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SOCIO-ECONOMIC COMPLEXITY IN SOUTHWESTERN IRAN DURING THE FIFTH AND FOURTH MILLENNIA B.C.: THE EVIDENCE FROM TALL-I BAKUN A

By Abbas Alizadeh

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The development of civilization and the problem of state origins and complex societies have long been central to many anthropological and archaeological studies of the ancient societies in southwest Asia. Though socio-economic and political development of the pristine states cannot be understood without a foundation of knowledge about the economic and political organization of the pre-state societies of the fifth and early fourth millennia B.C., surprisingly little work has focused on these precursors of the later urban societies.

This situation is, perhaps, mainly due to the limitations of prehistoric data and methodological problems such as measurements of population size, nature of the prehistoric political, social, and economic institutions, and the fact that many of these sites were excavated when archaeological investigations had not started focusing on these problems. Nevertheless, we are fortunate to have meticulously recorded evidence from Tall-i Bakun A in the highlands of southern Iran which can be re-evaluated with such problems in mind. The present article is devoted to demonstrate a prehistoric case of differential control of economic resources which resulted in social stratification in the later complex societies (Adams 1966). Further, I will attempt to study the socio-political and economic roles that the nomadic communities of the highlands played in Fars *vis-à-vis* the settled communities. In so doing, I will draw conclusions from prehistoric data and will compare them to the later historical and modern data.

The archaeological material in the present article comes from the published 1932 (Langsdorff and McCown 1942) and unpublished 1937 seasons of excavations at Tall-i Bakun A, located in the fertile Marv Dasht plain of Fars, near Persepolis (Fig. 1). Bakun has played a prominent role in the understanding of the prehistory of Fars, partly because it was the first large-scale excavation of a prehistoric mound there, and primarily for the richness of its finds. Among the finds was a variety of clay sealings. One type of these sealings was described by McCown as 'labels' that "... were rarely found scattered but more usually were in groups in various rooms... The labels, made of fairly fine clean brown clay, are usually conical, perforated vertically, with simple rough flattish bases... The sides, which ordinarily slope at about

45°, were smoothed to receive the seal impressions" (Langsdorff and McCown 1942: 66). When McCown wrote this description of the door-sealings found at Tall-i Bakun A he did not recognize their function and thus their great significance, nor did the next generation of archaeologists, who in fact only quite recently began to appreciate their meaning as documents for reconstructing ancient economy (see i.e. Wright and Johnson 1975).

These sealings, though sufficiently described and illustrated (Langsdorff and McCown 1942: 66, Pl. 7: 13, 18–19) remained, nevertheless, unnoticed, perhaps because Tall-i Bakun has been so well entrenched in the archaeological literature as a simple prehistoric farming village.¹ Similarly, the chronological position of Bakun A (*ca.* 4100–3700 B.C.) as a Chalcolithic site also may have 'frozen' its status in the "band-to-state evolutionary paradigm" as a simple village without socio-political complexity.² However, recent re-investigation of the materials demands a re-evaluation of the socio-economic complexities of the site. Until now, door-sealings were thought to have originated in the Protoliterate period (*ca.* 3500 B.C.), when urban centres with complex societies arose.³ Since door-sealings are associated with the development of these centres and are an important component of their administrative technology (cf. Wright and Johnson 1975: 270–2), and since socio-economic processes which led to the rise of urbanism and complex societies must have begun prior to the period of pristine states (Wright 1984), the present article re-evaluates the socio-economic and political status of Bakun as an example of pre-state complex society in light of this long-neglected evidence.⁴

I

Season of 1932

The first season of excavation at Tall-i Bakun A began in 1932 on behalf of the Oriental Institute of the University of Chicago (Langsdorff and McCown 1942). The work of this season was concentrated on the northern part of the mound, where an area of about 1200 sq. m. was opened (Fig. 2). Five occupational levels were reported, Level I being the lowest, and

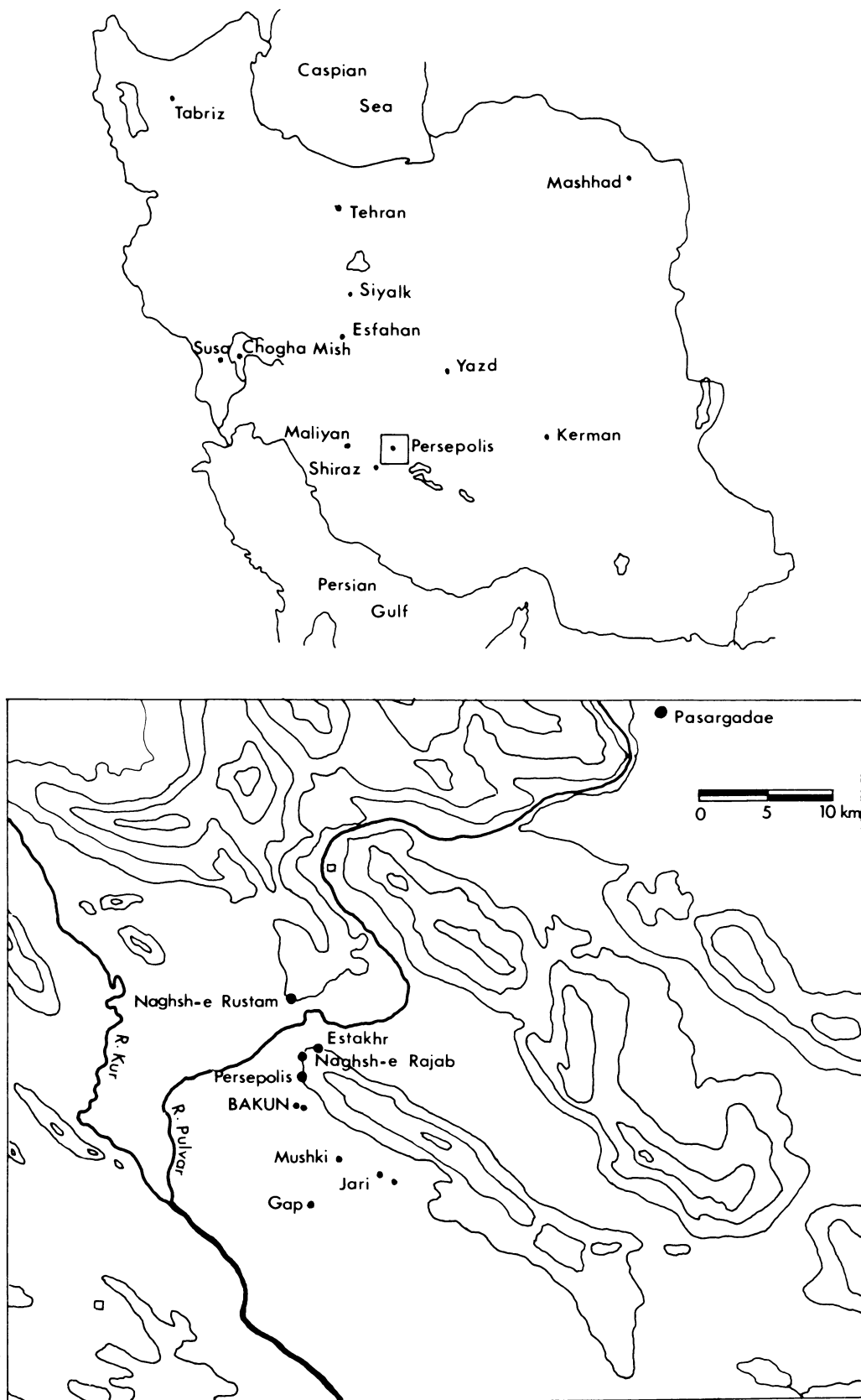


Fig. 1. Location of Tall-i Bakun A in the Persepolis plain.

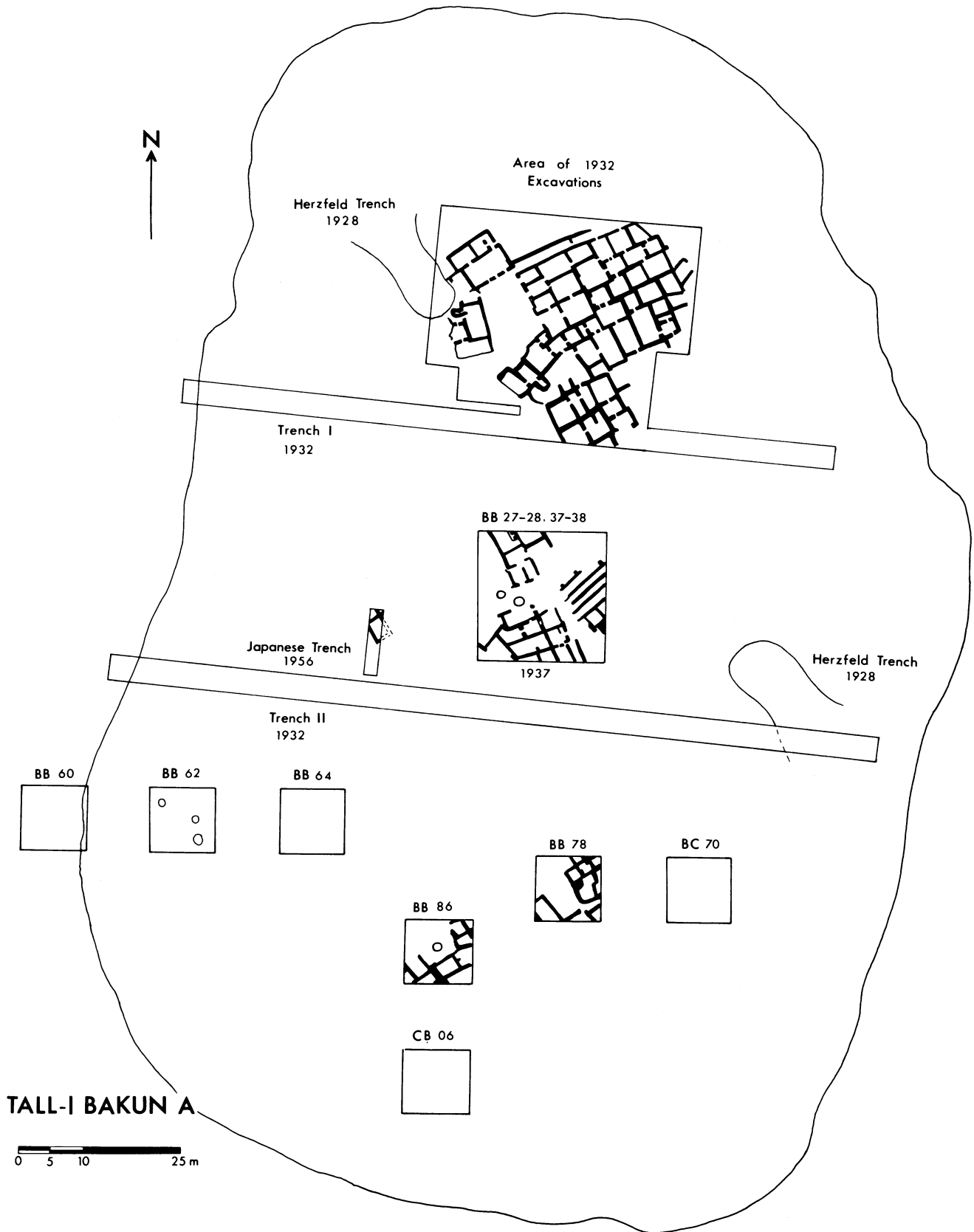


Fig. 2. Tall-i Bakun A, excavation areas of various seasons.

Level III being the best preserved and most extensively excavated (Langsdorff and McCown 1942). Level III contained a complex of buildings consisting of rectangular houses with common walls. This level also produced most of the artifactual material including the clay sealings.

In general, the buildings of Level III suggest a planned architectural layout; they are oriented north-east-southwest with nicely aligned and carefully abutted common walls. Unit VIII stands out as the best and largest example. It is niched and probably was erected first before the surrounding Buildings II-IV and VII were annexed to it. Buildings I and II which do not align with the general plan are possibly later

additions filling, in part, the open space defined by Buildings III, VIII, IX, XII, and XIII (Fig. 3).

Langsdorff and McCown assigned Buildings I and II to Level III and Building XIII to the later Level IV (*ibid.*, pp. 7-20). The assignment of Building XIII to the later Level IV was rested solely on the fact that the floors of this building, and those of Buildings XIV and XV (Figs. 3-4), were higher than those of Level III (*ibid.*, pp. 19-20). I consider, however, Building XIII as belonging to Level III because these differences of absolute level are not convincing stratigraphic evidence. Firstly, Building XIII and its adjoining buildings which were assigned to Level IV are closer to the centre of the mound and thus on a higher level.

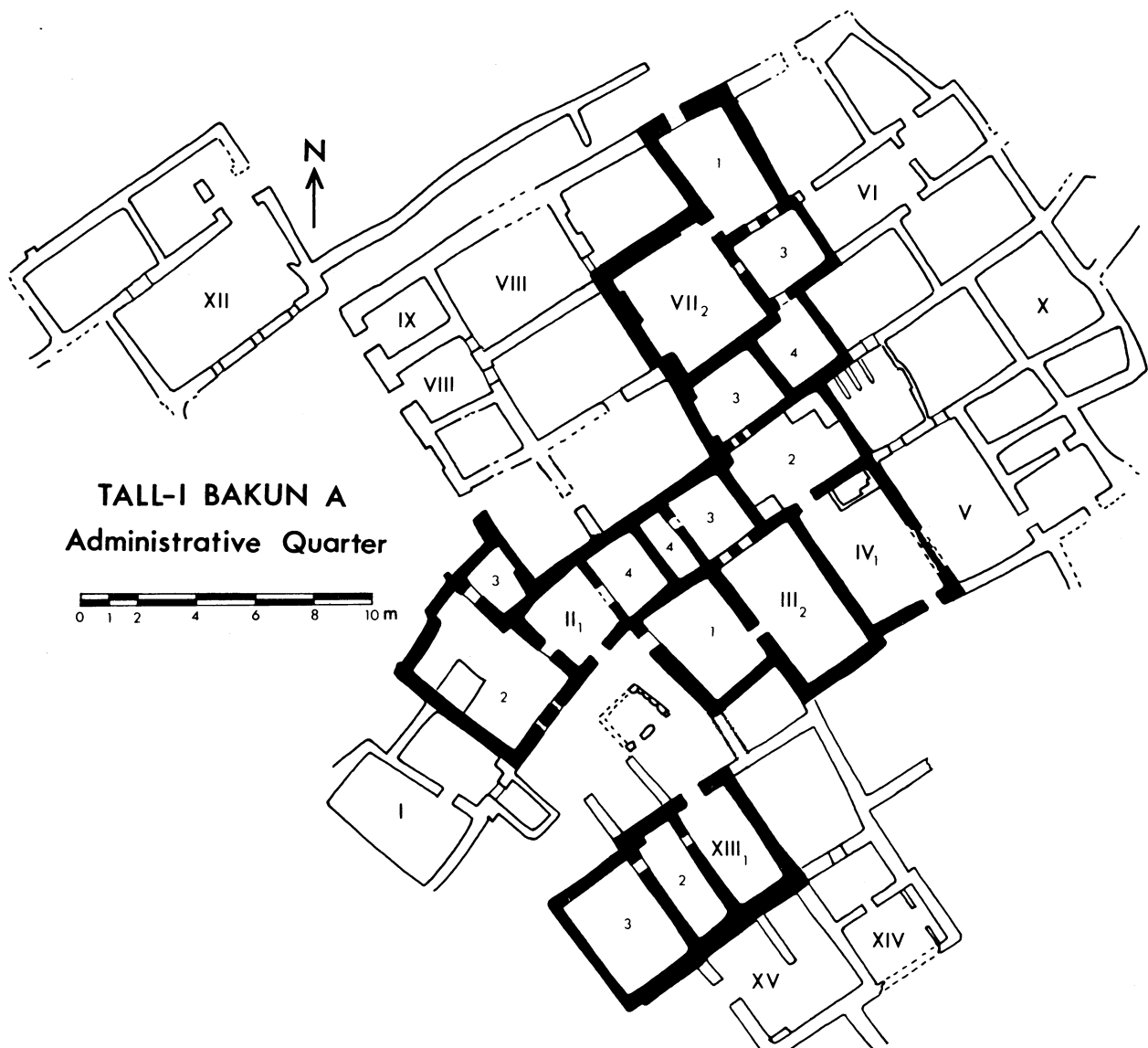


Fig. 3. Tall-i Bakun A; plan of the northern complex, showing locations of buildings (shown in black) that contained clay sealings.






Secondly, these buildings, like those assigned to Level III rest on a thick layer of ash, providing a common stratigraphic foundation for these units and those assigned to the earlier Level IV. Thirdly, this building is perfectly aligned with the buildings of Level III; and finally, the material culture from Building XIII is the same as from Level III including the types of sealings.⁵

Access to the interior of the complex was probably through the alley on the north part of the settlement. After passing Buildings IX, XII, and VIII this alley turned into the open area surrounded by Buildings III, VIII, IX, and XII (Fig. 3). Somewhat later during the occupation of Level III, Buildings I and II occupied part of this open area when a shift in the organization of the settlement may have occurred. This inference of an organizational change is based both on architectural aspects and the spatial relation of these buildings to one another (shown with dark walls in Fig. 3), and

on the pattern of distribution of the seal impressions found in these buildings (see below and Table I).

Central to this paper is the significance of Buildings II–IV, VII, and XIII, their common architectural features, and the sealings that were found in them. These buildings are connected by common walls except for Building XIII (Fig. 3). Buildings IV and XIII have three rooms; the others have four. All these buildings have an entry-room which leads to a central hall (Fig. 4). Connected to the central hall and in the rear of the buildings there are one or two back-rooms with low doorways (Figs. 3–4). The sealings were all found in the back-rooms or immediately in front of them in the central hall, suggesting that these buildings were used as warehouses or store-rooms, based on the assumption that the artifactual by-products of an activity will be deposited near the place where the activity occurs. Since door-sealings are associated with store-rooms

TABLE I
Tall-i Bakun A, distribution of various seal designs according to their provenances.

Provenance	Type of Sealing						Miscellaneous Seals	Total
		SEAL 1	SEAL 2	SEAL 3	SEAL 4	SEAL 5		
Building II	DS						12	15
	BS						2	
	MISC						1	
	TABLET							
Building III	DS	1	9		7			25
	BS		1					
	MISC						7	
	TABLET							
Building IV	DS	36		12		15		80
	BS			8			6	
	MISC	2						
	TABLET						1	
Building VII	DS		3				5	12
	BS						4	
	MISC							
	TABLET							
Building XIII	DS						4	8
	BS							
	MISC						3	
	TABLET						1	
	Total	39	13	20	7	15	46	140

DS: door-sealing; BS: bag-sealing

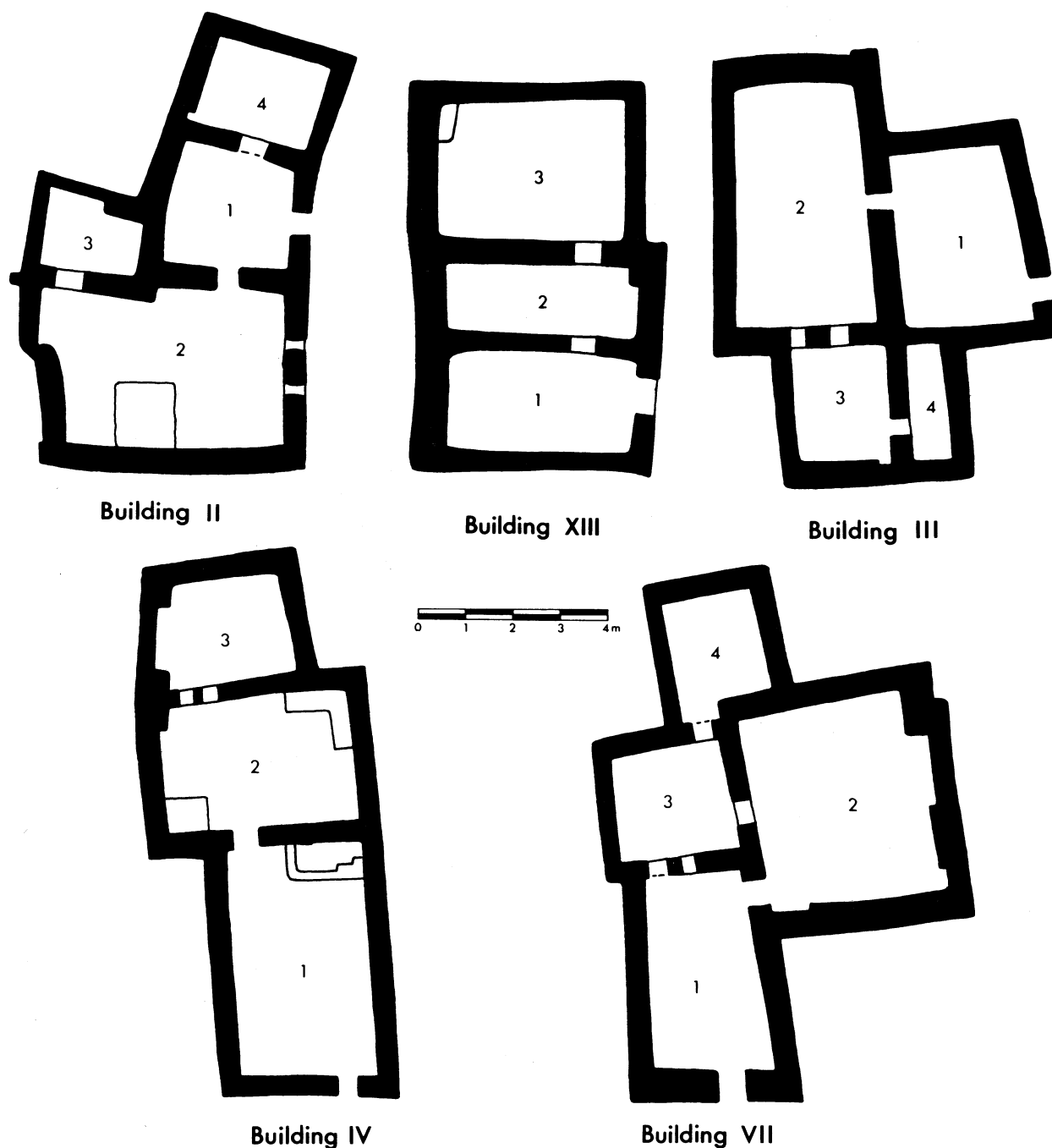


Fig. 4. Tall-i Bakun A, individual buildings that contained store-rooms and clay sealings.

and warehouses in the later historical contexts (Fian-dra 1975: *passim*) I consider the buildings that contained the sealings as such (see below).

Season of 1937

More information about the site came with the

results of the second season of excavations in 1937.⁶ Unlike the work of the previous season which was concentrated in one large area, several 10 × 10 m. squares were dug in the central, southeast, and southwest areas of the mound. Only the central area (BB 27-8, 37-8) and southern area (BB 78 and BB 86) contained architecture; other squares yielded kilns of

various sizes surrounded by thick layers of debris and ash (Fig. 2). The central and southern areas are markedly different from the northern complex of 1932 season. As mentioned above, the northern constructions exhibit a planned architectural layout as can be discerned from the regularity in spacing of the rooms and thickness of their walls. The architectural units of the central and southern quarters follow the same northeast-southwest orientation; they are not, however, as carefully constructed as the units of the northern complex. Also, these units are surrounded by open areas containing kilns of various sizes and covered with layers of debris and ash⁷ (Fig. 2).

Except for a number of painted pottery motifs unknown from the first season, the artifact assemblages from these areas and the northern complex are basically the same with the exception of the sealings that were absent from the second season. The central and southern areas, however, contained a higher concentration of unworked and half-finished items.⁸ This situation and the evidence of industrial installations and activities as can be deduced from the presence of kilns in open areas covered with ash and debris layers, pottery wasters, possibly copper slag, various stone tools, and unfinished material goods, support the identification of the central and southern quarters as workshop areas. Artifacts from the northern complex and the central and southern quarters include pottery, animal and human figurines, spindle whorls, pottery tokens of various shapes and sizes, small, decorated, pottery pipes, firedogs, pottery wasters, stone maceheads and pounders, stone and clay sling missiles, large and miniature vessels of alabaster and local stones, flint and obsidian blades, scrapers, borers and drills, finished and half-finished stone stamp seals (Langsdorff and McCown 1942), copper objects such as points and needles, chisels, a 25 cm.-long dagger, a stamp seal (Schmidt 1939: 126-7), and copper ores (Langsdorff and McCown 1942). The wealth and variety of material items at Bakun and the evidence of large workshop areas point to the existence of local industry and connection/trade with distant regions such as the Persian Gulf, the central plateau, Kerman, and northeastern Iran whence goods like shells, copper, steatite, lapis, and turquoise were procured.

If my inferences are correct, we have a settlement that is spatially arranged according to its functional needs and socio-economic organization. The central and southern quarters were designed for craftsmen, whereas the northern section seems to have been used for storage of various products, reception of goods and overseeing of the distribution of material goods. The latter interpretation is based on the presence of various sealings found in Buildings II-IV, VII, and XIII, similarity in their architectural design, their concentration around the open space, and the material items found in them.

Clay Sealings

Although the existence of trade is obvious at Bakun, it is not the "habitual patterns in the movement of goods"⁹ that are central to this paper. Exchange of various material goods, to meet economic and social needs, was common among the neolithic societies in the ancient Near East. What makes Bakun special and sets it apart in a pre-urban network of exchange/trade therefore is not the presence of various types of commodity from distant places, nor the evidence of workshops and various crafts, but the existence of door-sealings. The differential spatial pattern of Bakun A internal settlement organization is demonstrated by the location of more than 140 sealings there.¹⁰ One hundred and forty sealings, along with many lumps of clay bearing mat or cloth impressions, were found in five loci, Buildings II, III, IV, VII, and XIII (Fig. 5; Pl. I). These sealings can be divided into four categories: 1) Bag and bale-sealings,¹¹ 2) Tablets, 3) Miscellaneous, and 4) Door-sealings.

Category 1 is represented by twenty-one pieces (Table I). They can be subdivided into two groups according to their shape and the patterns of cord-impression they bear on the back. The first group (Fig. 5: F) consists of sealings that were used on bags/sacks probably made of some kind of rough fabric. The lump of clay must have been placed where the bag was closed tight with a cord and pushed down around the knots to cover them, thus the faceted shape of the sealings of this group. The second group (Fig. 5: G; Pl. I: C-D) has a rather smooth and elliptical shape; the bottom always bears impressions of mat and of one row of cord. Sealings of this group may have been used on wicker-work baskets, closed tight with one row of cord as it appears on the back of the sealings.

Only two pieces constitute the second category (Fig. 5: A, C); they are designated "tablets" because of their flattish shape, the smoothed surface on the one side, and the seal impressions they bear on the other. The larger and better preserved example (Fig. 5: A) bears impressions of two different seals, one on each side. Its shape and the fact that it has seal impression on both sides make plain that it had not been intended to seal any container; rather, it probably served as a tag or receipt of a type of transaction. The second specimen (Fig. 5: C) is smaller and bears only one seal impression on one side; the other side is damaged and it is not possible to determine whether it also bore a seal impression. The rounded edges and the similarity in shape to the first example suggest that this piece was a tablet as well.

The third category consists of a few jar sealings and pieces too fragmentary to be assigned to any of the first two groups. Jar-sealings of the type that are usually applied around the neck of a jar are rare and the few that occur at Bakun are problematic, hence their

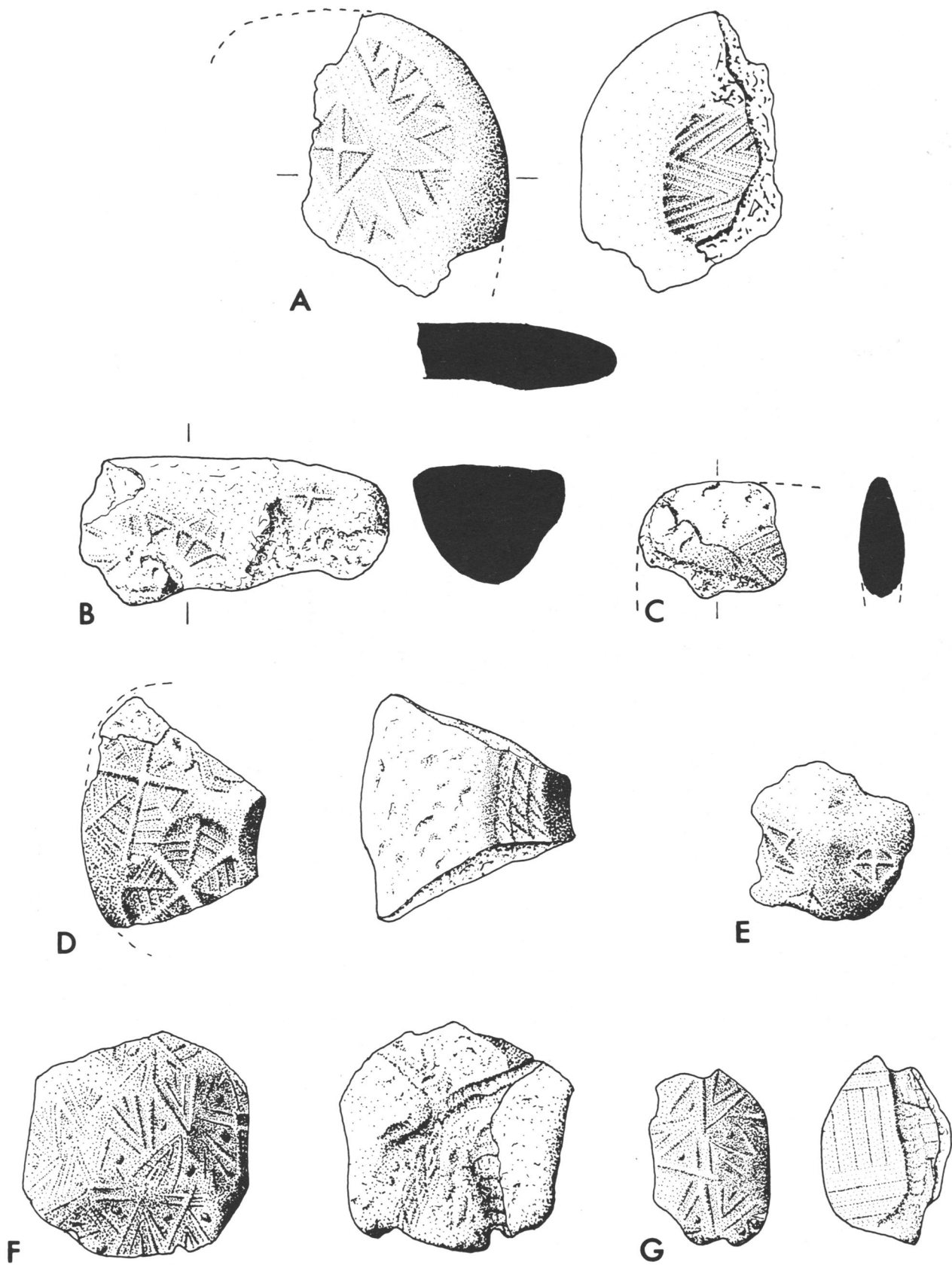


Fig. 5. Tall-i Bakun A, various clay sealings showing impressions of stamp seal, cord, stick, and mat.

inclusion in the Miscellaneous category. Fig. 5: B is an example of this type; it has on its flat top a seal impression and its rectangular profile could have fitted the area between the rim and the shoulder of a large jar. Similar jar-sealings from other sites have impressions of cord where the clay rested on the neck of the jar, but our example is damaged and it is not certain whether originally it bore traces of cords. Another example (Fig. 5: E) is conical with a flat base.

Categories 1–3 serve a common function: sealings of moveable objects. In this way they differ fundamentally from the sealings that were used on doors (Fian-dra 1975). The sealing of a moveable container such as a bag or a jar may have safeguarded its contents in the store-room, but might also have been connected with some kind of trade and business interaction through which these containers were shipped to other locations while their contents were protected by sealing the containers. In the case of shipping goods, it would be practical to entrust delivery of merchandise to specific individuals, thus making the deliverer directly responsible for the safe-keeping of the shipped items. In this fashion the sealing of moveable objects implies at least some level of socio-economic institutionalization to ensure safe-keeping of merchandise so that the breaking of the sealing would result in sanctioned punishment.

Although the practice of sealing moveable containers could be an indication of a level of socio-economic complexity, in the case of Bakun it is difficult to argue for such complexity on the basis of this type of sealing alone. One could, however, extrapolate from such evidence the presence of a simple economic

organization if it could be shown that these containers were sealed to be sent away or were received from elsewhere and not just to protect their contents against local tampering. Nonetheless, these sealings, even if not intended to safeguard exported/imported goods, imply a kind of social contract which would be respected by the members of a community and whose breach may bring punishment to the offender—otherwise in the absence of this mutual understanding of the regulations set forth to protect properties and the consequences in the event of their breakage, sealing would be a meaningless practice.

The importance of Buildings II–IV, VII, and XIII at Bakun does not rest only on the presence of the sealings of moveable containers. These buildings take on special significance because, along with the other sealings, 104 door-sealings were found in them (Tables I–III). As mentioned above, most of these sealings were discovered either in the back-rooms or in the rooms immediately in front of them. They comprise the bulk of the Bakun sealings and were designed as a protective device to ensure that a closed door could not be opened without detection. Rooms so protected must have contained stores that had to be secured against opening by unauthorized individuals. It is this category of sealings that has significant bearing on the socio-economic complexity of Tall-i Bakun A.

The frequency of the occurrence of individual seal designs may be related to the degree of authorization of individuals controlling the movement of goods (cf. Wright 1984: 64–5). Since seals belong to individuals or offices, their spatial distribution and their context may be directly connected to those in control of the

TABLE II
Tall-i Bakun A, quantitative analysis of various seal designs in each buildings.

Provenance	SEALS						Total %
	SEAL 1 %	SEAL 2 %	SEAL 3 %	SEAL 4 %	SEAL 5 %	MISC %	
Building II	–	–	–	–	–	100	10.7
Building III	4	40	–	28	–	28	17.8
Building IV	47.8	–	25	–	18.7	8.7	57.1
Building VII	–	25	–	–	–	75	8.5
Building XIII	–	–	–	–	–	100	5.7
Total %	27.8	9.2	14.2	5	10.7	38.8	100

TABLE III
Tall-i Bakun A, quantitative analysis of various seal designs on different categories of sealing.

Type of Sealing	Total	SEALS					
		SEAL 1 %	SEAL 2 %	SEAL 3 %	SEAL 4 %	SEAL 5 %	MISC %
DS	104	35	12.2	11.5	6.7	14.4	20.1
BS	21	-	4.7	38	-	-	57.1
MISC	13	15.3	-	-	-	-	84.6
TABLET	2	-	-	-	-	-	100

buildings in which sealings occurred. Thus an analysis of the pattern of the spatial distribution of different categories of sealings is in order. The seals as represented by their impressed designs are divided into six groups (Table I).¹² Groups 1–5 represent designs that were attested more than once, and group 6, various designs which are attested only once.

From among the seals attested more than once on the sealings, Seal 1 has the highest frequency (27.8 per cent), (Table II). This seal has been attested only in Buildings III and IV; it is used mainly on door-sealings. I have included two examples of Seal I in the Miscellaneous category, but it is likely that these two fragments which have destroyed backs were door-sealings (Table I). Seal 2 occurs on 9.2 per cent of all the sealings; this seal was also used primarily on door-sealings and once to seal a moveable container. This seal was attested only in Buildings III and VII (Table I). Seal 3 occurs only in Building IV and was used exclusively on door-sealings and bag/bale-sealings; this seal was used to make 14.2 per cent of all the seal impressions (Table I). Seal 4 is the least attested, on 5 per cent; it was used exclusively on door-sealings and only in Building III (Table I). Seal 5, 10.7 per cent, also occurs on door-sealings and found only in Building IV (Table I). With the exception of three examples of Seal 2 that are attested in Building VII, Seals 1–5 were almost exclusively used in Buildings III and IV, whereas the seals used in Buildings II, VII, and XIII belong to the Miscellaneous group (Tables I–III).

The above observations suggest a hierarchy in the degree of authorization of individuals in control of the movement of goods in specific buildings where the owner of Seal 1 may have possessed a greater authority than the owner of Seal 4 (Tables I–III).¹³ Further, a shift in the economic organization of the site occurred when not only seals 1–5 ceased to be used (Table I),

but also Buildings III–IV seem to have gone out of use as loci for reception and distribution of goods. If my inference, based on the above observations, is correct that the northern complex may have been an administrative centre with warehouses in which craft production and economic activities were controlled and organized, then, following examples of later historical administrative centres with store-rooms,¹⁴ one may expect to see that the general architectural plan should exhibit features of security as well as easy communication and an open area to accommodate transport animals and movement of goods. An administrative centre combined with warehouses would be the locus of activities such as preparation, storage, delivery and dispatch of goods. Such a nucleus would require an open space to accommodate such activities (Fiandra 1981b: 30). The architectural design of the northern complex at Bakun seems to have provided such accommodation.

Although deductions about administrative aspects of the Bakun A socio-economic system cannot be checked with textual evidence, the results of the study of later historical documents provide some analogies that may help decipher the organization of Bakun A society. For the time being, I shall assume that these door-sealings had a function similar to those of later periods discovered in the ancient Near East (Fiandra 1975; 1981a; 1981b; Zettler 1984: 150–90). A study of the administrative texts in connection with the door-sealings from the period of the Third Dynasty of Ur has demonstrated that the withdrawal of goods from the warehouses was done by the owner of a seal who sealed the warehouse after the transaction was completed. Further, the person in charge of the store-house would routinely draw up a text that recorded the transaction. In this system the seal on the clay sealing would naturally represent the last office or person who

withdrew goods from the warehouse (Fiandra 1981b). Also detailed studies of the Middle Assyrian tablets from Assur have demonstrated that the owner of warehouses would routinely give written instructions for transactions which were to be carried out. The transaction then would be monitored by some of his agents who were present at the warehouse. The warehouses had a staff who had their own seals and were in charge of opening and closing doors (i.e. breaking the sealing and putting on a new one), and delivering items requested (Fiandra 1975: 21). Ur, Nippur, and Assur were large urban centres with numerous functionaries and complex economic systems. We cannot expect that in a small prehistoric community such as Bakun A, where few people may have been engaged in the movement and storage of goods, and in the absence of writing, to find close parallels with a complex system of record-keeping and management of warehouses operating in large urban centres of the later historical periods, and I do not intend to equate the bureaucratic features of these periods with the system of economic management at Bakun A. Nonetheless, the situation at Bakun, so far as door-sealings are concerned, shows similarities with later historical administrations in which the practice of door-sealing was fully operative.¹⁵

II

Pastoral Nomads of Southwestern Iran

The economic aspects of the nomadic mode of production and the dichotomy in social structure and subsistence in regions with mixed nomadic and sedentary populations may have some bearing on the socio-economic and eventually political development of Fars in the early fourth millennium B.C. Since it is my contention that socio-economic and political developments in Fars during the late fifth and early fourth millennia B.C. were influenced by the pastoral nomads and their interaction with the sedentary population, it is necessary to outline briefly socio-cultural developments of the late fifth and early fourth millennia in southwestern Iran, and the modern demographical components of this region.

Bakun A is externally a homogeneous culture in Fars represented by a widespread, highly sophisticated painted pottery. Outside Fars this pottery has been found in northern Khuzestan (Le Breton 1943; Weiss 1976; Wright 1981), in the Bakhtiari mountains (Zagarell 1975; 1982; Nissen and Zagarell 1976), and in the Behbahan and Zuhreh regions (Nissen 1976; Dittmann 1984). These areas have been traditionally exploited until recently by the nomadic pastoralists of the Zagros as summer and winter pastures. The tribes of the Bakhtiari confederacy roamed in the region stretching from west of Isfahan down to southeastern Khuzestan; the Mamasani and Boyr-Ahmadi tribes

wandered around the areas between north and southeastern Khuzestan and northwestern Fars. The tribes of the Qashqai confederacy swung from the area southwest of Isfahan well into southern Fars, near the Persian Gulf, covering a distance of more than 700 km. in their annual migration. Other nomadic tribes of the Khamseh confederacy and Arabic-speaking tribes also exploited Fars, sharing it with numerous other nomads and the sedentary population (Barth 1959; 1961; Garthwaite 1983; Beck 1986).

Fars thus seems to have been favoured by many nomadic tribes for its vast and multitude of natural resources. The locations of summer/winter pastures of the tribes of Qashqai, Bakhtiari, Khamseh, Mamasani, and Boyr-Ahmadi confederacies correspond to the pattern of geographical distribution of the Bakun painted pottery. I am well aware that the political configurations and the ethnic make-up of these nomadic tribes are the outcome of later historical and political developments (Garthwaite 1983: 4–16; Beck 1986: 41–95). However, since geographical and ecological features of this region impose certain migration patterns related to summer and winter pastures, particularly in the case of vertical nomadism, it is reasonable to assume that these routes and pastures were more or less the same from the beginning of nomadic pastoral life in the highlands. This assumption is also based on archaeological data.

Archaeological investigations in the Behbahan–Zuhreh area (Dittmann 1984), Dasht-e Susan (Wright *et al.* 1979), and particularly in the Bakhtiari mountains (Zagarell 1975; 1982) have indicated that in the fifth and fourth millennia B.C. these regions were utilized by nomadic communities. Moreover, the archaeological data from the Bakhtiari mountains suggest similar developments that occurred during the first half of the fourth millennium B.C. in Fars, culminating in the abandonment of some sites and the displacement of Bakun A painted pottery by a plain red ware (Zagarell 1982: 44–50). The situation is less clear in the Behbahan/Zuhreh plains and in upper Susiana. However, the appearance and the disappearance of the Bakun A painted pottery is paralleled in Susiana, the Behbahan/Zuhreh region, and the Bakhtiari mountains, and certainly witness to universal developments that occurred both in the lowland and in the highlands.

No doubt Bakun A and some other sites were major centres for manufacturing pottery in Fars; it is, however, unlikely that the vast geographical distribution of Bakun painted pottery was the result of long distance trade. A major problem would have been the difficulties involved in transporting the fragile Bakun pottery over long distances and through mountainous regions, rendering a trade of this sort neither feasible nor economical. Secondly, the Bakun A painted pottery outside Fars exhibits a limited repertoire of shapes and designs, a character that can be expected from

periphery regions. Thus, Bakun cultural influence outside Fars in regions traditionally under the sway of numerous nomadic tribes may have been the outcome of a common cultural and perhaps ethnic backgrounds which the settled population in Fars shared with the nomadic tribes who dispersed Bakun A culture over vast areas.¹⁶

Bakun A Economic Base

As we have seen, Bakun A was a flourishing prehistoric settlement which procured raw materials, manufactured material items, and distributed them perhaps both intra and inter regionally. An obvious and thorny question that may be asked is what was the base for the site's economic power in the absence of state organizations and large-scale irrigation agriculture which would allow a portion of the population to be engaged in full-time activities other than agriculture? Unlike the Susiana and Deh Luran plains, where major centres such as Chogha Mish, Abu Fanduwa, Susa, and Musian differ from minor sites in both size and symbolic features (Hole 1982; Pollock 1983; Wright 1984), major sites in Fars during the Bakun A period such as Tall-i Bakun A, Tall-i Rigi, and Vakilabad are not considerably larger than their neighbouring sites and can be archaeologically detected as 'major' centres by the presence of symbolic features such as specific painted pottery designs and stamp seals.

It has been suggested that pre-state societies are characterized by a redistributive economy through which tributes were extracted from smaller centres to larger one(s) which were the seats of chiefly class (Brumfiel 1976; Steponaitis 1978, 1981; Wright 1984). Archaeological surveys have demonstrated that such centres did not develop in Fars until the later Banesh period (*ca.* 3200 B.C.). Bakun sites in Fars are rather low and small, ranging in size from less than a hectare to rarely more than three hectares.¹⁷ These sites are usually located in several fertile valleys of Fars in clusters comparable to the modern towns and villages (Stein 1936; Vanden Berghe 1959; Sumner 1972; 1974; Miroschedji 1972). These valleys are shared extensively by both the sedentary population and the pastoral nomads. Most of the Bakun sites are located near springs, and there is no convincing evidence that until the Banesh period (3200 B.C., Proto-Elamite), the inhabitants of the region employed a river irrigation system in agriculture (Sumner 1986).

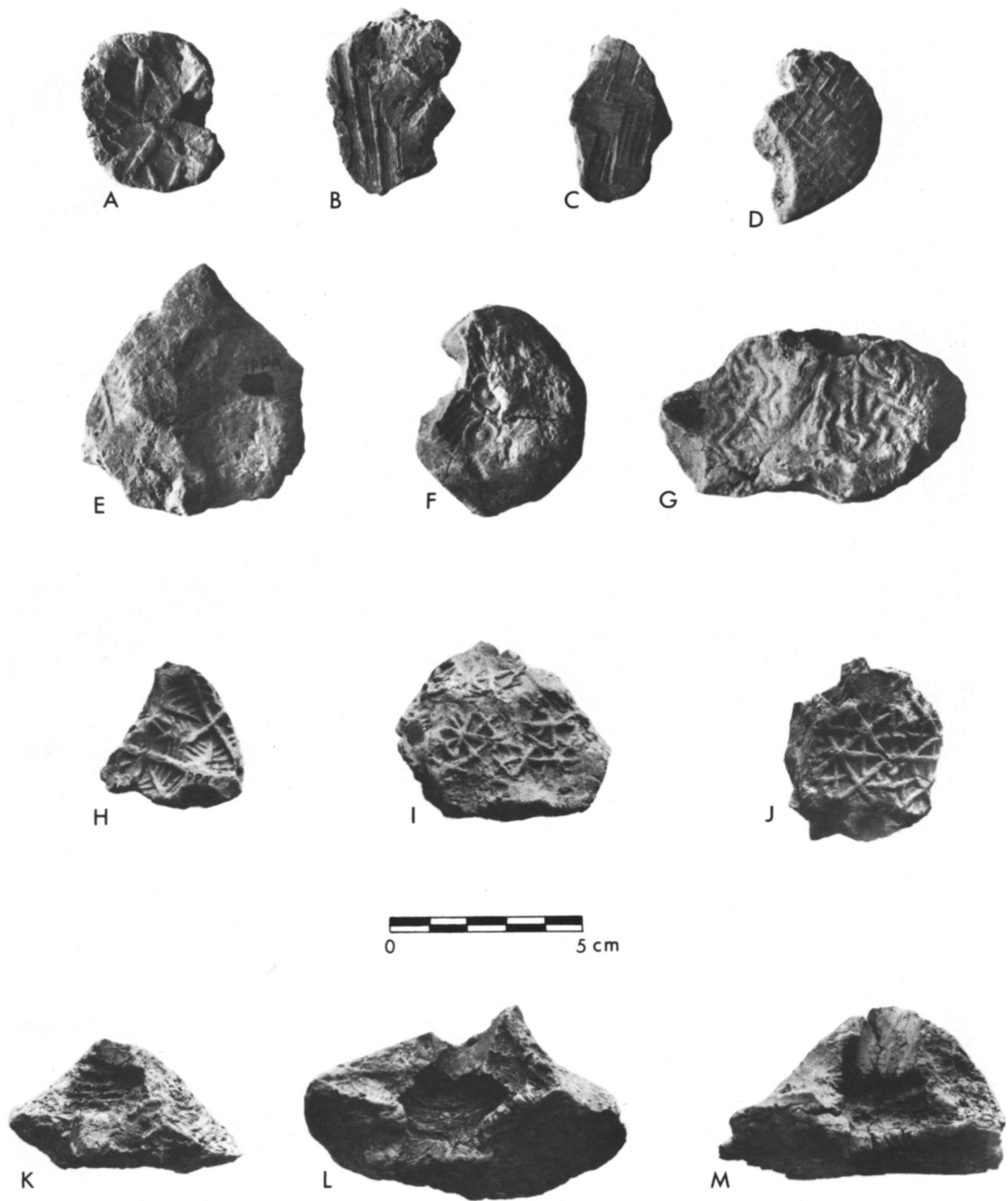
Though many Bakun sites remain unexcavated, given their small size, their distance from rivers, and their simple, spring irrigation technique, it is unlikely that the farming communities of the early fourth millennium in Fars had the technological capabilities to produce an agricultural surplus that could be used as the economic basis for the production and trade of

material goods. Nor does there exist any site large enough to be considered as the seat of a paramount chief and thus a redistributive centre (see below).

Except for one archaeological survey in the Kur River Basin (Sumner 1972), northwest of Shiraz, the modern province of Fars has never been intensively investigated. Direct archaeological evidence of the presence of pastoral nomads before the Banesh period (*ca.* 3600 B.C.) in Fars is limited (Sumner 1986: 200). However, the size, location, lack of architecture, and midden deposits of ash and debris indicate that at least some of the sites were seasonal. More important is the existence of flat sites in Fars. These camp-sites which Aurel Stein came across in his survey of southern Fars are sufficient to suggest the existence of pastoral nomadic sites there (Stein 1936: 161, 163, 175, 180). These camp-sites, strewn with Bakun A painted pottery and flint blades indicate two things: first, that nomadic camp-sites existed in the early fourth millennium B.C. in Fars; second, that these camp-sites were integrated into the Bakun A cultural and, perhaps, economic sphere as indicated by the material culture recorded from these flat sites.

Thus, known Bakun A sites can be assigned to three categories: 1) permanent villages characterized by mounded sites with architecture,¹⁸ 2) seasonal villages characterized by mounded sites without architecture, 3) camp-sites characterized by flat areas covered with potsherds and flint blades. Whereas there is little doubt about the nature of the sites of the third group, the nature and function of the first two groups can be understood only by detailed analysis of their components, which should reflect the material needs of their occupants. At this point, however, I assume my categorization of Bakun sites to be generally correct for heuristic purposes.

Since Bakun A sites in Fars are small, and agricultural technology was inadequate to allow production of the type of surplus which makes growth, development, and trade possible, to argue for an agriculturally based trade is not tenable and theoretically incongruent with archaeological data. If the Bakun manufacturing sites did/could not rely on an agricultural surplus to obtain raw materials and maintain a community of specialized craftsmen and coordinators, then how did they balance their economy and how did they become such centres? Now that we can reasonably demonstrate the presence of nomadic tribes that were closely linked to the settled population of Fars, it can be hypothesized that the production of surplus by which Bakun craftsmen and traders/administrators could maintain their trade/market economy was basically related to a pastoral mode of production (Boonzajer Flaes 1982: 87–96). The creation of surplus in traditional agricultural societies depends on many variables including manpower, irrigation technology, storage facilities, market availability, and incentive.¹⁹



Pl. I. Tall-i Bakun A, various clay sealings.

The latter two variables are in fact interrelated and most crucial. In the absence of a state economy, for an agriculturalist to produce a surplus there must exist a market/incentive which could absorb his product and would in turn provide him with material goods such as pottery, tools, cloth, etc. that he may not be able to produce because of either technological or economic reasons.²⁰ The existence of such markets thus would provide incentive that would encourage production of a surplus necessary for exchange and in turn would accelerate specialization of crafts.

In contrast, a pastoral nomad would need no incentive to produce a surplus. Animals reproduce themselves without the complexities involved in the production of agricultural surplus; in fact in the course of several years when environmental conditions are favourable, a pastoral nomad would have more animals than would be needed for a subsistence economy. There are, however, cultural (Galaty 1981: 72–80) and economic-environmental (Swift 1979; Balıkcı 1981: 152–3; Boonzajer Flaes 1982: 87–95) limitations to the production of surplus among pastoral nomads; first, the surplus cannot be internalized and pumped back into the economy; and second, it cannot be maintained in its original form (animals on hoof) within the economy for long because of the danger of overgrazing, shortage of manpower, and socio-cultural inhibitions (Galaty 1981; Hjort 1981; Gilles and Jantgaard 1982). The nomadic surplus can, though, be externalized without damaging the production possibilities of the remaining herds (Boonzajer Flaes 1982). It is this transformation of a surplus from structurally the same as income to structurally different that should characterize the political-economic character of pastoral nomadic societies. The externalization of surplus among modern Iranian pastoral nomads has been done through the purchase of agricultural land, with some individuals becoming landlords as well as owners of herds²¹ (Barth 1961: 110; Balıkcı 1981: 154). This conversion of the wealth of herds into land requires, of course, “money” of some kind. In the case of Bakun A society, the conversion of nomadic surplus into convertible items that would have provided economic power to maintain a body of full-time craft specialists would have been accomplished through mechanisms which out of mutual demands for fibre, meat, various tools, pottery, textile which both settled and nomadic populations of the highlands created for one another as a result of their interdependence and populations increase.

III

Discussions and Conclusions

On the basis of the archaeological data for the late fifth and early fourth millennia B.C. in Fars and in the

neighbouring regions discussed and analysed above, the following proposals can be suggested: the plain of Susiana suffered a sharp decline in population by the end of the Middle Susiana period (Adams 1962; Hole 1969). Conversely, Fars reached its peak prehistoric population at roughly the same time, or somewhat later (Sumner 1972; 1977; 1986: Fig. 3). At this point it is a matter of conjecture whether that portion of the Susiana population which abandoned its villages migrated to Fars, adopted nomadic life, or both, and whether this situation in Susiana was due to new socio-economic and political developments which eventually resulted in the formation of state societies there.

Whatever factors contributed to demographic developments in Fars by the late fifth and early fourth millennia B.C., it appears that the population increase and the appearance of nomadic groups there created new demands for material goods. These demands were met by sites like Bakun A. They were by no means mere manufacturing settlements. Judging by the evidence of administrative technology at Bakun A and at other sites as implied by the presence of stamp seals and tokens, such settlements were at once manufacturing sites and centres for the administration of production and trade. Moreover, they possess a great repertoire of painted pottery with some specific motifs such as human beings, lizards, and large-horned mountain sheep and goats that are either rare or totally absent from other sites²² (Fig. 6). This observation in turn suggests that the elite segment of Bakun society resided at and had control over these centres (Pollock 1983).

Because of the specialized and one-sided economy of nomads, they are more interested in trade (either their own products or conduct long-distance trade) than the sedentary people. Further nomads cannot trade among themselves because of their undiversified economy, and agriculturalists can get along without them (Khazanov 1984: 203). A common ethnic background and perhaps kinship between the settled communities in Fars and Zagros nomadic tribes may have facilitated processes of economic and socio-political development in Fars. The small cadre of individuals at Bakun A who controlled the resources and production of crafts may have easily procured raw materials from far away regions on one hand, and traded the finished products through their nomadic kinsmen on the other.²³ In this fashion, they not only enjoyed nomadic support and protection, but also a steady flow of valuable information needed to conduct their inter/intra-regional trade in material goods such as pottery, stone vessels, stone tools, textile, and ornaments.

Socio-Political Status of Bakun A

Most archaeologists and anthropologists are of the opinion that the period preceding the formation of pristine states and urbanization in the Near East was



Fig. 6. Ceramics from Tall-i Bakun A, season of 1937.

characterized by chiefdom societies.²⁴ This characterization is based on evolutionary models derived from the ethnographic data of African and Polynesian societies. This evolutionary stage, "chiefdom", was discussed in detail and refined by Service (1962: 144) as "redistributional societies with a permanent central agency of coordination". Since Service's model of pre-state organized societies would include many societies of various degrees of complexity that would not necessarily evolve state organizations, and since recent archaeological and ethnographical studies do not support his emphasis on the redistributive aspect of chiefdom societies, some anthropologists have sought to make distinctions between those chiefdom societies that were capable of developing state organizations and those which were not (Earle 1977; 1978; Wright 1977b: 381; 1984: 42-4).

According to a recent and carefully formulated definition, a chiefdom society is "... a socio-political entity in which overall social control activities are rested in a subsystem which is externally specialized *vis-à-vis* other activities, but not internally specialized in terms of different aspects of the control process ... e.g. observing, deciding, coercing" (Wright 1984: 42). Moreover, control in "complex chiefdoms" "... is exercised by figures drawn from a class being defined as a ranked group whose members compete with each other for access to controlling positions and stand together in opposition to other people" (*ibid.*). It is argued that these societies can be identified archaeologically when they exhibit: 1) settlement hierarchy; 2) residential segregation; 3) mortuary segregation (Wright 1984: 43-4). Using Steponaitis' tributary model, which maintains that seats of paramount chiefs would be comparatively larger than the sites from which resources are extracted and distributed,²⁵ H. Wright arrived at the first criterion working with materials from Farrukhabad, a site in the Deh Luran area, northwest of Susiana (Wright 1984).

The pattern of the spatial distribution of Bakun sites, their relative small size and the spatial relation of larger sites to the smaller ones do not show the type of settlement hierarchy expected to be present in the case of "complex chiefdoms" or proto-state societies as observed in Susiana and Deh Luran. Similarly, Bakun A and similar sites such as Rigi and Vakilabad that demonstrate symbolic features characteristic of major centres do not seem to exhibit any specific location that may be considered central to the surrounding communities, nor are they considerably larger than some of the sites in their vicinity.

As for the second characteristic, Bakun A itself demonstrates an internally segregated settlement; this segregation, however, could have been functional, because, except for the architecture and the sealings, we have no evidence indicating any difference in the material remains between the northern complex and

the central and southern quarters which would indicate class differentiation within the site. Given the available archaeological data, Tall-i Bakun A must be considered as a centre of specialized craft production in which accounting control was exercised over certain storerooms and that these storerooms were segregated from the craft quarters. Nevertheless, Bakun A itself can be considered a special centre which, *vis-à-vis* non-specialized sites, demonstrated aspects of socio-economic differentiation in pre-state societies.

The absence of burials from the Bakun culture does not allow speculation on the third characteristic. Thus, the archaeological material of early fourth millennium Fars discussed here does not conform to the models suggested for the archaeological discernment of centres of "paramount" or "complex chiefdoms".

A different problem in characterizing Bakun A as a "complex chiefdom" according to the above models involves the size of the society. If the organizational characteristics of a society are functionally related to its size (Service 1962; Sanders 1984: 16), then in order to characterize Bakun society as chiefdom, etc., we need to estimate the size of the society Bakun A controlled and this, given our present knowledge of prehistoric Fars, is not possible. Further, if the development of special institutions of a higher level in the matrix of a pre-state society to deal/control/organize the consumer goods is related to the size of the consumer potentialities, as suggested by Nissen (1983: 336), it is possible that a nomadic pastoralist population, being mobile and economically more flexible and adaptive than the agriculturalists, will affect this relationship and will add to the potential of the consumers regardless of the size of the settlement system. This situation may explain why settlement patterns of Bakun sites in Fars differ from those in Susiana where there is marked settlement hierarchy with large centres (chiefly centres) dominating smaller sites. Therefore, Bakun A may have occupied a place among a network of interaction whose developments may "... lead to configurations which are neither uniform nor stable" (Adams 1974: 244). Thus, it can be hypothesized that because of the unstable nature of these interactions, members of the Bakun society who were engaged in the production of crafts and trade became dependent on them and once the equilibrium of the trade was changed, be it by nomads or decline of the 'market' places, or disruption in the source of raw materials, this class of individuals and their residency would disappear. In this respect it is interesting to remember Sumner's speculation on the transition from the Bakun period to the following Lapui period as a rise in the nomadic population of Fars and decline of the settlements.

The outcome of the socio-economic and political development of the early fourth millennium in Fars is by no means clear. It may, however, be postulated that

Bakun as a stratified society, in order to maintain itself and not to revert to a simpler society in which access to resources is not limited, must have had to "... evolve more powerful institutions of political control than ever were called upon to maintain a system of differential ranking" (Fried 1967: 225–26).²⁶ Whether the nomadic elements of Bakun society provided formidable obstacles to prevent it from evolving these institutions of political control cannot be answered at this point.²⁷ We know almost nothing of post-Bakun societies in Fars. Some of the Bakun sites were deserted some time before the middle of the fourth millennium B.C. The following, Lapui, period is virtually unknown, except for its characteristic red burnished pottery—we have yet to excavate one Lapui site in Fars. Alternatively, the socio-economic and political developments that began in the Bakun period may in fact have continued after the disappearance of its elaborate painted pottery. Indeed, Bakun society represents a case in which the socio-political situation had become complex and mature enough to develop state organizations (Fried 1965: 185–91). Or, perhaps, Bakun A represents a pre-state community in which administrative problems were being differentiated or changed into political ones as a result of internal competition among the small cadre of individuals who controlled and redistributed resources (cf. Wright 1977b). The emergence of an impressive urban centre, much larger than Susa, at Malyan (historic Anshan)

and the concomitant development of Proto-Elamite civilization dominating both the lowland and highlands may well have had their roots in the earlier Bakun period.

I am aware that the arguments presented are brief, and given the lack of comparative material this is inevitable, but the hypotheses are capable of being tested. The data analysed also provide an empirical base to test anthropological theories dealing with the processes of the formation of stratified societies and pristine states which remain, nevertheless, archaeological questions (see Wright 1977b; 1984; Earle 1984: 1–5).²⁸ Further, this paper should be considered as heuristic in nature, in the hope of encouraging similar studies that may offer new insights with which to analyse aspects of socio-economic organizations in pre-state societies in the ancient Near East.

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¹ See, however, Sumner's statements on the social complexity of Bakun culture in Fars based on his survey data (1977: 303).

² Cf. Hole's 1983: 322–7 discussion of the status of the Susa A period at Susa.

³ Amiet (1986) in a recent article has noted the hitherto unidentified evidence of door-sealings from Susa A.

⁴ Bakun seems to be the earliest site in which door-sealings occurred; but I suspect that some of the sealings reported from late chalcolithic levels at various Anatolian sites may be door-sealings, though they are called bullae. See Edgü 1983: 80–1, nos. A147–A151; Esin 1981, Fig. 11; Esin 1983: 182, Pl. 36: 4–7. See also Amiet 1986.

⁵ McCown, 1942: 60, particularly warns us that "The forms of the vessels from Levels III–IV are too similar to be used for stratigraphic distinctions".

⁶ I would like to thank Professor Janet Johnson, Director of the Oriental Institute, for giving me permission to publish the archaeological material of 1937 season of excavations at Tall-i Bakun.

⁷ The blank areas in Squares BB 27–8, 60, 64, 78, 86, BC 70, and CB 06 indicate ash deposit.

⁸ McCown, pers. comm.

⁹ See Adams 1974: 240.

¹⁰ Sealings that were too fragmentary to be assigned to any specific groups are excluded.

¹¹ This category may include sealings of baskets, sacks, bags, boxes, and other containers, but they are all treated under the rubric "Bag-sealings" for convenience.

¹² Since, of course, the seal designs were made by individual seals, these designs are reconstructed to represent actual seals.

¹³ It is also possible that a person/office had more than one seal, in which case there may have been attached an even greater authority to their owner.

¹⁴ Cf. Fiandra 1981b.

¹⁵ Cf. Fiandra's analysis of sealings from Shahr-e Sukhteh, 1979: 12–26.

¹⁶ A similar situation has been suggested for the distribution of the neolithic Urfirnis pottery in Greece (Jacobson 1984).

¹⁷ Sumner recorded three large sites (8H8, 817, and 9H31) in his survey of the Kur river basin. He noted that "... none of these seems to be central in terms of access: two are located in a narrow neck of land between Kuh-i-Ayub and the River Kur... and the third is on the edge of a vacant marshy area on the periphery of the central population concentration." (Sumner 1972: 256–7). These three sites have been intentionally excluded from the analyses of Bakun A sites in this article. The exclusion of these sites is due to the chronological problems they present. Sumner dates these sites to his Phase III; this phase includes all the sites that produced painted pottery known from Tall-i Bakun B, Tall-i Gap, and Tall-i Bakun A (*ibid.*: 58). Though painted ceramics from these three type sites share a common tradition, they do represent distinct chronological periods that could be equated to the Middle through Late Susiana/Susa A periods in Khuzestan, covering perhaps a millennium. Therefore, since the present article deals only with the period of Bakun A, Late Susiana, I have excluded these three sites from my analysis until a more refined chronological sequence is worked out, allowing precise dating of these three sites.

¹⁸ Some nomads live in small villages at their summer/winter pastures which they abandon part of the year (see Arrian, *Anabasis*, III. 17. 3–6, where he refers to nomadic people living in villages. But since this practice is not very common among nomads, it is safe to assume that mounds containing architecture with ceramic exhibiting a large repertoire of style and shape should fall in the first group.

¹⁹ See Boserup (1965; 1981) for a full discussion of these problems.

- ²⁰ Other mechanisms for mobilising surplus in per-state economies may include kin obligations, marriage payments/contracts, ritual/religious duties, and chiefly tributes (Wright, pers. comm.). But I doubt that these mechanisms would lead to formation of a market economy and craft specialization as suggested for the Bakun A society.
- ²¹ For a different approach to this aspect of the pastoral mode of economic adaptation, see Botte 1979: 399–418.
- ²² Sumner (1972: 40) reports, for example, that out of 3,000 sherds only twenty had naturalistic motifs such as dancing men, animals, snakes, and birds.
- ²³ Cf. Hjort 1981 for a study of the relevance of ethnic ascription and ethnicity to economic expansion and development of political system among pastoral nomads.
- ²⁴ Cf. for example, Service 1962; 1975; Wright 1984; Johnson 1973.
- ²⁵ See also Flannery (1972: 403) for similar emphasis on this characteristic of “chiefdoms”.
- ²⁶ The term “stratified society” is preferred here over “chiefdom society” due to the fact that we can speak about socio-economic aspects of Bakun without walking too often in the realm of hypotheticals. Further if Bakun was predominantly a nomadic society, then it is possible to argue that it reached that stage of development which directly precedes the emergence of a state (Khazanov 1984: 165).
- ²⁷ Cf. Khazanov (1984: ix–xxv, 228–95) for a detailed discussion of the socio-political obstacles inherent in nomadic societies hindering autochthonous complex political institutions.
- ²⁸ Cf. Haas 1982: 50–3 for a full discussion on this problem.

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