Chapter 4. Contact and Development in Godin Period VI
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[see On the High Road: The History of Godin Tepe, Iran for figures referenced in text]
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Godin Periods VI and VII span the fourth millennium BC, the period when many features of the modern world emerged. All the hallmarks of complex society came into existence at that time including leadership with the authority to make and enforce policies, taxes and tribute, social differentiation, bureaucracy, extensive economic specialization, writing, life in cities, and organized militias (Adams 1981; Wright 1977, 1994, 1998; Fried 1967; Service 1962; Rothman 1994b, 2007). Although many of the most dramatic changes of this early social evolution toward complexity occurred first on the lowlands of modern southern Iraq, societies in the central Zagros of Iran and the hills north in the Taurus Mountains of modern Turkey were essential players in this transformation.

The difference between patterns of development in the highlands and lowlands, especially as they reflect different adaptations to the natural environment, are one of the themes of this book, but the path to these complex societies involves much more than the natural environment (Rothman 2004). Culture and society at any given time period are the result of both unique conditions and processes of change common to many evolving societies. This chapter will explore how the society of Godin Tepe Periods VI-VIII and the associated sites in the Kangavar Valley of highland central western Iran were the product both of a long history of development in the mountains and intercultural connections with lowland societies.

At the core of understanding Godin VI and its larger importance for Greater Mesopotamian prehistory are three fundamental questions:

- When and how was the pattern of food and craft production typical of the highlands established? In what ways is it typically highland versus lowland?
- The earliest phases of this evolutionary trajectory are in a context of what anthropologists call simple societies; simple only in the sense that their organization tended toward small, kinship-based groups with the most rudimentary types of leadership (Johnson 1973, Wright and Johnson 1975). What was the path that led to larger societal units, more highly developed leadership organizations, and more specialized economies?
- What were the connections of these highland societies with each other and with lowland Mesopotamian societies? What were the types of interactions among them? To what degree did these connections motivate local residents of the Kangavar Valley to retain or alter their behaviour and social structures?

All of these questions are essential to try to answer because of what has emerged as a set of theories about why cities and leadership with authority developed for the first time midway through the fourth millennium BC when Godin Periods VI and VII were occupied (Algaze 1993, 2001, 2005; Stein 1999; Stein, ed. 1999; Rothman 1993; Rothman 2001, ed., Frangipane 1993, 2001). Those theories rest on the idea that the natural resources missing in the alluvial basins of the Tigris and Euphrates, but present in the surrounding highlands, created the need for a
controlled, intra-and interregional trading system. Because the lowland societies had developed more sophisticated economic and political systems, they controlled the highland societies either as economic colonies or as trading partners. For the past four decades, these theories have been hotly debated and have spawned many archaeological projects. Godin Tepe VI is often cited as evidence for this model.

Most of the data we have relating to the study of the fourth millennium BC at Godin is from its last phase, Period VI:1 (originally called V) (Figure 4.1). Godin levels VI:3 to pre-XI yielded samples of artifacts that are too small and too much out of architectural context for us to analyze their cultural meaning (Young 1969; Young and Levine 1974). Because Godin was such a deep site and it was clear that it would be difficult to reach these early levels, in 1971 and 1973 the Godin Project conducted excavations at Seh Gabi, a Neolithic to Chalcolithic site some six kilometres northeast of Godin in the Kangavar valley. The data from Seh Gabi formed the basis for understanding these early periods in the area.

Table 4.1 Chronology of Greater Mesopotamia from the Neolithic to the end of the Chalcolithic Age
The chronology of the broader period covered by this chapter is summarized in Table 4.1. Traditionally, archaeologists named this period and its sub-phases after Uruk-Warka, the first major excavated site in which it was identified. As our understanding of the period broadened, however, scholars realized that the system of nomenclature no longer sufficed to characterize the cultural complexity of the period in the region as a whole. At a recent symposium of archaeologists and historians published (Rothman ed. 2001, Wright and Rupley 2001), a more neutral chronological framework (labelled Late Chalcolithic or LC 1-5) was developed that could better account for these cross-regional cultures. It is that framework that will be used here.

Neolithic Precursors to Godin

To understand the nature and dynamics of Godin VI we must start thousands of years before the fourth millennium (Figure 4.1). The economic elements of the society of Godin Period VI began to emerge at the time of the first domestication of plants and animals, the beginning of settled life, and the appearance of economic specialization during the so-called Neolithic Revolution (Childe 1950, 1953;). Although the Neolithic is often thought of as a uniform phenomenon, these three elements represent partially independent spheres of change. For example, settled village life preceded domestication at Hallan Çemî (Rosenberg 1994; Rosenberg et al 1995; Rosenberg and Davis 1994) in the Taurus Mountains, Zawî Chemî Shanidar in the Zagros (Braidwood and Howe 1960), and numerous sites in the Levant (Balossi Restelli 2001). Domestication of grains first occurred in the shadow of the mountains in the Levant, whereas some of the earliest animal domestication preceded plant domestication in the high piedmont and mountains (Rosenberg and Redding 2000). Pastoralists, who moved their flocks from highland pastures in the summer to lowland ones in the winter, also first appeared in the mountains. These early economic specialists provided animal products to villagers in exchange for craft goods and grains and often acted as transporters of goods. Theirs was a symbiotic relationship although at times rife with conflict (Bates and Lees 1974).

In the Zagros, early Neolithic villagers at sites like Asiab, Sarab (Braidwood and Howe 1960), Ganj Dareh (Smith 1975), Guran (Mortensen 1974), and Abdul Hosein (Pullar 1990) evolved step by step over millennia from collectors to cultivators, village farmers, and pastoral nomads. Palaeolithic peoples had a strategy of utilizing a broad spectrum of foods, because they were dependent on whatever nature provided. Residents at early Ganj Dareh continued this strategy (Balossi Restelli 2001). However, by its second phase excavators at Ganj Dareh found no wild grains; domesticated cereals provided the major component of their diet. Researchers also found evidence there of the first steps toward specialized, nomadic pastoralism. While plant foods were similar throughout the Neolithic countryside, the specific sources of meat and animal products within the mountains varied according to locality; residents of some sites emphasized pastoral animals like sheep and goat, others wild boar and deer or raising cattle (Zeder 2001, Zeder and Hesse 2000). Pigs provided a small amount of meat in all of these places.

Craft production in the Neolithic presages that of the later Chalcolithic. Clay figurines of humans and animals were first made in considerable numbers during the Neolithic at sites like Ganj Dareh and Sarab. Technologies for chipping stone into bifacial blades and flake tools from cores, grinding stone into querns and rubbing stones, forming clay into pottery with traditional shapes and painted design, and the production of spindle whorls for making yarn appeared in the early Neolithic.
Craft production is important because it reflects the technology of the time, but also because it indicates underlying social structures (Costin and Wright 1998). Economic specialization is one of the defining characteristics of complex societies. Such a system can involve farmers making pots or sickle blades in their non-agricultural seasons, as was the case early in prehistory, or it can describe a system like ours in which we all produce one good or service and depend on the specialized production of others for almost everything we consume. The former is a basis for exchange that can strengthen or create social bonds through gifts; the latter is a complex system of interdependence that normally requires administrative organization and allows for administrative interference and control.

Goods were exchanged over a surprisingly large area since as early as the Upper Palaeolithic period (Henry 1989). Finds of Red Sea dentalium shells over a very large area demonstrates the scope of early exchange systems. This earliest exchange is often characterized as down-the-line trade, because those nearest the source of the valued item, would take what they wanted, and would exchange the remainder to the nearest settlements. The process would start again in this second settlement and so forth down the line (Renfrew et al 1969). The quantities would therefore decrease as one moved farther from the source area. A more formally organized system of exchange in which distance from the source was not the prime factor appeared later at the time of Godin VI:2 (see below).

The Neolithic villages were not so simple in their organization that they did not display some new social forms. Many of the earliest village sites such as Ain Mallaha in the Levant (Bar Yosef et al 1992; Simmons 2007), Qermez Dere in northern Iraq Watkins et al 1989), Novaklı Çori (Hauptmann 1988, 1991/2, 1993), and Hallan Çemi (Rosenberg 1994, Rosenberg et al 1992, 1993) in the Taurus foothills had distinctively larger structures, perhaps community buildings. Public ritual emplacements also became more commonplace. Private houses continued to be built in non-standard, ever-changing configurations. Such communal facilities and presumably the social organization necessary to coordinate them are the foundation for later more elaborated institutions evident at Godin and other sites.

**Godin and the central western Zagros during the Early and Middle Chalcolithic**

The earliest evidence for occupation at Godin comes from Periods XI through VII, spanning the Early and Middle Chalcolithic into the beginning of the Late Chalcolithic (Figure 4.3). Remains of these periods consist of pottery sherds, a few objects and some animal bone excavated in a deep test trench, called Operation XYZ, as well as in the two soundings (Operation A and B) that Cuyler Young excavated in 1965. Operation XYZ was a small (two meter by four meter) trench below the northern wall of the Period VI:1 Oval that was dug in 1973 in order to try to uncover some of the earlier sequence at Godin. This trench was recorded in arbitrary twenty centimeter units instead of by archaeological strata so that it is difficult to reconstruct a cultural sequence for these early levels. From the very fragmentary remains that were recovered it would appear that Godin Period VIII is in the transitional phase between the Middle Chalcolithic period and the Late Chalcolithic (LC1). Period VII, falling in the first part of the fourth millennium BC, belongs to the Late Chalcolithic (LC 2) (Early Uruk) period. The neighbouring site of Seh Gabi, which was also excavated by the Godin Project, extends this sequence back into the Neolithic period.
The story told by the sites of these periods in the Zagros Mountains is of an ever-shifting distribution of communities and overall flux in the highlands throughout the Early and Middle Chalcolithic periods. One indication of that flux is found in the ecological niches that Early and Middle Chalcolithic groups chose (Hole 1987). Early Chalcolithic sites clustered either on small streams or wadis (seasonally wet run-off streams) or were located at somewhat higher elevations that were not as dependent on readily available water. By contrast, in the Mesopotamian lowlands the first settlements could not have existed without immediate access to water for irrigation and transport routes.

This flux is represented by a series of painted pottery traditions including J ware (Godin pre-XI), “streaky,” painted, and impressed Dalma ware (Godin XI/X), Black on Buff, Red on Buff, and Red, White and Black wares (Godin IX/VIII) are associated with the Chalcolithic period within the central western Zagros (figure 4.4). If we can interpret the distribution of these pottery design types as representing broadly interacting social groups, we can see that early highland groups were in one sense self-contained, but also that they had already begun to communicate and interact with lowland societies (E. Henrickson 1983, 1989; Levine and Young 1986).

The people who made and used one of the earliest of these pottery traditions, J ware, lived on flood-plain streams (Hole 1987). Their pottery was related to Halaf pottery of the piedmont of northern Mesopotamia. Dalma ware, on the other hand, contained many elements of the pottery traditions from the highlands north of Godin, especially the area of Lake Urmia (E. Henrickson 1989). It did not extend into southern Luristan. While ‘Ubaid pottery blanketed the piedmont and lowland plains of most of Greater Mesopotamia in the Middle Chalcolithic, the central western Zagros was largely isolated from these lowland pottery traditions until the end of the fifth millennium, although as figure 4.4 illustrates, all of these traditions share a common overall aesthetic as well as some specific design elements.

Pottery style distributions indicate interactions, but the Middle Chalcolithic period in the central western Zagros represents other kinds of changes as well. Population size is a critical element for catalyzing change as well. State societies usually are not only the most organizationally complex, but have the largest populations as well. The necessity of controlling and providing for the needs of larger populations often requires more complex organization. As agricultural technology was refined, the overall size of the population measured by the occupied area of sites in these mountain valleys grew in the Early Chalcolithic period.

Yet, by the end of the Middle into the beginning of the Late Chalcolithic period (Godin IX-VII) population numbers as represented by the occupied area of settlements had drastically declined throughout the Zagros from Iranian Azerbaijan to Fars (Wright and Johnson 1975). The Kangavar Valley seems to have been the one exception to this trend (Young 2004). Some
researchers argue that real population actually remained steady, but that a shift to a nomadic pastoral adaptation with its temporary encampments meant that fewer people left a trace in the archaeological record. There is a long history in the Middle East, continuing until very recent times, of people moving from village to pastoral nomad life in times of political or economic upheaval (Adams 1978).

The continuing increase in political organization, however, is demonstrated in a number of ways. An early way of controlling access to raw materials and goods was to seal them in storerooms or portable containers like jars, baskets, and sacks. Access to these materials was then limited by placing clay sealings impressed with a carved seal signifying an individual or office, over the string knot (Rothman 1994a and c; Frangipane 2007). The seal design carried information about who sealed the container and therefore also who might have access to it (see discussion of seals by Holly Pittman). Although seals and sealings pre-date Godin VIII, they became more frequently used in this period, and the uniformity of some designs suggests that they were more likely to be the symbols of institutional affiliation than personal identity (Rothman 1994c, von Wickede 1990).

One reason for an increase in control mechanisms and probably more controlling political organization was an increase in the movement of goods. Greater Mesopotamia has an uneven distribution of resources. The alluvium lacks much beyond dirt, water, people, and animals. Any metals (gold, silver, copper), precious or semi-precious stones, wood for constructing larger buildings and boats, or chipping stone (including volcanic glass - obsidian) must be imported from or through the surrounding highlands. During the time of Godin VIII, the LC 1, a real increase in the movement of these goods is evident across the region. For example, lapis lazuli, a semi-precious blue stone known to occur naturally only in the Badakshan area of northeastern Afghanistan, began to appear in LC1 sites in significant amounts (Herman 1968). The trade route used was the High Road north of the Dasht-e-Kavir. In the LC1 the primary route continued down through the Jebel Maqlub near Lake Urmia onto piedmont near Tepe Gawra and connected with the Tigris corridor (see figure 1.1) (Rothman 2002). Later on in the LC2-5 (Godin VII to VI:1), traffic shifted to a north-south route through the central western Zagros toward Susa. Obsidian and other chipping stone and finished blades as well as metal ores of hammered or cast copper also traveled along the same route. In the northern piedmont, finely fired and decorated ceramics were traded over a surprisingly wide area, determined by chemical characterization of pottery from Tepe Gawra, Shelgiyya, and Tell Brak (Rothman and Blackman 2003). In other words, the route past Godin became a more and more important one for regional and even inter-regional exchange. Such an increased role is often an opportunity for would-be leaders to insert themselves into societies forcing a real change in the basic relationships of different members of a society.

Often, during periods of such political change, religion comes into play (Rothman 2001). In order for people to accept the idea that they should give over power to leaders with the authority to make decisions for them, the gods often play a role in what anthropologists call the sanctification of political rule. For example, in fourth-millennium-BC alluvial Mesopotamia the concept of the gods as providers, especially from afar, mirrors the images of kingship that emerged and the importance of exchange for exotic goods that elites promoted and used to signal their new social status (Jacobsen 1976).

One probable example of this is found in lowland southwest Iran at the site of Susa (Hole 1983; Wright 1994). There, residents built a truly massive high platform (the massif), composed of some 570,000 mud bricks covering one hectare (figure 4.5).
The top of the structure was mostly removed by later rebuilding, but the shape of the one exposed side was recessed at the corners suggesting that the building was originally in a cruciform shape. On its apex were remains of a building with massive walls, large storage rooms, and a shrine decorated with ceramic models of caprid horns. A painted pot was found at Godin Phase VI:2 that bore a painting of a horned animal that is very similar to the images found on some of the pottery from this period at Susa (figure 4.6). At the foot of the Susa massif was a cemetery with graves containing unusually finely made painted vases. These same special vases are found on survey in smaller numbers across contemporary sites of the Susiana Plains. One interpretation of this pattern is that a more hierarchically organized society had emerged, in part organized through the recruiting of labour to build and maintain the massif temple. The finely painted vases may have been tokens of rank used to reward the local leaders who participated in this new hierarchy. Meanwhile, in the northern piedmont excavators at Tepe Gawra and Tell Brak recovered specialized buildings for storage of exotic goods (Rothman 2002; Oates and Oates 1997).

Leaders cannot rely on sanctification alone. Central storage of foodstuffs and other goods, the distribution of water for irrigation, and defence against pastoral nomads, other cities, and landless peoples were among the services these new leaders had to perform.

One reason that the highlands and lowlands differed in their organization and in the overall size of their political units has to do with the natural environment of agriculture; whereas an estimated 20,000 people lived in Uruk-Warka by 3500 BC, no such numbers would be found in the highlands for millennia. In the alluvium, population growth, clustered near the river banks for access to irrigation, also put pressures on these societies. Rainfall agriculture in the highlands did not require clustering. Population density in the highlands was lower and the size of political units was smaller, yet pressures that spurred greater social complexity still existed (Weiss 1986).

All of the institutions of these LC2-5 societies in the lowlands are associated with seals and sealings, indicating that a system of administered centralization had begun to evolve in earnest. Seals and sealings are also evident in the central western Zagros at this early stage of the Late Chalcolithic Period. In general, however, we have much less knowledge of what was happening in the Zagros Mountains than in the lowlands. Only Tepe Giyan in Nehavand, Seh Gabi in Kangavar, and Baba Jan in the Pish-i Kuh (Goff 1971) have yielded relevant data other than pottery. The collection of seals and sealings from Giyan (Caldwell 1976) are especially important because of design parallels to Tepe Gawra which lies some 500 kilometres to the north as well as to the Bakun culture in southern Luristan to the southeast (Alizadeh 1994). These sites were stops on the intermontane exchange routes to the northern piedmont.

This pattern of links between distant sites suggests that extensive, integrated, controlled exchange networks in the Zagros had replaced simple down-the-line exchange (Renfrew et al 1969).

The presence of thick-walled buildings at the village site of Seh Gabi, mound A, near Godin indicates some social changes in Kangavar as well (figure 4.7). Excavators uncovered eight rooms dating to Godin Period VII with cruciform hearths whose shape mirrors that of the temple on the Susa massif. The walls of these buildings were thick enough to support additional stories, although no foundations for staircases were recovered. Evidence for the production of pottery, sickle blades, stone beads, textiles, and clay figurines as well as the remains of metal working suggest a very lively craft-working tradition at this village (Hamlin/Kramer 1974).
Finds of both seals and sealings indicate that this small village near Godin was part of a system evolving toward more complex organization, possibly with Godin as its center (Figure 4.2).

Such a societal system in Kangavar implies that geographical and societal centralization was developing. In more centralized systems the most important economic, social, and ritual activities are limited to a few sites. Cities or more appropriately urban systems represent a physical index of the degree of centralization of societies. Different functions from governance to farming to manufacturing to religion are distributed across sites in a pattern in which the most specialized ones or ones that the leadership controls tend to exist in city centers (see Rothman 2002).

By the mid-fourth millennium BC, a very complex system of urban-centered social organization would be established throughout Mesopotamia (Adams 1981). The development of these earliest state-based societies, traditionally called the Uruk phenomenon after one of its greatest early cities, catalyzed change as far away as the northern Caucasus in Central Asia where very large settlements also appear for the first time (Anthony 2007). The immediate cause of these changes was in part the movement of goods and people in greater numbers and over a wider area than ever before. This new social complexity would be marked by qualitatively and quantitatively different kinds of economic, governmental, and religious interdependence. For some scholars the heart of the state is in its internal, hierarchical organization. For others it is the emergence of elites of power and privilege and the tools that these leaders used to work their will (Algaze 1993; see Rothman, ed. 2001). All researchers acknowledge that specialized craft-making and high levels of exchange are part of the economic landscape of the state.

One of the hallmarks of the state in Mesopotamia was the development of a region-wide exchange network. Because the heartland of cities on the southern alluvium of Mesopotamia was so resource-poor, many of the raw materials needed to produce goods and to signal the new status of leaders were imported from areas to the north and east. Unlike earlier down-the-line exchange, these networks short-cut the gradual movement of exotic goods through space by sending agents into resource-rich areas to facilitate the movement of desired goods directly to their final destinations.

One of the major reasons why Godin VI is important to larger anthropological and Middle Eastern research is the theory that it was a colony of lowland alluvial city-states (Weiss and Young 1975). Cuyler Young and Harvey Weiss initially made the same argument for Godin Tepe in its final VI:1 stage. They saw the Godin compound within its oval wall as a colony of merchants from lowland Susa to its southwest. Co-author of this chapter, Virginia Badler, proposed that the Oval complex was not a merchant colony, but a fort guarding the High Road (Badler 2002, 1989). Yet a third researcher, Roger Matthews, proposed that it is a local administrative center (Matthews in press). Whichever is more likely, the more important question of who actually occupied it will be addressed below.

Those who favor the theory of economic colonization point to a distribution of distinctly southern, Uruk cultural artifacts in the northern piedmont and highlands. This along with the fact of southern political and economic sophistication of Uruk city-states is the evidence to support their theory. Those who see an alternative theory point to the indigenous development of societies in the so-called peripheral or colonized areas before the controlled international trading system, known by many as the Uruk Expansion, had begun (Rothman 2002; Frangipane and Palmieri 1983, Stein 1999). Trade in exotic goods was already prominent in the Middle Chalcolithic Period. Even if the opponents of the colonization theories, modelled on the World
Systems model of Wallerstein (1994), disagree with the nature of the periphery, including the central Western Zagros, they do agree that the trading system did exist.

The central question in the discussion of Godin VI material is how to define the nature of this site in terms of its relation to the lowland Uruk world (Figure 4.8). Was there an actual population of Uruk, lowland people living in the Oval Compound, as Young and Badler believe? Was there an indigenous highland population with its own developing leadership structures based on local needs, as Matthews suggests, or is there another, third possibility not yet considered?

**Godin Tepe Period VI** (Figure 4.9)

Godin Period VI was reached only in the final month of the four-year Godin Project. With the final season and funding coming to an end, speed was of the essence. As it became clear that the Uruk-related VI architecture was substantial and significant, and because a numeric tablet was found on the first floor to be exposed, the Period IV remains that still lay over much of the VI architecture were removed quickly and with less than optimal attention to detail and recording. As a result the transition form VI to IV is very poorly understood and there are many mixed lots and untraceable walls in these late VI and early IV deposits. Vertical elevations were recorded for the tops of walls and some floors of both levels, but the artifactual “lots” nor bottoms of walls making their first construction were not were not tied into this vertical grid so that it is sometimes difficult to establish the stratigraphic relationship between the architectural phases and the artifacts that were found in them. The only really useful stratigraphic sequence for this period is the 1965 Operation B (originally recorded as C and G), but here again it is difficult to correlate the strata recorded in the stratigraphic section and the recording system used for the pottery collection. Strata 21, 18, and 13 in particular are so badly mixed that they are unusable.

In spite of the speed with which Period VI was excavated, the graduate students who were supervising the area convinced Cuyler Young that given the remarkable preservation of the architecture and floors it would be worthwhile to screen the dirt as it was removed so that the smaller artifacts and bones that might have otherwise been missed were recovered. They also undertook some flotation of the deposits to collect the charred seeds discussed in chapter 3. This screening was far from 100% and was not in any way according to a regular plan.

**The Dating of Godin Period VI**

In earlier publications VI:1 was called V, and the number of subdivisions we refer to here with each of phase V:3, 2, and 1 (from earliest to latest) had been much more finely subdivided. Young (2004) explained this re-phasing: “Unfortunately, because in the original test trenches dug in 1965 materials of lowland origin such as Late Uruk Trays and Beveled-Rim Bowls appeared to be stratified above materials of Period VI, the levels in which they were found were labeled Period V. In an effort to eliminate this confusion and make it clear that what was originally called Period V is chronologically just late Period VI... Period VI will henceforth be divided into three phases: VI:3, which represents the indigenous culture before any contact with the Uruk Period lowlands, VI:2, in which the first hints of some contact with the lowlands appear; and Period VI:1, in which the Oval wall is built. Period VI:1 is divided into VI:1B and VI:1A based strictly on the architectural changes which occurred within the Oval.” How can
these phases be dated and how do they correlate with comparable sites in the Greater Mesopotamian world?

Table 4. 3 Radiocarbon dates for Godin VI

The dating of Godin VI (and VII) is based on both relative chronology and radiocarbon dating. Our best understanding of the overall chronology appears in Table 4.1. Table 4.2 summarizes the absolute dates for Godin VI. Although absolute dates derived from radiocarbon analysis are in many ways the best source for chronology, they only provide a possible range of dates and these ranges can sometimes be narrowed by comparison with other sites. Chronological schemes that most archaeologists use are often the somewhat intuitive correlation of absolute and relative dates. The radiocarbon dates analysed by the Smithsonian lab (sample numbers beginning with SI) from Godin VI are fairly consistent and can be combined with Bayesian statistics (using the OxCal modelling program developed by Bronk Ramsey). With 95% probability these carbon samples came from trees that were alive sometime between 3490 and 3050 BC (Wright and Rupley 2001). From the depth of deposit and other factors, it seems likely that the buildings of the VI:1 Oval existed for less than 250 years; this time span probably fell sometime within that range of dates. Since the oval wall that defines the compound was clearly built after some of the buildings within it—the wall cuts some of the original buildings—the life of the Oval’s wall is considerably shorter, probably less than 150 years. Three dates that were originally assigned to VI on the basis of our re-analysis of the stratigraphy belong rather to pitting from level IV (SI 2674, 2676, and 2682).
Unfortunately no carbon samples were recovered from phases VI:2 and VI:3. These phases can be dated only by comparison with other sites. The relative chronology of Period VI and its overall relationship to other sites will be discussed below.

The Pottery of Godin Period VI and VII (figures 4.42-4.51)

Virginia Badler analysed the pottery from Godin Period VI. She used the 1965 Operation B to trace the changes in pottery style through the sub-phases of this period, although there were stratigraphic problems with the Operation B sounding.

We first need to define the ceramic assemblage that is to be compared. As at most archaeological sites, pottery was the most ubiquitous category of artifacts recovered from Godin Tepe. There are over 4,000 pottery sherds from VI and VII stored in the Royal Ontario Museum, and perhaps fifty whole or full profiles of vessels. Other complete vessels remained in Teheran.

Making a vessel entails many important decisions by the potter. These manufacturing decisions are profoundly influenced by available clay and temper resources, the training of the potter, and the purposes for which, or persons for whom, he or she is making the pots. For the purposes of discussion, the Godin VI pottery will be divided first into functional shapes. The largest percentage is made up of small bowls—bowls with a rim diameter of 24 cm or less were classified as small, and those with a rim diameter of 25 cm or more were classified as large—serving bowls and beakers (58% of early Period VI sherds). The remainder of the assemblage is divided into vessels which would have had a group-use function: large bowls (group serving and food preparation; 17% in early Period VI), spouted vessels (serving of liquids; 2% in early Period VI), pots (food storage or cooking depending on burn marks; 10% in early Period VI), pithoi (for food storage; 1% in early Period VI), jars (for food storage; 11% in early Period VI), and lids (1% in early Period VI). There are similar percentages throughout Period VI. Table 4.3 presents the major types.

<table>
<thead>
<tr>
<th>I. Bowls</th>
<th>II. Jars</th>
<th>III. Spouted Vessels</th>
<th>IV. Beakers, Bottles, and Jugs</th>
<th>V. Various</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small &lt;24 cm&gt; large</td>
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<tr>
<td>c. In-turned rim</td>
<td>c. Collared or everted neck</td>
<td>c. Trough</td>
<td>c. Beakers</td>
<td>c. Strainer</td>
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<tr>
<td>d. Flaring plain rim</td>
<td>d. Fine</td>
<td>d. Bottles</td>
<td>d. Cooking pot/ trays</td>
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<tr>
<td>e. Plain everted</td>
<td>e. Short wide/ cannon</td>
<td></td>
<td>e. Pithoi</td>
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</tr>
</tbody>
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Table 4.4 Godin VI and VII pottery types.
All of the pottery of Period VI and VII was fired at a fairly low temperature with exposure to a considerable amount of air (oxidation), as opposed to in a kiln (Rice 1987), which is sealed reducing the amount of oxygen (reduction). Its earth-colors ranged from pink to buff when not slipped (a thin layer of liquid clay applied before firing). When they are slipped the colors tend to be cream or red. Fine-painted pottery is most commonly decorated in brown or black paint on a cream ground. Two vessel forms, the rolled-rim small bowl and small jars, are almost always slipped, usually with a cream slip that sometimes burns pink in the firing.

That treatment, paralleled in the piedmont at Tepe Gawra, appears in the lowland later. Most researchers assume that lowland forms always move toward the highlands, but lowlanders do adopt highland forms. This is one of a number of examples.

Potters in Period VI and VII were also quite consistent in their use of tempering material. Throughout the entire period, the primary tempering agent is vegetal, most often chaff, or in the case of very fine chaff perhaps it is from dung, dried cakes of which mixed with straw was a common fuel for heating, cooking, and other pyrotechnic activities. There are certain exceptions, most notably medium sized jars and cooking pots. Cooking pots were made to withstand thermal shock, and to that end, small stones were added to the temper. However, very large pithoi were still tempered with a very coarse straw.

Most Godin pottery is hand formed. Forms are often quickly made and crudely trimmed by paring off the excess clay from the base as exemplified by the in-turned rim bowl shape. However, there is evidence for use of the wheel, a technical advancement first utilized in the LC3 period. The probable date when the wheel is first used at Godin is VI:2, the beginning of more intense contact with the Mesopotamian world. The pottery of VII and VI:3 is indistinguishable in many ways other than the percent of VII that were painted. Level VII and VI:3’s pottery is the finest made. VI:2 and VI:1 potters valued speed over quality (Figure 4.13, 4.16), which is significant because mass production often accompanies overall increases in economic specialization and societal complexity.

Among those categorized by Badler as small bowls are the highly straw-tempered utility wares of the Uruk world, the beveled-rim bowls (Figure 4.17), which are important because of their connection to the lowlands. These were mass produced in the millions across Mesopotamia beginning in about 3600 BC. Some researchers think these bowls were mould-made, but it is more likely that someone took a wad of prepared clay holding it between the thumb and two fingers, quickly formed it, and finished it with a sweep of a thumb around the rim giving it its beveled edge. These can be low or have higher forms called Blumentöpfen (flower pots) by those who first found them. Badler’s experiments with various substances suggest that they have been used to contain liquids, both because the rounded-rim bowls they replaced late in the VI sequence was apparently used for drinking and because the formation of the bevel makes it fit a lower lip at a good angle for drinking. Evidence, including textual evidence, suggests that they were ration bowls, made by common workers rather than skilled potters, to feed the dependent or corveé work force of the central authorities (Nissen et al 1993).

Overall, the pottery of level VII and VI provides evidence for distinct patterns of development and change. The changes that mark Period VII from Period VI:3 to VI:2 include decreases in the percentage of painted pottery, slipped and burnished pottery, and in handmade pottery, including Period VII coarse-burnished wares. In late phase VI:2 flared plain-rim and bevelled-rim bowls—these became the predominant bowl shape—emerged as new forms. New
large bowl forms appeared as well: ledge-rim bowls, bowls with an interior bevel, raised and incised decoration including everted-rim jars with rope decoration. Straight and funnel-spouted vessels also appeared in late Period VI:2. Potters in the VI:2 phase added disk and ring bases, medium and large beakers (with pinched lips in late VI:2), rolled-rim pithoi, pithoi with interior ribs and pinched knobs, exterior lugs, exterior decorative knobs, as well as serving trays and strainers.

The transition to VI:1 saw a return to painted jars and expanded use of the fast wheel as evidenced by unfinished string cut bases and rilling (the undulating surfaces of wheel thrown pots). Slipped pottery and the number of pithoi decreased. Handmade bevelled-rim bowls became the predominant small-bowl form, small rolled-rim bowls were more flared and the roll more tapered, and Uruk type serving trays either with a rolled rim (with single thumb print on rim perhaps for pouring) or a straight rim became common. Ring bases increased in size. Only in the Oval did excavators recover everted-rim jars with rope decoration and nose lugs, Uruk droop and trough spouts, cooking bowls (“woks”), Uruk-type bottles, and flared bowls with interior decoration.

**Comparanda and Relative Chronology of Period VI Pottery**

The pottery of VI:3 to 1, is significant because of our ability to date it and thus the archaeological strata in which it is found. It is equally important because it tells us about cultural connections among ancient peoples.

The pre-Uruk contact or early Uruk contact material can be placed in time through relative chronology (Table 4.3). The nature of that contact in VI:2 is very limited in that it consists of the almost universal beveled-rim bowl, which we now know was already in wide circulation from 3600 to 3000 BC. String cut bases and trays also appear then.

Godin VII and VI:3 into 2, the period when the site was very much part of the Zagros Mountain culture area can be best dated by sites to its north and east in central Iran. The sites of Gabristan near Qazvin and Sialk near Kashan both have levels with ceramics comparable to Godin VII and Early VI. For VII just before and at the beginning of the fourth millennium BC the comparison is with the earliest level at Gabristan and Sialk III, phases 4-5. Gabristan IV and Sialk III, phases 6-7, compares with Godin VI:3 into 2. A bowl type with three black painted finger marks from the rim can place Godin in the LC2 with parallels to the piedmont of northeastern Iraq and southeastern Turkey (Rothman 2002b).

Godin VI:2 on the basis of these comparisons falls in the LC3 and 4 periods, and Godin VI:1 into LC5 (table 4.4). The pottery from this period also establishes very clear cultural links between the residents of Godin and the lowland Uruk world, particularly the part of the Tigris and Euphrates south of modern Baghdad (Nippur and Uruk), as well as the extension of the alluvium into southwestern Iran (Susa and Choga Mish.) There are surprisingly few commonalities in pottery style with the Diyala Plain through which travelers from the south would have had to pass. Kunji Cave is clearly related to this VI:2 period.

Godin VI:1 shares many parallels with the Uruk traditions of the lowlands at Nippur, Uruk, and Susa. It also shares styles with Baba Jan (Goff 1971) and other sites in the Pisht-i Kuh closer to the lowlands, presumably also copies of Uruk styles (Wright et al 1975). An unusual connection with Arslantepe VIA of the LC5 is the fenestrated stand, also present in the Diyala (Frangipane 2002). In the last sub-phase of Godin VI:1A, an additional cultural connection is made with pottery of the Transcaucasian cultures from the mountains of the south Caucasus in
the modern countries of Armenia, Georgia, and Azerbaijan. This other cultural movement, which is the subject of the following chapter 5, will also prove important for understanding the functioning of the site in its final VI:1 days. It establishes the date of VI:1A close to the end of the fourth millennium BC.

Certainly, the corresponding geographical distribution patterns of Uruk-like ware and local VI pottery suggest a directed flow of influence or exchange, not a blanketing effect (figure 4.17). The full Period VI ceramic assemblage is found in the central Zagros northeast of the Kuh-i Sefid and even more so northeast of the Kuh-i Garin, extending north to the Qazvin Plain near modern Teheran (E. Henrickson 1983). This is the high mountain front adjoining the Dasht-i Kavir. The so-called attenuated VI, defined as having fewer VI elements, covered an area where only a partial set of the VI types are found to the south and west of the Kuh-i Sefid in the Mahi Dasht and Hulailan valleys. In the succeeding Godin IV, surveyors did not find any of the Early Transcaucasian wares that dominated Godin in these valleys, suggesting some kind of cultural barrier existed separating them. However, the clearest presence of the Uruk pottery occurred in the broadest agricultural plains of the Central Western Zagros, the Mahi Dasht and Kangavar. Contact snaked its way up the rivers along the High Road into the richest of the valleys. Parenthetically, it was in the Kuh-i Sefid and Kuh-i Garin, as well as the lowlands where the size of population (mostly new villages) grew in the fourth millennium, while in the Mahi Dasht and Hulailan valleys population declined. Kunji Cave outside the VI or attenuated area is generally interpreted as a seasonal pastoral site southwest of the Kuh-i Garin on the route into the lowlands (Wright et al 1975). Because it was one of only a few excavated sites other than Godin with this typical VI pottery perhaps Kangavar or its environs was a home base for these pastoral nomad groups.

The Architecture and Function of the Godin VI:1 Oval Compound

The latest and most important set of buildings in Godin VI are those within the Oval wall. This Deep Sounding compound consists of a group of structures around a central courtyard placed at what would have been the high point of the mound. The entire compound is surrounded by an oval enclosure wall, and covers an area of approximately 560 square meters. The buildings within the oval are divided into separate named units composed mainly of adjoining rooms. The Oval compound was abandoned and what remained was in fairly good context. Area 21 rooms 22 in the northeast corner of the compound were burned (Figure 4.14 and 4.19)

A number of rooms including the northwest corner of the northern building (room 14) are cut away by the construction of the oval wall, suggesting that the oval wall was built after some of the buildings inside it. There are also three triangular rooms (rooms 5, 10, and 13) that accommodate the curve of the oval wall, which suggests that these at least were built after the wall. The overall impression is that the builders of the Oval were taking advantage of the limited space available. The re-modeling of VI:1A consisted of the addition of large rooms or enclosed areas (rooms 7-9) inside the courtyard. Based on the way this additional structure appears to block one side of the entryway door, it may be an unroofed enclosure, perhaps even for animals. Near the end of the Oval’s life, the doorways to rooms 2, 10, 12, and 13 were sealed.

A number of features typify these buildings. Four of the rectangular rooms have interior niches on their long walls (rooms 2, 6, 18 and 22), and one of these rooms (room 6) also has interior niches on its short walls. From ethnographic parallels, these niches were probably used
as storage shelves. Of the thirteen completely excavated rooms in the VI:1B Oval only five have hearths on their initial floors. Three of the hearths (in rooms 17, 18 and 19) are heating fireplaces, while two of the hearths (in rooms 5 and 6) are constructed as cooking hearths, complete with griddles. In a modern Near Eastern village such as Titris Höyük, interior rooms can be divided into two basic groups based on use: living spaces with hearths where villagers cooked, ate and slept, and storage rooms that are without hearths or windows (Figure 4.15).

One reason that Godin is important is its potential role in the Uruk expansion (Algaze 1993, Rothman ed. 2001; Stein 1999, 1999a). Was it a colony or fortress built by lowland merchants? If so, were the occupants from outside the highlands or local leaders coordinating or regulating economic activity from inside the Oval? These questions are best answered by analyzing the structure of the site’s activities in its buildings through their architecture and their contents. Comparison with the VI:1 and VI:2 levels of the Brick Kiln Cut outside the Oval, although a small sample, should also aid our analysis.

What would one expect if Godin were occupied by lowland people? At Habuba Kabira and Jebel Aruda in northern Syria the occupants of newly founded colonies of Uruk people used the full range of Uruk pottery types. Their architecture followed the southern alluvial architectural plans. They also had a full range of seals and sealings. Habuba Kabira yielded numerical tablets like those at Godin. At Hacnebi, a site in southeastern Turkey in which a colony of lowland people lived side by side with a local Late Chalcolithic population, Uruk residents also had a full set of Uruk pottery types and sealings (Strommenger 1990; van Driel 2002, 1983, 1979). Arslantepe on the Upper Euphrates, on the other hand, was a site that had developed significant administrative and economic centralization before the Uruk expansion, as we discussed above. Excavators there found locally made copies of Uruk types, although they are a minority of all pottery types and many retained distinctly northern features (Frangipane 2001, 2002, 2007). There was not a full corpus of Uruk types. Sealings had long been in use. Overall, the style of their seals is different from Uruk seals, although Uruk designs do appear in very small numbers in its last fourth-millennium phase. The Italian excavation team also found a set of unsealed, round, thin tablets with punctured holes.

Whether occupied by local or foreign people, an administrative center should have buildings whose primary function is not domestic. Such buildings often have large public areas for congregating, and rarely have artifacts typical of a residence. A fortress would contain weapons, stored supplies, and material for sustaining a siege. A merchant colony should have evidence for stored goods or raw materials exotic to the merchant’s home base, but available locally, or for the manufacturing of products made from such materials.

Distribution of objects in the VI:1B and A Oval Compound (Figure 4.6, 4.22, 4.23)

The southernmost set of buildings forms an entryway. A visitor or resident would have entered through room 4. If they brought material sealed or noted on tablets, they would have carried those materials through the gate and checked in with the guard who would deposit it for future audits on a shelving unit in room 3. Room 5 may have been where guards stayed and possibly cooked meals while on duty. The purpose of room 2 with its bin and remains of a wine jar and eating vessels is not clear. It was closed off near the end of the Oval’s occupation.

The building most likely to have had a special function is the northern building (rooms 14-19 and maybe 20). The main room, 18, cannot be approached from the courtyard. Its two openings are windows. A visitor would need to enter through rooms 14 or 19 and then go through rooms 15 or 17. A deep trough in the rear of room 14 contained many discarded tablets
hammer) and some blades and flakes. The pottery from room 18, aside from the storage jar containing the clay balls, consisted of sherds from a set of eating vessels. For this period the small bowl, beveled-rim bowl, and eating tray appear to constitute an eating set. Excavators recovered similar sets in rooms 14, 15, and 18, and the open area 1. Additional sherds are parts of serving and storing vessels. Although the hearths are forms that are not usually classified as cooking hearths, a number of sherds classified by Badler as cooking vessels based on their ware lay on the floor of the northern building (Figure 4. 9, 4.27, 4.28, 4.29, 4.30, 4.31).

A person could only enter rooms 13 and 12 from room 14 of the northern building. Room 12 had unusually thick walls, which Badler has previously interpreted in an article in Artefacts of Antiquity as evidence of a safe storeroom. Its contents do indicate that it was a special function room, lacking any potsherds in good context, but with a variety of tools: spindle whorls, beads, a bone awl and horn flaker, a grinding tool, a few clay balls, and a figurine of a woman (Figure 4. 10). This would suggest a workroom rather than a storeroom. The presence of three sealings but no tablets reinforces this interpretation. As discussed above sealings were placed on containers whose contents were controlled. When they arrived at their destination, authorized persons would break them open to access their contents. Tablets were normally used to record goods not easily stored in small containers, such as animals or large quantities of grain rather than raw materials.

Room 10 appears to have been used as a place to deposit trash in the final days of the Oval’s occupation. Its contents include a blank tablet, an unsealed tablet with three wedges, a sealing, lots and lots of pottery sherds, some clay balls, a core, and many lithic flakes. Also, most of the small collection of animal bones found within the Oval were recovered from this room: 11 fragments from cattle, 32 from sheep or goat, and one from a red deer.

At the southwestern side of the Oval, room 6 constitutes a seeming residence. Excavators found the only two cooking hearths in this area. Unfortunately, this area was excavated even more quickly than much of the rest of the Oval and its finds are badly mixed. Serving bowls, a spindle whorl, grinder and quern, lithic tools, and one of the only sickles recovered from the Oval also remained in reasonably good context in this area.

The remaining areas are either only partially excavated or poorly understood. The rooms in the eastern side of the Oval were beyond the baulks. Room 22 had charred grains and legumes on its floor, whether for household stores or part of a larger site-wide storeroom we cannot know. One possible material stored there was dung fuel, because barley, wheat, lentil, and weed remains are a typical diet for village sheep and goat. The numbers in most so-called Uruk IV tablets are traditionally those for grains (Nissen et al 1993). A quern, macehead, a few clay balls, a metal chisel, a sealed numeric tablet, and eating and serving vessels were recovered in rooms 22 and 23. Room 20, a thick-walled room separated from any other building, did yield one spectacular find, a necklace of 208 black and 2 white stone beads. Its other remains, a heating hearth, sherds of a wine jar, grinding stones and lithic blades do not imply any particular set of activities.

The artifacts from the open courtyard are mostly lithic blades, flakes, and cores and pottery of the same types as in the rooms, as well as tablets near the entrance to room 14. Edens (2002) studied the lithics of Godin VI and IV. He concluded that there were two lithic industries. One was a flake industry (figures 4.29 and 4.30). Flakes were roughly removed from pebbles of chert or flint. They were used as rough cutting implements or were more finely chipped into points, scrapers, or blades. The other industry used much more carefully prepared cores from which finer bifacial blades were struck (see chapter 5, figure 5.31 for a picture of
such a core). Although these techniques are widespread across the highlands from before the beginning of the fourth millennium BC, they were first identified in the Levant and are therefore called Canaanese blades. No Canaanese blade cores were identified from Godin VI. Edens therefore concludes that the bifacial blades were made elsewhere in the highlands and exchanged with the residents of Godin. Similar specialized blade-making workshops have been identified in southeastern Turkey from the fourth and third millennia at Değirmentepe and Titriş Höyük. On one point we disagree with Edens. He asserts that different materials were used to make blades than to make flake tools. An examination of the lithics stored at the ROM did not confirm this conclusion.

The only cylinder seal recovered from Godin VI (73-260) was also found in this courtyard area (figures 4.33 and 4.39). Another cylinder seal was found built into a brick in Period IV:1b. It was probably accidentally included in the brick when the clay for its manufacture was dug from the earlier Period VI levels.

Taken as a whole, the compound within the oval wall would be unusual for a domestic neighbourhood. Few of the buildings appear to be houses, although people ate there. The presence of weapons certainly indicates conflict, although it is not clear whether the enemy were simply outside the oval wall or outside the site. Administered goods were entering and leaving the compound, as indicated by the tablets, seals, and sealings. Beads of shell, and black, gray, and white stone were common—their source is unknown—as were all the stages of flint-knapping, including a flaking tool. Metal objects occur in small numbers. As analysed by Leslie Frame, a fairly sophisticated metallurgical technology was in use at Godin VI:1. The presence of Early Transcaucasian pottery in VI:1A may be meaningful in this regard, as the early Transcaucasian people were known for their skill in metalworking and also wine-making. At the same time, evidence of metal smelting at Seh Gabi in the Middle Chalcolithic period indicates that metallurgy was an old craft in the Kangavar Valley.

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<th>Metallurgy of Godin VI</th>
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<td><strong>Lesley Frame</strong></td>
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| The earliest evidence for metallurgical activity at Godin Tepe appears in Period VI. Seh Gabi yielded earlier material; however, these remains have not yet been analyzed. The metallurgical materials include a small fragment of a melting crucible (B1-510 ss28), a furnace fragment with evidence of smelting (A01-50 ss40), and many small copper oxide ore fragments (A01-34 ss29). The crucible and furnace fragment each contain high purity copper prills with sulfide inclusions. In addition to the processing debris, numerous metal artifacts were also recovered from this period. Only one of the twelve Period VI objects contained enough metal for analysis. Gd73-312 is an As -cast figurine fragment of Cu-1.9wt%As-0.8wt%Ni (‘As’ is arsenic, a common feature of early Middle Eastern metallurgy before tin was added to make true bronze).
| It is clear that both smelting and melting practices were known to the Godin Tepe craftspeople during Period VI and later in Period IV (Figure 4. 11). |

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<th>Wine and Beer Residue Analysis Virginia Badler</th>
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<td>The chemical analysis of residues in Godin Tepe pottery established that the technique could be used to determine the existence of ancient wine and beer in prehistoric contexts (Badler et al 1990; Badler 1995; Michel et al 1992, 1993; McGovern 2003). Tartaric residue suggesting a</td>
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grape product that would have fermented into wine was found in a distinctive jar type (piriform, with impressed decoration in an inverted U shape on opposite sides of the vessel) from Deep Sounding room 18 and room 20 (latest VI:1A). The later vessel from room 20 has a bung hole a short distance from the base drilled after firing that was presumably to decant the beverage, as the colour of the dregs intensified below that point. Calcium oxalate residue suggesting the presence of beer was found imbedded in the interior slashes on the interior of a large two handled jar found in the same room 18 as the early wine jar. The slashes on the jar interior are depicted on the early Sumerian sign for beer (KAŠ) that is clearly a jar marked by diagonal lines.

The earliest known wine residue was found in Transcaucasia (an early sixth-millennium BC jar from Shulavenis-Gora), and it has been suggested that this region may be the homeland of viticulture. At Godin Tepe there is an intriguing link between winemaking and the appearance of the first Transcaucasian type pottery. The earliest evidence for wine production at Godin Tepe correlates with an increase in the number of Transcaucasian style sherds, including drinking cups. The winemaking artifacts themselves are suggestive: the funnel is similar to the Transcaucasian sherds in its method of manufacture (handmade and fired in a reduction atmosphere), and the heavy lid is a Transcaucasian pottery type that continues later in Godin Tepe IV.

The Godin VI Oval Compound contains some evidence to suggest that it may have been occupied by administrators of some sort: weapons suggest a military component; tools and raw materials indicate the presence of craft manufacture; and tablets, sealings and jars may be involved in the collection and possibly storage of local agricultural and pastoral products.

The Godin Period VI: 2 and VI:1 Architecture from the Brick Kiln Cut

Our only real glimpse of life outside the Oval comes from the Brick Kiln Cut area south and down the slope from the Deep Sounding. The BKC VI:2 level (figure 4.36) predates the oval wall, the VI:1 level is probably from an early phase of the wall, so they are not perfectly contemporaneous with the latest finds of the Oval. The two earlier buildings, equivalent in time to VI:2, the earliest period of increased contact with the lowlands, are of a simple domestic type. Excavators found few tools, but among them were lithic blades with sickle sheen, and much pottery, again a serving set, this time without the beveled-rim bowl, as well as cooking, serving, and storage vessels. These suggest local farmers. None were of the Uruk type. The later building, which is contemporaneous with the VI:1 phase of the Oval Compound, has a hearth much like those found in the Oval. Some Uruk-related pottery forms are also found in this level although they form a smaller percentage of the assemblage than in the Oval Compound. An interesting feature of this building is a staircase, implying that there was either a second floor or that the roof was used to perform some activities (Figure 4.36, 4.37).

Perhaps more important than the man-made artifacts in this area were the animal bone remains. The vast majority of animal bone found from Godin VI came from the Brick Kiln Cut. As the analysis by Crabtree details, the emphasis appears to have been on raising animals primarily for their meat, and secondarily for their wool. As Crabtree notes, this is a pattern of a fairly prosperous settlement that was probably more important in the economic system of the valley than a simple village.

The Animal Bone from Godin Period VI
Pamela Crabtree
The Godin VI faunal assemblage included 3715 mammal bones and fragments. Of these 2198 were unidentified mammal fragments. The bones that could be identified to species or higher order taxon included: domestic cattle (*Bos taurus*, 182 fragments), domestic sheep (*Ovis aries*, 153 fragments), domestic goat (*Capra hircus*, 74 fragments), indeterminate sheep/goat (792 fragments), domestic pig (*Sus scrofa*, 10 fragments), domestic dog (*Canis familiaris*, 6 fragments), red deer (*Cervus elaphus*, 3 fragments), roe deer (*Capreolus capreolus*, 1 fragment), and equid (*Equus* sp., 36 fragments). While most of the identified bones came from domesticated animals, the presence of red deer (*Cervus elaphus*) and roe deer (*Capreolus capreolus*) bones indicate that hunting played a small role in the diet. The equid remains are still under study, but both morphological and genetic methods will be used to determine whether they are onagers, horses, or donkeys. The species ratios\(^1\) for the four most common taxa indicate that the Godin assemblage was composed of 14.6% cattle, 81.7% caprines (sheep, goat, and sheep/goat), 0.8% pig, and 2.8% equid. The sheep to goat ratio is about 2:1.

Age profiles for the caprines were based on dental eruption and wear, following Payne (1973). The Phase 6 assemblage included 24 ageable mandibles: 11 sheep mandibles, 10 goat mandibles, and 3 indeterminate sheep/goat mandibles. Goat mandibles were distinguished from sheep mandibles following Halstead et al. (2002). The data are summarized below. The ageing data suggest that about 25% of the caprines were killed during the first year of life; an additional 40% of the caprines were killed about the time they reached bodily maturity (2-4 years of age), and the remainder survived to adulthood (4-10 years). The sheep sample, in particular, includes a small number of animals that survived to advanced ages. Since the Phase VI assemblage includes spindle whorls, it is possible that these sheep were kept for wool production.

The Godin VI cattle assemblage did not include any complete or near-complete mandibles, so the age profiles are based on epiphyseal fusion of the limb bones. The epiphyses were divided into early fusing, middle fusing, and late fusing elements\(^1\). In the Godin VI faunal assemblage 25 of the 28 (89.3%) early fusing epiphyses were fused, indicating that nearly 90% of the cattle survived to more than 1.5 years. Eight of the 9 (88.8%) middle fusing epiphyses were fused, indicating that almost none of the cattle were killed between 1.5 and 3 years. Five of the 11 (45.5%) late fusing epiphyses were fused. Over 40% of the cattle were killed as market-age animals between 3 and 4 years of age. The remaining 45% of the cattle survived to maturity. These animals were probably used for breeding and may also have provided secondary products (Halstead et al 2002; Payne 1993).

The faunal assemblage from Godin VI was dominated by the remains of sheep, goat, and cattle, along with smaller numbers of equids, pigs, and red and roe deer. About 25% of the sheep and goats were killed during the first year of life, and an additional 40% were killed between the ages of 2 and 4 years. The older adult sheep may have been kept for wool production. A small number of the cattle were killed during the first year and a half of life. Nearly half the cattle were killed just when they reached bodily maturity; those who survived to adulthood were probably used as breeding stock and for secondary activities like ploughing. The goat age profile matches a herd-security model, but the sheep profile does not. I think that there may be some emphasis, but not specialization, on wool production.

This is not a pastoralist strategy, which depends on milk, and secondarily on wool, rather than on meat. Pastoralists tend to kill their animals for meat only when they have stopped being useful for milk or wool. For a fairly prosperous village or perhaps small town, this animal exploitation strategy, however, makes sense. The extraordinary amount of bone suggests that this part of the mound may have been used for provisioning its residents (Zeder 1991).
ceramic samples of comparable age from Seh Gabi were also analysed, as were samples of Early Transcaucasian Culture pottery from Godin Period IV (see chapter 5). The clay objects were included because they were likely to represent locally available Godin clays. The Godin VI ceramics were compared to an even larger sample of ceramics previously analyzed from Godin III levels (R. Henrickson and Blackman 1992). To test for their origin, the results of this analysis were compared to previously analysed clays from Khuzistan (near the site of Susa) and from Nippur in the Euphrates Valley. Based on style, these were likely sources of Uruk immigrants and products. The ceramic samples from Khuzistan were taken from a number of sites and represent a general Khuzistan composition not a specific site. To source the Godin VI ceramics for membership in comparator groups from various source areas, a cluster statistic of Mahalanobis distance was calculated using 17 elements.

After testing, the following conclusions can be drawn:

1) None of the Godin VI samples analyzed have a probability of greater than 0.9% of being drawn from the Khuzistan or Nippur comparator groups.
2) Half of the Godin VI ceramics, the Godin VI clay tablet, the two Godin VI clay balls, and two thirds of the Seh Gabi ceramics are compatible with the same clay source as the previously studied Godin III ceramics and are most likely locally made. These nine samples include a VI:2 painted-pedestal bowl, VI:1 incised four-lug jar, VI:1 tall wine jar, VI:1/2 beveled-rim bowl, VI:2 short funnel-spout jar, VI:2 trough spout, VI:1 collared jar, VI:1 red-slipped 4 lug jar, VI:1 collared four-lug jar.
3) Half of the Godin VI ceramics and one of the Seh Gabi ceramics are compositionally incompatible with the Godin III ceramic clay source. Nine Godin VI ceramic samples and a single Seh Gabi ceramic were not closely associated with any of the three comparator groups nor do they seem to form a separate compositional group. They include a VI:1 red-slipped four-lug jar, VI:1 white-slipped painted jar, VI:1 rolled-rim wine jar with impressed strip, VI:1 red-slipped 4 lug jar, a cooking pot, VI:1 cream-slipped in-turned bowl, VI:1 striped polychrome jar, VI:1 double-rimmed jar, and VI:1 droop-spouted jar. These samples also do not form a single compositional group of their own. Whether they were made of several compositionally different clay sources or from the addition of differing types or amounts of temper in the Godin area cannot be determined with the current sample. Nor can the possibility be eliminated that they were imported from other manufacturing locales.

The inscribed Godin tablets (Figures 4.12 and 4.13) consist almost entirely of numbers. Number-tablets from other sites need to be considered, but there is not as yet a conventional form of notation that bridges the geographical horizon of all the finds which can be regionally distinct. Even when there are trans-regional similarities in the number signs, there may not be any easy way to compare them with the forms of numeral notation in historic periods (Nissen et al 1993).

The Godin corpus of tablets is linked to archaic number tablets from elsewhere. In fact, the similarities are striking and the divergences minor, when one considers such factors as the date of the assemblage, the size and shape of the tablets, the appearance of the units from "1" up, the
arrangement of the number signs on the tablets, the use of seal impressions, and of course the medium (clay) on which the seals and number tokens are impressed. Clearly, the Godin material is part and parcel of an interregional phenomenon that embraces, in modern terms, Iraq, northern Syria and western Iran or, in ancient terms, what has come to be regarded as Greater Mesopotamia. The token system that preceded the number-tablets indicated not only the quantity but the nature of the commodities being counted (Schmandt Besserat 19xx). The slightly later archaic tablets from Uruk IV perpetuate these distinctions, albeit on a more sophisticated level, using different systems of counting for different commodities. Since the Godin system most nearly resembles that used for barley at Uruk, one may venture a guess that barley is also at issue here. The Godin VI:1 stratum where the tablets were found indeed contained storage rooms and pottery and there were legumes and grains stored in room 22 (Weiss and Young 1975).

The seals of Godin Period VI
Holly Pittman

The ways in which societies make and distribute images provides us with an important means for understanding both their values and their relations both within their community and with the world outside. Especially for communities that did not use writing to transmit information across time and space, imagery is an important way for us to gain insight into some of their ideas and the nature of their relationships. For the prehistoric Middle East, imagery was carried on many different types of artifacts that have been recovered, including pottery, statuary, and the few wall paintings that have been preserved. A particularly important carrier of imagery in the ancient cultures of the Middle East are small stone objects which served both as amulets and as seals that served to protect goods and to authenticate transactions. These seal stones can be carved either with abstract designs or with representations of plants and animals as well as people and things. When taken together the images used in a community make up what archaeologists call a system of iconography which served to convey messages about what was important in a society. Features of iconography not only store information about a society, but often it reflects ideas received from other communities.

In the study of iconography, the visual elements that scholars consider are both the subjects that are represented and the ways in which those subjects are represented. For example, horned animals are an important theme in the village cultures of the sixth and fifth millennia BCE across most of the Middle East. But how those animals are rendered can tell us where or when they were made. Animals gouged into the surface of a stone with a graving tool were made in the northern regions of Mesopotamia, while those made with a drill were made in the south (Pittman 2001). As early as the sixth millennium BC in the Zagros Mountain region, persons in small villages controlled access to goods and raw materials by carving or drilling designs onto the surface of hard materials, usually stone, but also bone or wood. They used these carved objects as stamps, impressing the imagery that they carried into moist clay masses that closed jars and bags and other containers (Rothman 1994a; Frangipane 2007). Later such clay masses were also used to secure doors of storage rooms. Only those authorized to access the materials secured by the seal impressed mud mass could break the sealing. The imagery engraved on stamp seals is the richest source of iconography preserved to us for the Late Chalcolithic period of the fifth and early fourth millennia BC. Around the time the Oval at Godin was built in period VI:1, a new shape of seal, the cylinder, had been invented in southern Mesopotamia. This new shape carried imagery on its sides and when impressed created a
horizontal band of imagery that easily covered the entire surface of large jar stoppers and tablets impressed with numbers.

Among the important finds made inside buildings within the Oval Compound at Godin were numerical tablets and a few container sealings that were impressed with the imagery carved on cylinder seals (Figure 4.14). The administrative use of seal impressed numerical tablets at Godin precisely mirrors the practice known from Susa in the Acropolis sounding, and from the site of Uruk.

The subjects engraved on the seals almost always involve animals. The most frequently occurring animal on the Godin seals are felines. They are shown walking or threatening bovids or wild goats. Felines are also shown alone. In one instance, impressed on the single tablet carrying an inscribed sign, lions are seated on their haunches facing some kind of standard. This regal posture suggests some symbolic reference, perhaps to a distinct center of administrative authority. Another distinct posture assumed by felines is rearing on their hind legs, looking back over their shoulder and with their tails crossed or entwined. Images of humans are rare, represented only by a kneeling archer hunting a quadruped.

Both functionally and iconographically all of the seals impressed on the Godin tablets and container sealings are closely comparable to ones found either at Uruk or at Susa in levels that can be dated to level 17 of the Acropolis sounding (LC 5 see table 4.1 above). They are in fact so similar that they must have been made in the same workshops. For example, the kneeling archer confronting a quadruped with its head turned back finds its close parallels on seals impressed on numerical tablets from Susa. A cylinder seal carrying the same imagery was found at Nineveh on the Tigris. The image of the feline seated on its haunches mentioned above is unknown at Susa but is closely paralleled in an example from the Eanna temple at Uruk. This theme is also attested at Nineveh impressed on a large sealing. Seals carrying images of large jars held in nets are found at almost all sites that have Uruk-related material including Uruk, Susa, Tell Brak, Hacinebi, Habuba Kabira and Godin (Rothman 2001).

Several cylinder seals from Godin carry a distinctive type of imagery that serve as early examples of what becomes the distinctive Proto-Elamite style of the following centuries. Although the Susa state and those of the southern Mesopotamian alluvium are very similar in iconography as well as political and economic structure during the fourth millennium BC, in the early centuries of the third millennium BC there is a regional realignment. The region to the east of the Tigris River realigns with Susa, the hilly flanks of the Zagros, and areas around the highland desert of Iran to form a cultural unit that has been called Proto-Elamite. The most characteristic example of the early Proto-Elamite style from Godin that illustrates the iconographic changes accompanying the cultural re-alignment is seen on an actual seal-stone found in a brick of Level IV at Godin, but which necessarily belongs to an earlier phase. The use of hatching on the shoulders of the bovid has been cited as one feature that links this seal to the highland tradition of the Proto-Elamites. But what has not been observed before is the presence of two distinct species of bulls shown side by side. This juxtaposition of a wild and a domesticated bull is a hallmark feature of the seals of the Proto-Elamite phase, and should probably be understood as a symbolic embodiment of a fundamental characteristic of the period during which there was a balanced integration of various centers of power. Another precursor of later highland imagery is the use of plants to suggest location in a particular landscape.

The exact message conveyed by the seals at Godin is still uncertain, but from later use we think that the seal referred to the administrator responsible for the transaction recorded on the


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(Henrickson and Blackman, 1992)