which ancient DNA can be extracted and studied, make it likely that we are on the threshold of a much better understanding of the health of the time.⁴⁷ Tutankhamun, weak in health (malaria has been identified in his body) and dying young, looks like a representative of his people rather than a tragic product of an anomalous family.

How far should we allow the comparative bleakness of the cemetery evidence to influence our portrayal of the life of the times? Within certain bounds of reasonableness, people adjust to what is normal. What confronts them from birth to death is the baseline against which optimism and pessimism vie to become the dominant mood of the individual. Some lose out to despair, but overall, populations incline towards something more than fortitude, towards a degree of cheerfulness and optimism that can confound the expectations of people who have been brought up surrounded by the best of modern experiences. That said, those who moved to Amarna might have faced a drop in living standards severe enough to leave those who survived to the end of the Amarna period only too happy to move away when it became possible to do so.