

REGIONAL SETTLEMENT PATTERNS, EXCHANGE SYSTEMS AND SOURCES OF POWER IN CRETE AT THE END OF THE LATE BRONZE AGE: ESTABLISHING A CONNECTION

by ELISABETTA BORGNA

1. – INTRODUCTION

The traditional debate on the end of the Bronze Age and the transition to the Iron Age in Crete has been fuelled in recent years by new contributions adopting new theoretical perspectives and specific fieldwork practices, such as in particular regional surveys¹. The purpose of this paper is to integrate certain recent indications with the preliminary results of a research project based on the analysis of the material culture coming from a single Late Bronze Age Cretan site, namely Phaistos in south-central Crete (Borgna 2001; 2003b, with literature). The data to be placed into a broader framework will, hopefully, serve to furnish a pattern for both the regional distribution of the population and the socio-economic relationships among the settlements and districts of Crete at the close of the Late Bronze Age. Some observations emerging from the scholarly discussion arising out of a specific Cretan perspective, together with an Aegean Mediterranean view, have provided the investigation with theoretical premises and analytical basis. These can be summarized as follows:

– In opposition to a generalizing explanation for Dark Age Crete, D. Haggis (1993; 2001; 2002) has reiterated the usefulness of a contextual analysis aiming at focusing on diversified regional realities. Furthermore, he has applied the concept of socio-economic “integration” to cultural frameworks and population layouts which, during the development of Minoan societies and in particular in the Prepalatial period, were unaffected by the control of central authorities. Thus the integration of human activities would have been the result of the convergence of various factors – environmental, ecological and cultural – whereas within the artificial settlement system managed by the palatial centres, immanent tensions and imbalances would have threatened the ordered regional layout and hindered socio-economic integration.

– During the Late Bronze Age and Early Iron Age “alternative networks” of long-distance exchange set up by new social agents have been proposed by S. Sherratt as an important factor in the spread of behavioural practices and cultural elements, in particular in the distribution of certain specific goods such as the “Urnfield

¹ See in general Nowicki 2000, with literature; Karageorghis, Morris 2001; Rehak, Younger 2001, 458-464, with literature; cf. furthermore Whitley 1991; Haggis 1993; 2001; D’Agata 2001, 346 ff.; in particular for surveys see Haggis 1996 (Kavousi); Whitley *et al.* 1999 (Praisos); Hayden *et al.* 1992 (Vrokastro).

bronzes"². As an increasing amount of evidence seems to testify³, the main role played by Crete in particular as a junction in these east-west oriented networks might have caused the island population to be intimately involved in the external exchange. The nature and directions of the external connections are here supposed, therefore, to have substantially affected the regional distribution of the population and the socio-economic relations among the Cretan settlements, not only during palatial times but also in the troubled period from the end of LM IIIB into LM IIIC as well, a period traditionally considered as characterized by isolation and difficulty in long-distance communication, not least because the central authorities had collapsed.

– The debate on palace administration, focusing in particular on the Knossian evidence, has recently emphasized the autonomy of a substantial rural economy, which would have supplied the palaces with exclusive goods and products. This kind of village economy, founded on the ownership of primary goods, such as estates, flocks and cattle in the hands of the local communities or important individuals (Halstead 2001a, with literature; cf. Greco 2000/01, 472-473), may point to continuity between the prepalatial social organization and the palatial centralized one, and at the same time helps to explain the postpalatial village way of life, which relied on economic and social institutions and bonds that possibly survived, albeit fragmentarily, the collapse of the central power⁴.

– The emerging role of animals – as regards production and exchange, negotiation of social relations and ideological and symbolic implications within the framework of social behaviours and cultural institutions – has been explored in different fields of research, involving archaeozoology, environmental pedological and soil micromorphological studies, as well as anthropology and ethnography. The intense debate on both the ecological and cultural constraints affecting pastoral activities, in particular transhumance, and the indications of specialized pastoralism⁵ has been increased within the Aegean domain by certain analytical studies that focus upon the evidence of animal husbandry in the Linear B documents⁶, and by a few recent developments within the field explored by "consumption archaeology" (Hamilakis 1998; 1999a; 1999b), which has pointed in particular to meat consumption on feasting and ritual occasions – an aspect especially relevant to Crete at the end of the Late Bronze Age⁷. On this subject,

² Sherratt 2000; for sub-elite social components in the industrial and exchange activities at the close of the Late Bronze Age, see Sherratt 1998; 1999; cf. in general on exchange networks and patterns Sherratt, Sherratt 1991; 1998.

³ In general for Aegean exchange during the postpalatial period see Deger Jalkotzy 2002; Deger Jalkotzy 1998, 24, in particular for the important role played by peripheral areas in the 12th century networks.

⁴ On the continuity of the village settlement pattern in the Mycenaean and post-Mycenaean world, see Donlan, Thomas 1993.

⁵ See in general Maggi *et al.* 1990; Biagi, Nandris 1994; for the discussion concentrating on the Aegean world, see Cherry 1988; Halstead 1990; 1996, with literature; among the ethnographic contributions, Watrous 1977; Blitzer 1990; Chang 1994; Nixon, Price 2001.

⁶ Killen 1964; 1984; Halstead 1999; 2001b, and literature in Halstead 2001a, 41 ff.; Greco 2000/01; see furthermore Burke 1997; 1999 on the important role of textile industries in Minoan Crete; cf. Sherratt, Sherratt 1998, 340-341.

⁷ In general Wright forthcoming; for Postpalatial Crete: Borgna 1997b and forthcoming(c).

furthermore – even if we discount the debated opinions about the natural reversion to pastoralism as a direct consequence of socio-political disruption during the Dark Age⁸ –, the great volume of animals recorded in the Knossian archives, and the indications provided by both classical authors and modern sources emphasizing the dominant role of pastoralism in the socio-economic life of the Cretan communities from at least the Archaic age onward (Chaniotis 1991; 1995; Nixon, Price 2001), permit us to infer that livestock constituted a vital resource for the rural communities and affected social and economic relationships among Cretan settlements and regions most probably also in the Dark Age – namely that period devoid of the specialized activities characteristic of the palatial administration.

In the field of animal exploitation, some other indications, such as the remarkable increase of spindle-whorls in several Italian and European Final Bronze Age deposits, the industrial evidence of Troia VI-VII, the introduction of practical tools such as spindles and distaffs within exclusive spheres of exchange, the diffusion of textile decorative style in pottery productions, as well as some specific evidence of textile installations – all point to a general development of textile activities and to their social importance in the Mediterranean world at the end of the Bronze Age⁹.

The points listed above are useful to stress the main theoretical premises to this work, but certain other contributions within the most recent literature have stimulated my investigation by the critical reaction they have provoked, and deserve a brief discussion:

– Fluctuations of population, changes in settlement patterns and especially gaps in the life of many settlements towards the end of the Bronze Age, in particular in LM IIIC, have been in the past explained as the result of migrations and invasions or wars, concepts which supply explanatory models in certain very recent works as well, albeit critically revised¹⁰. In his substantial reconstruction of the framework of the Cretan upland sites, K. Nowicki has defined them, all-inclusively, as “defensible settlements”, founded by people under the pressure of raids and seafaring enemies, fleeing in search of security. Further abandonments and new foundations – precisely recognized within an articulated chronological framework – would have been caused by ceaseless struggles, confrontations and ultimately population movements both from within and without the island (Nowicki 2000; 2001). In my view this kind of

⁸ See in particular Snodgrass 1987, 170 ff.; for a critical revision Cherry 1988, 26-30.

⁹ For spindle-whorls see, for instance, Pacciarelli 2000, 222-223; Médard 2000, 27-28; compare with the huge number of spindle-whorls at Troy, in particular from Troy VII continuously throughout Troy VII, in association with industrial structures as well: Balfanz 1995a, 137-138; 1995b; for the “Pillar House” cf. Blegen *et al.* 1953, 219 ff.; on spindles as prestige goods see Barber 1991, 62 ff.; Borgna 2003a; for textile decorations cf. Sherratt 1998, 304-305; for installations see, for instance, on the Near Eastern coasts, Sherratt 1998, 304-305: the author supports the evidence with the indications coming from the archaeozoological analysis and pointing to a specialization of animal rearing directed to wool production: cf. Hesse 1986 for Tell Miqne Ekron.

¹⁰ Schachermeyr (1979) was able to recognize many different waves of invasions, pointed out as regards LM IIIC in particular by the so-called “Flüchtlingskeramik” of Mycenaean refugees at the beginning of the period and later by the “Pleonastic style” of the barbarian invaders; see furthermore Desborough 1972, 113; Popham 1965; Kanta 1980, 325 (on pottery evidence); Nowicki 2000.

generalizing explanation, though well-founded and in many cases even true, does not afford us a thorough comprehension of the multiple system of settlement patterns in Crete; it needs to be clarified somewhat, even if we are inclined to admit that the circulation of peoples throughout the Aegean and the Mediterranean had a much greater impact than the movement of goods on the socio-economic dynamics of the last centuries of the Bronze Age.

As a first point, some recent evidence calls our attention to the presence of a mixed and heterogeneous population in Crete before LM IIIC. Minoan, Mycenaean and Cypriote¹¹ components are supposed to have played their role already in earlier LM III contexts without being involved in any struggle or troublesome contact; at worst, the population increase and the changing patterns of social interaction might have borne upon “peaceful” competitive social relations, as may be observed in the use of pottery styles (Borgna 2003b; Borgna forthcoming(c)); such competitions cannot be tested on the exclusive ground of ethnic confrontation during LM IIIA-B, much less in IIIC when the articulated framework of the local population seems to have been the result of a long internal process of cultural integration.

As a second point, it is worth remarking that, as Nowicki himself suggests, the defensible sites involve different types of settlement, provided with different characteristics as regards the environmental and topographic layout as well, which is sometimes not clearly suitable for defense and refuge purposes. In fact, on the one hand the scattered pattern of small sites located in high and mostly inaccessible locations during the earlier LM IIIC phase in East-Central Crete might suggest that the population was prompted to flee as far inland as possible, at least in part because life on the coasts was dangerous, under some kind of threat. On the other hand, however, we have to bear in mind that the remarkable depopulation of the coastal areas seems to have been such an exclusively eastern and southern Crete phenomenon¹² and, moreover, that the fragmentation and dispersal of the population into small clusters might have been brought about not only by a desire to safeguard primary goods such as animals from raids on the coastal plains¹³ but also, and more substantially, by internal competitions¹⁴ and social withdrawal, regardless of the arrival of new peoples. Some comparisons from Near Eastern contexts might be useful in connecting, on the one hand, sudden abandoning of land, social disruption, disintegration and banditry, and, on the other hand, the

¹¹ For Cypriote components I limit myself to mentioning the recent revision of the materials from the Olous cemetery by A. Kanta (2001a); in general on the Mycenaean presence see *La Crète mycénienne* 1997; cf. Borgna 2003b; though more doubtly attested, Italian components could in turn have played a role: see for literature and discussion Bettelli 2002.

¹² Such a situation seems to fit with the indication of troubles in Eastern and Southern Mediterranean in connection with the activities of Sea Peoples; for inland and upland settlement at the beginning of LM IIIC, Nowicki 2000, 228 ff.

¹³ Cf. raids in Homer: e.g. Od. IX 39-46.

¹⁴ Cf. Haggis 2001, 53. It is worth observing that the impact of outside invaders might have favoured a different population pattern, much more characterized by the need of common defenses, cohesion and cooperation and would have encouraged inland concentration of settlements rather than fragmentation.

development of upland and mountain occupation in the Aegean world as well (below)¹⁵.

The demographic increase and the growth of the defensible settlements in number and size in the advanced LM IIIC phase, instead of being indications of persisting troubled conditions which would have favoured the flight of substantial groups of people towards the most strategic locations, might be considered as evidence of the intensification of the mountain economy as an outcome of the improvement in sedentary life and of the population growth, which have been verified as normal trajectories within the dynamics of upland occupation (Marfoe 1979, 22-23), regardless of contingent and isolated abandonments and blanks. From then on, upland settlements seem to have been participating in a socio-economic integration process, which could have developed, as D. Haggis suggests, into the pattern of "site cluster formation" (Haggis 1993). At the same time, we may infer that the evolution of these clusters of sites might have depended also on the role they played within external exchange networks involving integrated areas of economic exploitation, as I will discuss further on.

As a third point, it is worth noting that the defensible role of some "defensible settlements" is not at all apparent: some small and short-lived coastal sites, such as Kastri at Palaikastro and Elias to Nisi near Vrokastro on the north-eastern coast, as well as – possibly – Amnisos in central Crete, cannot be defined as true refuge settlements¹⁶; within the general framework of a troubled access to the sea, they might nevertheless have played an important, specialized role in, say, the management of sea products and possibly salt extraction as well, something that has attracted very little attention in the Aegean literature (Kopaka, Chaniotakis 2003).

As a fourth and last point, the most defensible settlements – namely those large sites, dated to the LM IIIB-C transition, provided with monumental enclosures and concentrated especially on high, well-nigh inaccessible peaks in West-Central Crete – though indeed defensible, upon closer examination do not show definitive indications for an explanation as real settlements. The long enclosures limiting a wide extension of land and the occurrence of particular types of building, such as at Kastrokephala, suggest that such sites could have served as specialized rural strongholds concerned with controlling and administering the land. As I will reiterate below, a feature that Kophinas, Jouktas, Kastrokephala, Orne¹⁷ have in common is that they are strategically located to control both the sea and land routes connecting northern and southern Crete and the access to the mountain pasturelands, which nowadays seem to be particularly concentrated around these sites¹⁸.

¹⁵ Liverani 1988, 629 ff.; Marfoe 1979; cf. Sader 1992 for the explanatory value within the dynamics of the Bronze-Iron Age transition.

¹⁶ Cf. Kanta 2001b, 16-17; for Palaikastro-Kastri see Sackett *et al.* 1965; Nowicki 2000, 50-52; Elias to Nisi: Hayden 2001; Amnisos: Kanta 1980, 38-39.

¹⁷ For Kophinas: "Kritikí Estia" 1991-1993; Nowicki 2000, 45-46; Jouktas: "Prakt" 1984, 608-609; Nowicki 2000, 44-45; Rehak, Younger 2001, 463, with literature; Kastrokephala: Hayden 1988, 3-5; Nowicki 2000, 42-44; Orne: Kanta, Stampolidis 2001; see also possibly Erganos, in the Southern Lasithi: see Nowicki 2000, 143-147; I am grateful to Jerry Rutter, who pointed my attention to this site.

¹⁸ For a pastoral connotation of the peak sanctuaries such as Jouktas and Kophinas in Minoan Crete see Rutkowski 1986, 93-94; cf. Peatfield 1992; Nixon, Price 2001, 416.

– The widespread opinion about a general final collapse in Crete towards the end of LM IIIB¹⁹ needs, I think, to be precised: on the one hand, the spatial and chronological dynamics within the social formations and the population layouts seem to have evolved into different frameworks according to the different areas of the island, at least as regards West-Central Crete and East-Central Crete; on the other hand, in a late or final horizon of LM IIIB the start of a new settlement pattern, in particular in Central and Western Crete, seems to suggest that the previous crisis was overcome. Nucleation around some settlements, such as Chania, Phaistos, Knossos and possibly Chamalevri²⁰, which were bound to become main regional centres in LM IIIC, seems to have been a prompt response to the radical disruption which had involved during LM IIIB both the Final Palatial central sites – such as Chania, Ayia Triada, Kommos – and the rural settlements.

2. – ARCHAEOLOGICAL AND TOPOGRAPHIC EVIDENCE

A short survey of the archaeological and topographic evidence at our disposal will help us to contextualize these preliminary observations by (a) focusing on the different settlement patterns detectable in West-Central and East-Central Crete²¹ and (b) by attempting to establish a connection between these two broad areas.

As has been observed above, the end of the Final Palatial authorities heralds the final Bronze Age occupation in both areas. Leaving aside the debated chronology of the fall of the palace of Knossos and the discussion on the role played by the emerging centres, such as Chania, Ayia Triada, Kommos, Malia, Palaikastro, I would like to point out that the island population involved in the IIIB crisis was most probably organized according to the pattern of the centralized territorial administration, though at a regional level. The LM IIIA-B élites that were settled in the various regional centres exerted their authorities over the land by adopting social instruments and ideological strategies which turned out to be very similar to those used by the previous Knossian power, beginning possibly with the Linear B administration²². Frescoes, public buildings such as megara and stoai, funerary customs and grave architecture, such as tholoi, grave circles and warrior burials, were part of the ideological expressions of these élites and may be considered signs both of Mycenaean cultural and social affiliation and of ideological continuity with the Knossian tradition²³. Such signs point to a desire by elite components – who

¹⁹ Desborough 1972, 112; Watrous 1996, 100; 2001, 85; Nowicki 2000, 224 ff.; Rehak, Younger 2001, 458; Deger Jalkotzy 2002, 50-51.

²⁰ See below, notes 25, 26, 27, 29; on the Late Palatial period in Crete and on the end of centralized authorities see Rehak, Younger 2001, 441 ff. (with the distinction between “Final Palatial” and “Postpalatial Crete”), with literature; recently also Merousis 2002.

²¹ I include in the second region some districts properly belonging to central Crete, such as Lasithi and Viannos; the district of Pediada is in turn considered as a buffer area, which was affected by aspects typical both of Central and Eastern Crete, though it was more deeply involved within the settlement dynamics of the lowland coastal plains.

²² Cf. for instance Hallager, Vlasaki 1997; on the most characterizing aspect, that is the control of exchange, as may be inferred by the evidence of inscribed Linear B stirrup jars, see, with literature, Haskell 1999; cf. Deger Jalkotzy 2002, 51, note 23.

²³ About frescoes see lately Militello 1999; for monumental architecture, cf. e.g. Haskell 1997,

were more probably actors in a political than a social and economic crisis and aimed at limiting the Knossian power – to be legitimised. The splitting-up of that power into the hands of the regional élites would have gradually evolved into a more rigid social control and a heavier economic constraint on the local communities, which would have been systematically exploited by the new authorities exerting power *in loco*. At the beginning of the process, however, the LM IIIA 2 Early gap, which should coincide with the traditional date of the destruction of Knossos, might not have been perceived at the time as symptomatic of a final, catastrophic change.

By contrast a final, ineluctable crisis took place in LM IIIB, possibly early, as it has been already said. Very few hints of continuity are discernible in the periods following upon the final destruction of monumental buildings and settlements. Instead we have site shifting, general population dispersal, and blanks within craft productions and stylistic expressions. Gaps of this kind seem to indicate a social crisis which most probably involved the complete collapse of the settlement system and the abandonment of the land. This could be verified, for instance, in the Mesara, where during LM IIIA-B a systematic land occupation seems to have consisted of many small rural sites, in contrast to the total blank in LM IIIB-C (Watrous *et al.* 1993 228-229).

From then on, procedures and relations linked to the centralized administrations were replaced by new ones, thereby creating new processes and new dynamics and exerting a new impact on settlement patterns, social organizations, forms of production and exchange and the conception of the role of the individual within social community. The general process of transformation would last without substantial breaks into Iron Age Crete.

2.1. – *West-Central Crete*

In West-Central Crete, the new developments seem to have been already underway in a late phase of LM IIIB, possibly towards the end of 13th century, after a short gap²⁴. A new population layout suggesting growth and retrieval may be detected at Knossos²⁵ and Chania²⁶, which survived the crisis, though throughout the period there is evidence of population decrease and architectural reorganization. They were to become the new main population centres together

191-192; Rehak, Younger 2001, 442-444; in particular on the topographic and ideological continuity between the villa and the megaron at Ayia Triada, see Cucuzza 2001; on warrior burials and burials with weapons: Matthäus 1983; Kilian-Dirlmeier 1985; Rehak, Younger 2001, 444-445, with literature; for Mycenaean elements see in particular the grave circle of Archanes (Kallitsaki 1997) and the tholos of Achladia (Tsipopoulou, Vagnetti 1995); cf. the tholos “intra muros” at Armenoi (Papadopoulou 1997); see now also Cucuzza 2002; Preston forthcoming.

²⁴ The break within the pottery evidence between LM IIIB early and LM IIIB late-IIIC gives rise to a debated problem; on possible contacts as regards the Mesara see Borgna 2001, 288 ff.; Borgna forthcoming (b) and the discussion in Hallager, Pålsson Hallager 1997.

²⁵ As regards Unexplored Mansion, Little Palace, Shrine of the Double Axes and the reoccupation of the Palace and the area of the Stratigraphical Museum see: Popham *et al.* 1984; Popham 1965; 1970; “AR” 2001-02, 107; Popham 1964; Warren 1997; for LM IIIC see Warren 1982-83.

²⁶ For LM IIIB 2 see Hallager, Tzedakis 1985, 42 ff.; 1986, 21 ff.; Hallager 1988, 117; for LM IIIC: Pålsson Hallager 2000; cf. Rehak, Younger 2001, 459.

with other settlements such as Phaistos and Kastelli Pediada²⁷, whose growth at the beginning of LM IIIC has encouraged some scholars to assert that new arrivals brought about complete new foundations (Nowicki 2000, 225). However, the process of nucleation around certain lowland settlements strategically located for land exploitation, such as Phaistos, and certain coastal sites provided with harbours, such as Chania, is in significant contrast to the general blank in the regional occupation, and may be explained as a strategy devised precisely to deal with the crisis. The isolation of these “quasi urban” settlements within an abandoned, no longer colonized territory, consisting possibly of large uncultivated estates suited possibly to some kind of extensive dry farming and pasturage in particular, makes sense within a completely changed economic, social and ideological framework, by now mainly founded on human recruitment in order to mobilize economic resources and to achieve social support and political power²⁸.

Within this framework, however, evidence of rural sites is not completely lacking, which might be explained as being an initial stage in the development of a territorial reorganization; LM III Chamalevri and Gouves, for example, might possibly account for the role of small sites specializing in craft, transformation and storage activities²⁹. During LM IIIC, moreover, the foundation of new inland sites such as Sybrita in the Amari valley and Gortina, overlooking the northern access to the Mesara plain³⁰, and the diffusion of defensible sites in West-Central Crete³¹, albeit far less widespread than in Eastern Crete, together seem to point to the development of a complex settlement pattern, able to deal with diversified environmental resources. Such a pattern may suggest that human occupation now aimed at land control and administration of fully-integrated economic activities.

The monumental buildings at Kastrokephala, Orne and possibly Jouktas, organized most probably early in the Postpalatial period as empty spaces defended and delimited within an initially abandoned landscape, and enjoying a strategic location for the control of traffic routes, might in particular point to the development of some specializing sites in the collecting and managing of livestock, as it has been recently proposed for the comparable site of Tsouka in Macedonia (Efstratiou 1993). Within such a perspective we might infer that the exploitation of the animal economy, in itself highly important, was possibly coupled with that of other vital

²⁷ For Phaistos see above, § 1; Kastelli: Rethemiotakis 1997a and b; other settlements, such as Archanes and Tylissos, might have had a similar development; certain sites in East-Central Crete, such as Malia and Gournia, seem to have been occupied at least in LM IIIB 2 (Rehak, Younger 2001, 458-459, with literature), but they did not have so important a role in LM IIIC.

²⁸ Cf., as regards the ideological values of LH/LM IIIC elite components, Whitley 1991; Deger Jalkotzy 1994; 2002; Borgna 2003b and forthcoming(c).

²⁹ For Gouves see Vallianou 1997; for Chamalevri, “Kritikì Estia” 1991-1993; “AR” 1997-1998, 123; “ADelt” 1994 B (1999), 730 ff.; “BCH” 125, 2001, 2, 1043.

³⁰ Sybrita: Rocchetti 1994; Prokopiou 1997; Rocchetti 2000; D’Agata 1997/2001; Gortina: Rizza, Santa Maria Scrinari 1968; Nowicki 2000, 186-187; Kanta 2001b, 15-16.

³¹ Nowicki 2000, 174-217; Watrous 2001, 86; after a detailed survey of plain and coastal IIIC sites in Eastern Crete (for Milatos see e.g. Nowicki 2000, 237; Kanta 1980, 125-128), the pattern of a dialectical relationship and a socio-economic integration between lowland west-central and upland east-central settlements could appear too rigid and it might be adapted to a more general relation between, on the one hand, inland and upland inhabited areas and, on the other hand, the lowland and coastal population.

activities, such as the management of island relationships. In other words, these specialized upland sites would possibly have depended upon the main economic activities controlled by the lowland settlements, which would have consisted of both the management of internal and especially external exchange and the industrial transformation of the animal products.

Although the bronze industry is attested here and there, together with the manipulation of primary goods such as foodstuffs and wool – as a few huge storage vessels and textile instruments permit one to infer at LM IIIC Phaistos³² –, nevertheless pottery manufacture appears to have been one of the main craft activities in the lowland and coastal settlements. The evidence of pottery there makes it clear that the development of those elaborate styles – which in LM IIIC would supply conspicuous sets of highly decorated prestige vessels such as kraters and drinking bowls, pyxides and stirrup jars – started early on in the LM IIIB-C transition. Detailed analysis of the Phaistos pottery has led to a tentative description of how social relations within the LM IIIB-C community were organized, namely by suggesting that at an initial stage (advanced phase of IIIB?) population increase and nucleation had a direct impact on “horizontal” social competition, which was enacted in the pottery system by means of the introduction and proliferation of new ceramic shapes and motifs which were mostly expression of social and cultural belonging. At a later stage (IIIC early?) this kind of social confrontation was substituted by an intense “vertical” competition prompted by the social struggle for status and power and, as regards the ceramic record, was played by means of stylistic elaboration and redundancy. From this point of view the elaborate pottery, including many pictorial products, may be regarded as a social means of communicating and diffusing the ideological values of the new élites, who would have used pottery style as a powerful instrument of social recruitment on certain ritual occasions appropriate to community control and cohesion. The elaborate style may therefore be properly considered an “elite” style, directly connected with the LM IIIC nucleated settlements’ new social organization, one founded on personal relations and on the individual success of the emerging chiefs, who relied on an inevitably unstable power³³.

The suggestion that these chiefs were aiming at the exclusive exploitation of some vital resources in order to achieve and maintain power seems to be supported in particular by the archaeological evidence related to external exchange. As mentioned above, the importance of long-distance exchange in the Postpalatial Aegean has received particular emphasis in the last few years. On the one hand the impact on Crete may be attested by such particular indications of its active role in Aegean and Mediterranean connections as, for instance: the stirrup-jars distribution

³² Borgna 2001, 285 and forthcoming (c); some spindle-whorls associated with an object which could possibly be a spindle, come from Chania together with evidence of metallurgy: Hallager, Tzedakis 1988, 42 ff.; 44, fig. 23; for spool-like objects, comparable with some materials from Phaistos, see Warren 1982-1983, 73; 85, fig. 58 (associated with a “gaming box”); Pålsson Hallager 2000, 177; cf. Felsch 2001, 195.

³³ See the “big-man” pattern suggested by Whitley (1991); for comparison between the use of pottery style within the Aegean societies and within chiefdoms, see Borgna 2003b; on the “elite style”: Arnold 1985, 234; Earle 1990; Plog 1995, 370; on the ideological value of pictorial pottery within IIIC Aegean societies see also Deger Jalkotzy 1995; 1998, 112.

still in LM IIIB late, the cargo of LM IIIB-C wrecks like the Point Iria³⁴, the continuous imports of Minoan pottery in Cyprus into LC IIIA /LM IIIC³⁵, the Minoan involvement in the late Aegean relations with Italy – especially as regards a southern sea-route via southern Sicily towards Sardinia³⁶; and finally, some recent evidence of contacts with the Western Peloponnese (e. g. Kanta 1998, 44-45). On the other hand, such impact is suggested by various foreign imports in the Cretan contexts, as well as by the influence exerted by foreign models on local production: the distribution of both “Urnfield” or “Italian” bronzes and “Handmade Burnished pottery” account in particular for foreign relationships in 13th-12th centuries Crete, the evidence in both cases probably depending on direct, personal bonds, at times even due to the demographic integration of external components into the local communities. The bronzes in particular could have circulated by way of ceremonial and ritual transactions and gift-giving and could have been channeled through some kind of exclusive elite spheres of exchange, albeit alternative to what they had been in the past.

The distribution of both the handmade burnished pottery – at Chania from LM IIIB Early onwards, at Knossos and possibly Ayia Pelagia, Tylissos, Kastelli Pediada and Sybrita between the end of LM IIIB and the beginning of IIIC³⁷ –, together with the LM IIIB Sardinian ceramics from Kommos, and the foreign bronzes seems to suggest that from the end of IIIB into an earlier part of IIIC the organization of external contacts was in the hands of some social components settled in the major settlements of West-Central Crete. It is worth observing that the earlier “foreign” bronzes – which belong to the “Peschiera” horizon/Italian “Bronzo Recente” (13th ca.) –, are distributed exclusively in the western and central regions of Crete and as far east as the Psychro cave, which is located on the western edge of the Lasithi plateau (Hogarth 1899-1900; Boardman 1961; Watrous 1996), whereas the widespread diffusion of “foreign” bronzes within Eastern Crete (Sherratt 2000) seems to have come to a climax a little later, i.e. in a more advanced stage in the development of the social mobilization of foreign prestige goods, as will be discussed below. Among the earlier bronzes, knives related to the Alpine *Matrei* type come

³⁴ Phelps *et alii* 1999; for the stirrup jars see in particular Day, *ibid.*

³⁵ As has been pointed out within the preliminary results of a forthcoming work (F. Poldrugo, *I rapporti tra Creta e Cipro nella tarda età del bronzo sulla base delle importazioni ceramiche*, PhilD at the University of Udine), during LM IIIB it is possible to record an intensification of a commodities-oriented exchange, as it is shown by an increased distribution of coarse and oatmeal stirrup jars; cf. Kanta 1998, in particular 34; for Cypriote pottery at LM IIIB 2 Chania, i.e. within the settlement which succeeded the “Final Palatial” centre, see Hallager 1988, 119; Rehak, Younger 2001, 459; on the dominant role of Chania in LM III exchange with Cyprus see in general Popham 1979, 184; Kanta 1998, 44 ff.

³⁶ A Minoan connection is detectable in my view in the Aegean materials in Italy usually dated to LH/M IIIB, but mostly belonging to a late part of the period or to the IIIB-C transition; for the evidence from Sardinia see Ferrarese Ceruti, Vagnetti, Lo Schiavo 1987; cf. also, at Cannatello, Agrigento, De Miro 1996 (e. g. 1003, nrs. 24, 66; 1005 nr. 124); for southern Italy see the pottery of Broglio di Trebisacce (Vagnetti, Panichelli 1994) and Torre Mordillo (Vagnetti 2001, cf. 324-325); cf. also Pålsson Hallager 1983; Pålsson Hallager 1985; for Postpalatial, LH IIIC relations with Italy, see Guglielmino 1996; Benzi 2001; Vagnetti 2000.

³⁷ Pålsson Hallager 1983; 1985; 2000, 165-166; Rethemiotakis 1997b, 313, fig. 15c; Bettelli 2002, 117-126; D’Agata 2001, 346; on the particular case of Kommos, where handmade pottery results in being all imported and of Sardinian provenance see Watrous, Day, Jones 1998.

from Knossos, Phaistos and the Psychro cave³⁸; Peschiera daggers are attested at Psychro and at Knossos, Zapher Papoura³⁹; a razor of the Italian Peschiera type was found at Tylissos (Matthäus 1980, 116, fig. 5; Pålsson Hallager 1985, 295). Not only the chronology but also the depositional patterns reveal a major distinction between the framework of bronze distribution in the west-central regions on the one hand, and that in the east-central Cretan districts on the other. Bronzes in the former regions, such as the knives from Knossos and Phaistos, including a violin-bow fibula from LM IIIB 2 Chania⁴⁰, come mainly from settlements, in the latter they belong mostly to tomb furniture and cult assemblages whose materials, clearly related to ceremonial spheres of exchange, are supposed to have been deposited after a long indirect circulation, following a “down-the-line” pattern⁴¹.

To my mind these indications permit one to propose that towards the end of the 13th and the beginning of the 12th century long-distance exchange, in particular the circulation of metals, was mainly and possibly exclusively controlled by the lowland and coastal settlements of western and central Crete, and that this kind of control constituted a main resource of power attainment, human recruitment and economic mobilization for the élites emerging in those centres.

The participation of the Cretan élites in the new alternative networks of the Late Bronze Age international exchange seems to be attested by the “elite” elaborate pottery style. Some pictorial vessels in particular include symbols which are considered to have been meaningful within the framework of long-distance cognitive exchange: in the LM IIIC pottery at Phaistos, for instance, some motifs such as the ship, the stylized bird head and the feathered headdress may be identified as shared symbols belonging to a cross-cultural syllabic language that was adopted within the elite long-distance communication from the Eastern Mediterranean throughout the Aegean world toward Italy and the European regions during the last centuries of the Bronze Age and in the early Iron Age⁴².

As regards the internal organization of exchange, we may suppose that the lowland settlements directly involved in the long-distance maritime trade relied on complex networks of prestige exchange and ritual bonds which permitted them to exert control over the flow of goods to and from the inland and highland “defensible” sites. The Psychro assemblage might be considered a symbolic border within the framework of important ceremonial transactions between two socially and environmentally different domains (below).

³⁸ Boardman 1961, 17 ff.; fig. 4; 69-70, pl. X 70; Harding 1984, 132-133; Bouzek 1985, 145 ff.; for Knossos see Warren 1982-1983, 71; 83, figs. 50-51; for Phaistos, with two exemplars, Milošević 1955, fig. 1, 13; Borgna forthcoming(c); cf. Sherratt 2000.

³⁹ Psychro: Boardman 1961, 13-17, fig. 3; pl. IX 56-57; Harding 1984, 172-173; Bouzek 1985, 132 ff.; Zapher Papoura: Evans 1906, 81-82, fig. 90; Sherratt 2000.

⁴⁰ Hallager, Tzedakis 1985, 24, fig. 15; in LM IIIC, Pålsson Hallager 2000, 179; cf. at Kissamos and Archanes, Sapouna Sakellarakis 1978, nrs. 25; 5A (tombs).

⁴¹ For an updated list: Sherratt 2000, 96-98; the violin-bow fibulae from LM IIIB 2 Malia, House E (Sapouna Sakellarakis 1978, n. 22) and from Karphi (Sapouna Sakellarakis 1978, nrs. 4, 8, 27-28, but usually dated to SM) might be considered as exceptions.

⁴² Borgna 1997b, 288, fig. 20, 15; 289, fig. 23; 290, fig. 26; 1999a, 359, fig. 26; cf. Borgna 1999c; for bird heads see in particular Matthäus 1980, 133 ff.; Bouzek 1985, 177-181; Lenz 1995; on the feathered headgear, possibly of Hittite provenance, Niemeier, Niemeier 1997, 203-205, with literature; 204, fig. 3; Niemeier 1998, 39, fig. 15.

The main economic resources exploited by the new élites in the lowland settlements would have consisted of the transformation of foodstuffs, such as oil and wine and especially animal products such as wool – i.e. activities based on technological knowledge and a set of practices coming directly from the extensive, specialized industries of the palatial past. By mobilizing and channelling foodstuffs and manufactured goods into the maritime trade networks these élites would have either obtained such prestige goods as the foreign bronzes – in order to redistribute them within inland networks so as to maintain bonds and alliances and to achieve and consolidate ideological power – or, possibly at a slightly later stage, they would have directly attracted attached specialists in order to guarantee the metal supply (Earle 1997, 150-151).

2.2. – *East-Central Crete*

If we take now into consideration the population layout in the eastern and east-central regions of Crete, we are bound to recognize that the settlement patterns and occupation dynamics seem to have been profoundly different from, even when connected with, the patterns and dynamics verified in lowland West-Central Crete. In East-Central Crete, the consequences of the IIIB crisis seem to have been, if possible, more disruptive than in the other regions because only scanty and uncertain evidence of reoccupation is detectable in the plain and coastal areas. At Malia, some hints of occupation at the Quartier Nu, including an inscribed stirrup-jar⁴³, together with other sporadic evidence such as a LM IIIB violin-bow fibula (above, note 41), point to a harbour site heavily involved in exchange. The apparent blank in LM IIIC suggests, however, that a comparable start in the occupation layout did not evolve in the same way as in the coastal settlements of West-Central Crete, that is toward nucleation. Different kinds of evidence, in particular graves⁴⁴, point rather to a new dispersed pattern consisting of small unstable settlements within a substantial continuity of human occupation. Some strategic sites overlooking the coast, such as Palaikastro-Kastri and Elias to Nisi, suggest furthermore that access to and control of the sea-routes, though problematic, were still important in the settlement system of East-Central Crete.

The LM IIIC Early dispersed settlement pattern, which was admittedly shaped by the shifting of the population toward strategic locations at high altitudes, is archaeologically proved by the distribution of coarse and simple pottery, which mostly points to productions devoid of stylistic elaboration and provided rather with

⁴³ Quartier Nu attests to an important role of the site as a regional center among the LM IIIA2-B decentralized political authorities, but remarkable indications of continuity in LM IIIB late as well: in particular Driessen, Farnoux 1993; for LM III occupation at Malia cf. Farnoux 1992; Driessen, Farnoux 1994; cf. Rehak, Younger 2001, 459; "AR" 2001-2002, 108-109.

⁴⁴ See the cemeteries at Milatos and Episkopi, with evidence of use from LM IIIA well into IIIC: Kanta 1980, 125; 146-160; some clusters of tholos tombs seem to point to an uninterrupted use during LM III as well, but at the same time they provide evidence for a sparse exploitation of land, where the population seems to have settled throughout the foundation of stable central sites only in LM IIIC; see for instance the case of Praisos: Whitley *et al.* 1999; on tholos tombs: Kanta 1980, 179 ff.; 1997; below, notes 49, 66.

plain ornamentation directly depending on a long-lasting use of earlier simple decorative patterns⁴⁵.

As we have already observed, during an advanced phase of LM IIIC the population layout of Eastern Crete evolved into a complex framework founded on settlements systems related to local environments, each system consisting of a few sites closely integrated in the manner of the “settlement clusters pattern” defined above. As Nowicki has pointed out, the population growth and the increase in size of the upland settlements, which, apart from some final abandonments and shifting, were general trends throughout LM IIIC (Nowicki 2000, 235 ff.), lead to a stable occupation and even to the emergence of some major sites, such as Kavousi-Vronda and Karphi. These are notable for dimensions, functions of special buildings, such as temples or central big houses with storage facilities, and the presence of craft products such as fine elaborate pottery, remarkably similar to the products of the lowland centres⁴⁶. To my mind, such an evolution cannot be satisfactorily explained in terms of continuous flows of refugees and population movements. It is worth stressing, rather, that the sites with more difficult access to environmental resources may have failed owing partly to the inherent weakness of social organizations that depend on the personal capacity of leaders to attract followers when the population is still unsettled⁴⁷, and partly to the competitions between the new sites. Moreover, the features and dynamics proper to mountain economies are sufficient to explain the growth and the long-lastingness of the overall settlement system into SM-PG, as has been verified in the Near East. There, agricultural practices such as forest-clearance and terracing are thought to have favoured sedentarization, cooperation and population increase. The upland economy was possibly based on a network of integrated activities, including the management of necessary small herds and flocks (Marfoe 1979, 23), together with a mixed farming and the exploitation of such typical products as honey, timber, herbs and spices, which had probably characterized the village economy during the palatial age⁴⁸.

In the course of LM IIIC various elaborate tombs such as small tholoi⁴⁹, certain special buildings such as the multi-roomed complexes at Kavousi-Vronda and

⁴⁵ See illustrations in Nowicki 2000; furthermore Nowicki 1996 (Arvi Fortetsa and Loutraki Kandiloro); Whitley *et al.* 1999 (Praisos).

⁴⁶ For Kavousi-Vronda see e.g., Whitley 1991; Preston Day 1997; Mazarakis Ainian 1997, 208-210; Nowicki 2000, 97-99; for Karphi: *Excavations in the Plain of Lasithi* 1937-1938; Mazarakis Ainian 1997, 218-220; Nowicki 2000, 157-164, with literature; for the elaborate pottery see also the important evidence of Kato Syme, pointing to a ceremonial use of the ceramics: Kanta 1991. Some objects, for example a pictorial krater from Karphi (Seiradaki 1960, fig. 25g) might account for concrete signs of inland exchange: considered as an import, it seems to be very close to some Phaistos products as regards both fabric (“pinkish red”) and pictorial decoration with bird motifs.

⁴⁷ See the big-man model proposed by Whitley (1991).

⁴⁸ On the mixed mountain economy in Crete see Chaniotis 1991; cf. Nowicki 1999; on the exclusive and complementary interaction of sites within upland settlement systems as regards the management of primary economic activities see already Watrous 1975; Halstead 2001a, on the products of rural economy.

⁴⁹ For built tombs in East-Central Crete, approximately dated to IIIC-SM, see e.g. Vasiliki (Kanta 1980, 146); Kamaraki (Tsipopoulou *et al.* 2003), Chamaizi (Kanta 1980, 176), Mouliana (Kanta 1980, 175), Praisos-Foutoula (Kanta 1980, 179 ff.), Halasmenos (Coulson, Tsipopoulou 1994, 84-86), Kavousi-Vronda (Preston Day 1997, 403-404), Karphi and the area of Lasithi (Kanta 1980, 121; Nowicki 2000, 240); cf. in general Nowicki 2000, 233-234; 240-241; Belli 1991; Kanta 1997.

Karphi (above, note 46), and some free-standing cult installations or temples such as at Karphi, Kavousi-Vronda, Halasmenos and Vasiliki Kephala⁵⁰, hint at the completion of the process involving a stable, growing population and an increasing social complexity in East-Central Crete. For that matter, several indications seem to point to the development of social ranking. Funerary evidence in particular, by showing a general shifting from the use of traditional multiple burials toward a special emphasis on larnakes containing one or two corpses within each grave, seems to underline the emerging status of certain individuals within the social relationships of Postpalatial Crete (Desborough 1964, 187; Snodgrass 2000, 164). Furthermore, the distribution of weapons and metal objects, which were often associated with eminent tombs, and the appearance of elaborate pottery, including drinking sets, within the major settlements and buildings of Eastern Crete as well, support the view that at the top of the ranking process some emergent individuals were able to acquire precise sources of power and to manipulate the social means of communication by the adoption of an elite ideological language. Exclusive status symbols were adopted in order to express ideological identification and legitimacy by those social components which, thanks to their access to the main economic sources, were emerging within the major settlements. A critical and powerful source of authority was possibly provided by the exclusive participation in the island exchange networks, in particular in the circulation of foreign bronzes, evidence of which is particularly remarkable within Eastern Crete, as S. Sherratt has pointed out (above, note 2). Among these bronzes, the flange-hilted swords and the socketed spearheads in particular might be attributed to a date roughly similar to the earlier "Peschiera" bronzes, which have been associated with the lowland settlements (above) and might be supposed to have circulated in the same exclusive spheres. However, as both swords and spearheads have been attributed by Bouzek to the second "generation" of foreign bronzes⁵¹, we may infer that such items began circulating a little later than the Alpine knives and Peschiera daggers. Furthermore, as both Cretan swords and spearheads seem to represent local varieties (Bouzek 1985, 122-124; 137), they might be considered as evidence of a new Cretan production of "international" bronzes based on foreign models, possibly an outcome of the recruitment of a few attached specialists in some lowland industrial settlements to supply the inland network of diffused circulation, itself supported by multiple chains of prestige exchange. The deposition of these bronzes within ritual contexts, such as tombs and cult sites, suggests that the upland settlements of East-Central Crete played a special attracting role within the inland circulation, which was mainly controlled by the emergent élites of the coastal and lowland settlements.

At a slightly later date, possibly from LM IIIC middle/late onwards, the distribution of some new classes of metal objects, as well as the diffusion of iron, tell a different story and show that the balance in metal circulation had dramatically changed on the island. In particular some items, which find good comparisons in

⁵⁰ Karphi: Rutkowski 1987; above, note 46; Kavousi: Preston Day 1997, 401-405; Gesell 1995, with literature on the excavations; Halasmenos: Tsipopoulou 2001; Vasiliki Kephala: Eliopoulos 1998; cf. "AR" 2001-2002, 112.

⁵¹ Apart from two exemplars from Myrsini and Moulana: Bouzek 1985, 122-124; 135 ff.; for the attribution to SM-PG of most Cretan flange-hilted swords see Kilian-Dirlmeier 1993, 94 ff.

Italian Final Bronze Age/Early Iron age contexts, such as pins, arched-fibulae and small twist-handled knives, are by now well attested in the inland settlement systems and the cemeteries of Eastern Crete, but much less in the lowland and coastal west-central regions. There, blanks and discontinuities in human occupation seem to confirm that the supply, and possibly the production, of metal weapons and prestige objects were then directly controlled by the defensible settlements of East-Central Crete, such as Karphi⁵², which had finally obtained direct access to the international exchange.

Built graves, metal furnitures, complex buildings and elaborate pottery in the later Postpalatial time in East-Central Crete may therefore be seen as indicating the emergence of chiefs, who aimed at the mobilization of critical ideological sources of power in order to achieve internal authority. The use of elaborate pottery seems to have been especially relevant in manipulating cognitive communication both inside and outside the communities and in achieving a role within the island's exclusive spheres of exchange. We may suppose that the elaborate style was borrowed by the upland élites as one of the main instruments to mobilize symbols of status derived from external sources, all the more so if we consider that the ceramic evidence of some defensible sites does not seem to point to any remarkable formative and experimental step within the development of the elaborate style – as has been verified in the ceramic record of some lowlands settlements such as Phaistos, especially on the basis of the growing evidence of the Mycenaean stylistic component. It shows, rather, highly elaborated vessels suddenly overlapping the simple LM IIIB pottery style⁵³.

In conclusion, the LM IIIC late population layout in the highlands of East-Central Crete may be considered a result, albeit indirect, of the profound LM IIIB social crisis and disruption which would have brought on an increase in inland and upland occupation. Small and dispersed groups of people would have initially confronted each other according to dynamics and strategies of competition substantially different from those in the crowded lowlands settlements: as opposed to the internal competition for social status discernible in the latter, the former

⁵² The knife with twisted-handle (*Excavations in the Plain of Lasithi* 1937-1938, tav. 28, 5) is considered by Bouzek (1985, 145 ff., § 4.1.7) earlier than the Italian Late Final Bronze Age items on the grounds of a finding from a LH IIIB context at Mycenae; however, the Mycenae exemplar is sporadic and cannot be precisely dated (Wardle 1973, 337-339, fig. 22); for the Italian knives see Bianco Peroni 1976, 75-76, in particular n. 253 (Fontana di Papa type); cf. also n. 386; the Karphi bronzes, such as pins, arched fibulae and a trunnion axe (*Excavations in the Plain of Lasithi* 1937-1938, pls. 28-29) may mostly be dated to 11th-10th centuries; for iron objects see Sherratt 1994; it is worth observing that the earliest appearance of iron in Crete involves the central regions of the island (Sherratt 1994, 88: iron knife with bronze nails from Tylissos; Kanta 1980, 314-316), thus supporting the main role of West-Central Crete within international exchange at the beginning of the Bronze-Iron Age transition; for evidence of direct foreign relations as regards metal supply in Eastern Crete, see now Tsipopoulou *et al.* 2003.

⁵³ Cf. for instance at Kavousi-Kastro, with the presence of both simple pottery directly depending on LM IIIB productions and highly elaborated and pictorial pottery: Coulson 1995; Coulson 1997 (LH IIIC "early" directly preceding the PG pottery phase); at Kavousi-Vronda see Preston Day 1997, who notices the lack of Mycenaean elements in the formation of the local elaborate style; for the Mycenaean components at Phaistos and the observable formative steps, see Borgna 1997b; 2001, 288-290; 2003b and forthcoming (c); for Kastelli Pediada: Rethemiotakis 1997b, in particular 325; for Kastelli Khania from LM IIIB late onwards see Kanta 1997, 87 ff.

would have displayed a much looser external confrontation between population clusters competing for environmental resources and control of livestock. In time, this kind of site competitions, which can account for sudden blanks and shifting of settlement locations, would be followed by a more stable layout, more balanced social organizations, possibly founded on an increased interaction between settlements and a notable integration with the environmental resources. Within such a framework a process of vertical differentiation would have accompanied the emergence of some entrepreneurial individuals who would have attained a key role in the management of economic resources, especially in the control of external exchange with the élites living in the lowland settlements, where they could have supplied themselves with prestige-goods such as weapons and foreign bronzes.

Early on, in the second half of LM IIIC, the collapse of the lowland settlement system would have made it possible for some inland settlements such as Karphi, which had evolved into a quasi-urban layout through a process of social stratification, to take over from the previous centres the control of the external relationships; we may suppose that such a development took place not peacefully but throughout intense competitions and possibly war.

3. – SOCIAL AND ECONOMIC STRATEGIES

Within such a perspective, at the close of the Late Bronze Age the general population layout and the socio-economic relationships of Crete seem to have been regulated by a profound integration of ecological and cultural environments based on different economic activities and social organizations and giving rise to at least two related if mutually opposed settlement patterns, the nucleated in the coastal and lowland regions of West-Central Crete, and the dispersed – and later clustered – in the East-Central (and possibly western) mountain districts⁵⁴.

The social dynamics related to circulation and exchange would have played a key role within these integrated relationships.

On the one hand, the dominant role of some coastal sites such as Chania in the LM/H IIIB late long-distance seaborne relationships might account for the initial supremacy of some social groups or individuals in the lowland regions, who would have been able to attract substantial clusters of peoples into the new emerging industrial central settlements or trading posts. Techniques of manufacture and products to be processed and exchanged were largely the same as during the palatial age, but forms and strategies of human recruitment were profoundly different and were founded for the most part on reciprocal exchange. According to patterns verified in big-men societies and chieftoms (Earle 1990; 1997), labour supply and social support were exchanged for gifts and security, especially on the basis of kinship relations, marriages, personal alliances and during cult events and feasts whose occurrence seems to have been verified archaeologically (above, § 1). Through the mobilization of craftwork and the industrial transformation of various primary

⁵⁴ Cf. the relationship between dispersed and nucleated settlements in the Mycenaean Argolid according to the regional integrated pattern put forward by Runnels, van Andel 1987.

goods such as textiles, wood, oil and wine, the new élites, like their palatial predecessors, would have aimed at the exclusive control of socio-economic activities, especially the external long-distance relationships and the inner flow of exotic goods, such as bronzes.

On the other hand, the organic population growth within the dispersed settlement pattern of the Cretan mountains would have favoured a systematic and integrated exploiting of the natural resources, which supported an economic basis completely different, though complementary to, the one in the lowland and coastal plains. The highland communities would have been able to supply the lowland nucleated settlements with exclusive products, which would have been exchanged for prestige goods and possibly certain rights, such as the use of winter pastures (Halstead 2001a, 39).

If we turn now to the major role of animal economy, we are allowed to suggest that breeding and herding created substantial opportunities for making alliances and maintaining relationships between both communities and regional districts. Though pastoral specialization and industrial management of huge flocks are hardly conceivable after the collapse of the centralized administration, and transhumance cannot be attested before the Hellenistic age (Chaniotis 1995, 72 ff.), some indications point to herding as a primary resource in the non-colonized country of Late Bronze Age Crete. As regards the nucleated coastal and lowland centres in particular, the volume of communal livestock would have required substantial movement and long-range control, and consequently, a kind of administered organization⁵⁵. Likewise highland livestock, though possibly consisting of very few animals, needed to be moved towards winter pastures on the coastal plains, which were most probably controlled by the lowlands settlements.

The better to evaluate the role of animals in social interaction, we may compare some strategies devised in traditional Cretan pastoral economies to meet the need to control livestock and to rule the complex trans-regional movements of animals, which inevitably involved different communities within reciprocal relations. In particular the employment of shepherds from outside is well attested (Chaniotis 1995, 46-47, 75) and it suggests a pattern of interregional integration founded on the exchange of workforce and land use, which might be verified in the Dark Age contexts as well⁵⁶. Such a framework of ties and dependencies, strictly ruled and indissolubly sanctioned by means of ritualized celebrations, would have afforded the lowland élites secure access to distant, untamed borderlands, which were probably settled by uncontrolled sectors of the island population and by essentially dangerous social groups⁵⁷. The well-functioning of the internal exchange, especially as regards the flow of prestige goods, would have served to maintain these ties, dependencies and sanctions.

⁵⁵ The formation of densely populated communities within an unsettled country should imply the need to organize the management of huge herds: cf. Halstead 1987, 82 for EH communities.

⁵⁶ For the complex transactions concerning the use of pasture-lands, cf. Koster 1997.

⁵⁷ Compare the personal and kin relations which joined nomadic and sedentary peoples in the Near East according to the pattern of the so-called "enclosed nomadism": McGovern 1987.

An interface of this articulated pattern of integration might be identified in the site of Psychro, whose location seems a natural watershed between the lowland central and the upland eastern districts of Crete⁵⁸. Among the Late Bronze Age offerings deposited in the cave, apart from prestigious objects and such signs of personal *status* as weapons and ornaments, some items such as knives and daggers could be considered as symbols of meaningful activities such as slaughtering, sheep-shearing and possibly other practices relevant to an elite ideology aiming at sanctioning and monopolizing lowland-upland bonds⁵⁹. P. Halstead has suggested that animal exchange and ritual consumption during feasts and cult celebrations were actively practiced during the palatial age not only at the palatial centres but in the rural communities as well, and served to rule economic and social relations between shepherds/owners and central power on the one hand and shepherds/owners and the village community on the other hand (Halstead 1999a; 2001a, 47). We may suppose that these practices probably survived the palatial age, all the more so if we bear in mind that ritual meals and possibly sacrifice have been proved to have played a crucial role on feasting occasions both in Minoan palatial and in Postpalatial Crete⁶⁰, when the main role of animals, as exchange goods within elite exclusive ceremonial spheres of circulation, could have been maintained and reinforced.

Within such a perspective, the role of the shepherd seems to emerge as crucial to the organization of social relationships among different communities – something that fits in well with Homeric ideology, which introduces warrior leaders as owners of livestock and pastoralists on the grand scale⁶¹.

In a distant, totally different context, namely Late Bronze Age England, M. Rowlands has put forward an explanation for its settlement organization which might be useful for late Bronze Age and Dark Age Crete as well. It relies on a pattern of socio-economic integration between lowland settlements, mostly devoted to industrial activities and external long-distance trade, and upland settlements, which would have supported a kind of exclusive interaction mainly founded on ceremonial and ritual exchange of animal heads and animal products⁶². Some indications, which would attribute Bronze Age roots to later Greek institutions such as *syssitia* and *andreia* (Koehl 1997), together with the evocative words of Aristotle, who reports that such institutions were directly and exclusively supported by contributions coming from animal husbandry⁶³, might be useful for testing such a pattern.

⁵⁸ Cf. Knapp 1997, 159, for the role of rural sanctuaries in the elite strategies concerning inland exchange in Late Bronze Age Cyprus.

⁵⁹ For the use of the knife for meat distribution at feasts cf. Borgna 1997b, 210; as regards textile industry, it is possibly worth comparing the shape of the Peschiera dagger with the wooden instrument associated with the loom for the processing of linen ("beaten sword", "épé de tisserand": cf. e.g. Médard 2000).

⁶⁰ Above, § 1; for archaeological evidence of meat consumption in Postpalatial contexts cf. at LH IIIC Tiryns, Kilian 1991, 79.

⁶¹ E.g. Od. IV 318-320; 638-640; XIV 100-104; Il. VI 421-424; Il. XI 104-106.

⁶² Rowlands 1980, 32-35; on the key role of livestock for chiefdom societies see for instance Earle 1997, in particular 100 ff.

⁶³ Aristotele, Pol. II 1272a, 15-20; cf. Chaniotis 1991, 100; 1995, 44.

4. – CONCLUDING REMARKS

In conclusion, though the economic resources were substantially different on the coasts and plains of West-Central Crete on the one hand, and in the highland districts of East-Central Crete on the other, the social strategies adopted by the emerging élites in both domains were ultimately similar, and implied manipulation of economic diversity for personal control of interregional relationships, according to dynamics verified within “big-man” and chiefdom societies.

In both domains, however, the elite ideology adopted by the emerging élites in order to legitimize their authority had to cope with the scale and volume of social interaction within the communities. In the lowland centres, therefore, it turned out to be substantially different from that of the upland villages. The nucleated lowland settlements were characterized by broad social organizations open to ethnic and social integration; social exchange is supposed to have been dramatically intense and to have involved heterogeneous components, differentiated both horizontally and vertically. In the “defensible” sites, by contrast, social exchange within the communities was much less intense, as it involved kin groups and nuclear or extended families distributed in small and dispersed clusters.

Consequently in LM IIIC West-Central and lowland Crete the lack of clear symbols of power such as monumental tombs, as well as the occurrence of “popular cults” such as open-air deposits⁶⁴, could be considered the result of an ideological strategy emphasizing open participation in order to encourage interaction with those sectors of the population that had come from a disruptive social crisis and were no longer under the control of centralized authority, as well as with heterogeneous ethnic and social components such as, possibly, the producers of handmade burnished pottery. Conversely, the ideological symbols selected by the highland chiefs seem to have aimed at legitimizing an authority stemming from the earlier tradition: the “tholos” graves, whose LM IIIC distribution seems to mark hill and mountain locations, especially concentrated in the area from the western Lasithi – including the eastern edges of Mesara – eastwards⁶⁵, seem to emulate some earlier monumental tombs, which were mainly distributed in West-Central Crete, such as at Knossos, Apodoulou, Rethymno, Chania⁶⁶. These earlier monuments, whose life cycle coincide with the reuse of some Minoan tholoi such as at Ayia Triada (B) and

⁶⁴ Ayia Triada: D’Agata 1999; 2001, 351; Patsos: Kourou, Karetsou 1994; see possibly also the small deposit of figures retrieved at Phaistos by L. Pernier (1902, 62, figs. 47, 54); cf. D’Agata 1999, 236-237 and in particular Kourou, Karetsou 1997, 107, for the concentration of the wheelmade figures in Central Crete.

⁶⁵ Exceptions might be represented by the tombs of Erganos (Kanta 1980, 75-76), which are located, however, at the eastern borders of Mesara, and those at Kamares (Kanta 1997, 244), which belong in turn to a mountain human environment.

⁶⁶ Kanta 1997, 233 ff., with literature; for the Chania region, e.g. at Maleme and Phylaki, see “ADelt” 36 B2 (1981), 398-399; “Prakt” 1966, 18 ff.; Kanta 1980, 229, in particular for Stylos Apokorounou; cf. Kanta 1984, 10; see furthermore Kanta 1980, 79 (Dhamania, Monofatsiou, LM IIIB); for the monumental tombs similar to the Mycenaean tholoi and dated from LM II onwards: at Knossos, Kephala and Isopata: Hutchinson 1956; Evans 1906, 136 ff.; Archanes, Achladia, Armenoi: Kanta 1997; Tsipopoulou, Vagnetti 1995, 83 ff.; Papadopoulou 1997; Rehak, Younger 2001, 444-445, with literature.

Kamilari⁶⁷, might be explained in turn as signs of an attempt made by LM IIIA 2-B Knossian and regional élites to connect themselves with a legitimizing noble tradition⁶⁸.

That the new IIIC highland élites tried to exploit earlier political and social symbols of power, rooted in the palatial past, might also be apparent in the significant distribution of the temples of the Goddess with “up-raised hands”, which, while proliferating during an advanced and late phase of LM IIIC in the defensible settlements, emphasize a direct link with earlier lowland cult places such as at Kannia, Gazi, Gournia⁶⁹.

Summing up, according to the evidence of the population layout and regional settlement patterns, it seems that two basically distinct human environments existed in Crete at the close of the Late Bronze age: the first concerned the central plains and the northern coasts of the island and was dominated by nucleated settlements oriented toward industrial activities and seaborne long-distance trade; the second involved, in particular, the inland and upland regions from the Lasithi plain towards the eastern coasts of Crete and was characterized by a dispersed population, sometimes clustered around some main defensible settlements. These human environments, provided with slightly similar social organization yet substantially different economic resources, developed a network of balanced relationships based on a profound integration of socio-economic activities toward the end of LM IIIB and an earlier part of IIIC. The period, however, was probably short. Toward the middle of LM IIIC or immediately afterwards, the archaeological record shows blanks and disruptions in such lowland settlements as Chania, Phaistos, Kastelli Pediada⁷⁰ and suggests that these settlements had suddenly failed to preserve their exclusive dominant role as population attractors and centres of control and administration of exchange. This sudden failure to maintain control over the sources of power was possibly exacerbated by a general disruption of the international connections and the arrival of new people as well; however, it was in the main most probably brought on by competitions and conflict prompted by the emerging élites which were acquiring weight and authority in the upland settlements. According to a verified strategy in the evolution of chiefdoms, warfare and raids could have been promoted in order to gain access to the foreign maritime trade and its sources of power such as prestige goods, previously controlled by the coastal and lowland élites (Earle 1997, in part. 109-110). It is no coincidence that toward LM IIIC Middle/Late

⁶⁷ Paribeni 1904, 686-690; Levi 1961-1962; cf. Kanta 1997, 232-233; Borgna forthcoming (b); Cucuzza 2002.

⁶⁸ On this aspect see e.g. Brumfiel 1989; Earle 1990; Helms 1992; Spencer 1993; Borgna 2003b.

⁶⁹ Gesell 1985, 41 ff., cat. nrs. 5, 10, 21; on the grounds of the scanty evidence of pottery in the publications, I would accept a date within LM IIIB Early, in particular for Gazi and Kannia; for Gazi see Marinatos 1937, 283, fig. 7; for Kannia: Levi 1959, fig. 7; Gournia: Boyd Hawes 1908, 47-48; Alexiou 1958, 185-187; for a LM IIIB Early date see Kanta 1980, 140; the diffusion of the cult of the goddess in small rectangular temples with benches might have coincided with the beginning of the crisis of the LM IIIA 2-B regional powers and might be an outcome of an intensification of cult and ritual activities: for LM I cf. Driessen 2001a.

⁷⁰ Chania: Pålsson Hallager 2000; Phaistos: Borgna 1997b; 2001 and 2003b; Kastelli Pediada: Rethemiotakis 1997a, b.

Karphi was becoming an important regional centre of distribution, as is proved by amounts of "foreign" bronzes there.

The clustered settlements of upland Crete, economically self-sufficient, proved themselves to be more suited to face trouble than the crowded nucleated lowland settlements, possibly depending on external relations for subsistence. In the lowland districts, dispersal of population, such as at Phaistos⁷¹, and shifting toward high and naturally defended sites, such as at Prinias, Gortina, Smari and Sybrita – which either appeared then or then acquired a major role⁷² –, seem to have constituted a general trend which ended in a dispersed settlement pattern in West-Central Crete as well. Isolated groups of tombs constitute in some cases exclusive evidence of occupation⁷³, which was probably founded on the residential unit of the nuclear or extended family or *oikos*⁷⁴, economically founded on self-sufficiency and bound to become a focal link between old values and practices of the Bronze Age élites and the new social and economic basis of Geometric Greece.

Elisabetta Borgna

Dipartimento di Storia e Tutela dei Beni Culturali

Università di Udine, Via Petracco, 8

I – 33100 Udine

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⁷¹ Borgna 2003b; 2001, 281.

⁷² For Gortina and Sybrita, see above, note 30; Prinias: Pernier 1914; Rizza 1996, with literature; Smari: Vallianou, Evthymiou 2000; cf. "AR" 2000-2001, 132-133; "AR" 2001-2002, 110.

⁷³ See for instance at Phaistos, where the occupation between LM IIIC Late and Geometric is doubtful; for the funerary evidence see Rocchetti 1978, with literature; see furthermore Cucuzza 1998; Palermo 2001.

⁷⁴ For the "oikos" as a form of structural continuity in Greek society from the Bronze Age onwards, see Small 1998; Small 1999; for the Dark Age, Deger Jalkotzy 2002, 58 ff.

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