

INFERENCES AND LIMITATIONS IN CHIPPED-STONE MODELING: LEARNING FROM AN ETHNOARCHAEOLOGICAL CASE (THRESHING- SLEDGE PRODUCTION IN THESSALY, GREECE).

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ABSTRACT

Threshing-sledges are among the few well-documented stone artifacts of the ethnoarchaeological record in the Mediterranean region. The current presentation concerns the collection of data from the agricultural region of Thessaly, central Greece. As use of threshing-sledges had already ceased in the region by the early sixties, the principal aim of this research was to reconstruct the behavioral sequence and practices related to the production and distribution of the agricultural artifact (i.e., division of labor, mobility patterns etc.). The ultimate goal was to construct a comparative frame of reference (on the basis of similarity or difference) that would stimulate and expand the inferential basis in chipped-stone modeling.

As research showed, agricultural poverty was the key-factor behind any decision towards specialized production. Generally, there was never a single production system operating in the whole region of Thessaly. Different but overlapping distribution networks dominated different parts of the region depending on proximity or cultural affiliations. All these factors resulted to a largely discontinuous and complex system of overlapping networks subjected to transformations and rapid changes.

Research results are assessed in the light of their use in modeling the production of flaked prehistoric artifacts and their utility in building an inferential body of reference. As certain behavioral patterns of the ethnographic record are not directly applicable to past cultural systems, the limitations of the ethnographic research are further discussed.

RESUME

Les tribulums occupent une place importante dans la recherche ethnoarchéologique de la région méditerranéenne, étant des objets lithiques assez bien documentés. Cette présentation porte sur la production des tribulums provenant de Thessalie, une région agricole de la Grèce centrale. Lorsque l'utilisation de ces outils est arrêtée dans la région pendant les années '60, notre recherche a tenté de reconstituer et comprendre le comportement et la séquence des pratiques liées à la production et la distribution de cet outil agricole. Notre but majeur était de construire ainsi une base de référence comparative qui pourrait stimuler et élargir la base théorique sur laquelle s'appuient les modèles qui tentent d'expliquer la production et la distribution de l'industrie lithique taillée.

La recherche a montré que le paramètre qui imposait une production spécialisée des tribulums était la pauvreté agricole. En grandes lignes, il n'y avait jamais un seul système de production opéré dans toute la région ; il s'agit plutôt de différents réseaux de distribution qui parfois se recouvrent et dominent les différentes parties de la région dépendant de la proximité ou de relations culturelles entre elles. Tous ces paramètres ont formé un système de réseaux discontinu et complexe subordonné à des changements et des transformations rapides.

Les résultats de notre recherche ont été utilisés pour aborder les problèmes posés dans la production de l'industrie lithique taillée préhistorique et pour élucider le fondement théorique des interprétations proposées. Lorsque certains aspects de l'analyse ethnographique ne peuvent pas être directement appliqués aux systèmes culturels du passé, les limites d'une telle approche ont été prises en compte et ont été rediscutées.

THE ROLE OF ETHNOGRAPHY IN MODELING LITHIC DISTRIBUTION: GOALS AND DRAWBACKS

Traditionally, modeling of prehistoric behavior has been based on inferential reasoning. The need for constructing an inferential framework for interpreting the archaeological record was a well-taken point within the field of New Archaeology. In the 1980s, Binford (1981;1983;1987) called for the development of middle-level inferential ('warranting') arguments. Such arguments, defined as 'generalizations that attempt to account for regularities that occur between two or

more sets of variables in multiple instances' (Trigger 1989:21) are based on observations in the living world. This led to the growth of ethno-archaeology (i.e., 'living archaeology', 'on-site' and 'off-site' informants; Gould 1977), that came to play a primary role in the interpretive process. On the basis of ethnographic analogies drawn from similar socio-economic contexts of the real world, archaeologists hoped to bridge the gap between interpretation and the static archaeological record. Yet, during the years, an ongoing debate developed on the nature and the validity of those analogies (Gifford-Gonzalez 1991, Gallay 1989, Brumbach and Jarvenpa 1990). Today, given the 'post-processual' focus on the role of perception in the interpretive process, ethno-archaeological reasoning is questioned more than ever. Although at the lower, more practical levels of analysis the construction of analogies is still pursuable (i.e., tool use identification), problems arise as one relies on inferences at the higher, more theoretical level (i.e., parameters affecting behavior).

The mode by which systems of lithic production and distribution were organized in the past is one example of the type of questions asked at a higher level of analysis. Following the successful chemical identification of the source of obsidian in the Aegean (Melos; Renfrew et al 1965), modeling in this region has been focused on disentangling the modes of obsidian production and circulation (Runnels 1985, Torrence 1986, Perlès 1990, Kardulias 1992, Karabatsoli 1997, Karimali 2000 & 2002). Traditionally, modeling has been grounded on inferences drawn from two main sources, cross-cultural ethnographic parallels and western theoretical frameworks. The serious drawbacks of these inferential bodies of reference were analytically discussed in a previous paper (Karimali 2000). In the current presentation a few of these inferences pertaining to models of obsidian production and distribution in the Aegean are juxtaposed to data collected from an ethnoarchaeological survey of a pre-industrial production system running in the region of modern Thessaly, central Greece until the middle of the century. The survey, conducted during the early 1990s (cf. Karimali 1994), was designed to understand the mechanics of the threshing-sledge production and circulation system in the region. As shown by the results, studying the organizational components of modern production systems can help us pinpoint differences as well as similarities to the prehistoric ones. Indeed, in our case, enlightenment of one of these systems stimulated a better understanding and refinement of several parameters used in models of obsidian production and circulation in the Neolithic Aegean.

THE THRESHING-SLEDGE: USAGE AND ETHNOGRAPHIC EVIDENCE

Threshing sledges (*tribulum*, *dhoukani*) were specialised agricultural equipment, widely used for threshing in the Mediterranean (Turkey, Greece, Palestine, Spain, Portugal, and Cyprus) during the ancient and pre-industrial times.

The sledge (Fig. 1&2) is a wooden implement equipped with teeth from stone used to separate grain seeds from chaff during threshing. It consists of two wooden planks laid side by side and tied together, with their extreme end curving upwards. Each plank has 18-24 rows of blade/flakes made of varieties of chert, retouched along one edge and set into slots carved evenly by chisel. Threshing sledges were brought to threshing floors (called *alonia*) where they were dragged by a yoke of oxen or donkeys across the harvested grain. A person often sat upon a chair placed on the sledge and moved clockwise or counter-clockwise in order to separate the grain and cut the stalk efficiently.

Literary evidence of the origins of the threshing-sledge in the Mediterranean goes back as far as 2,200 BC (Akkadian tablet of the Diyala region, Pearlman 1984:16; Ataman 1999). Nevertheless, sledges are commonly presented as agricultural devices invented and/or established during the Roman period. The sledge continued to be a popular implement in many countries of the Mediterranean region until the 1950s and 1960s, when it was gradually replaced by modern farming machinery (tractor-powered threshers). Although used in all agricultural areas, little was known about its production and use all over the Mediterranean. So far, the only well-known studies are those of Bordaz (1969) and Ataman (1999) who recorded features of the threshing-sledge production system in Turkey, and Pearlman (1984) and Fox (1984) who recorded the same system in Cyprus. A few other studies have focused on the problem of identifying stones used in sledges in archaeological samples (i.e., Shakun 1999; cf. Whallon 1978, Kardulias and Yerkes 1996 on *use-wear analysis*). Recently, concern for interviewing the last flintknappers of Cyprus led to a new cycle of interest (Whittaker 1996 & 1999).

THE ORGANIZATION OF THRESHING SLEDGE PRODUCTION IN THESSALY

GOALS AND OBJECTIVES

Threshing sledges were also quite popular farming implements in Thessaly, central Greece. The region is renowned as the granary of modern Greece (Halstead 1989), thanks to its two extensive fertile plains (Larisa to the east and Karditsa to the west), covering an area of 3,200 km² of fertile land. Thus, although when the project started evidence of sledge production was poor-documented (Runnels 1990, personal communication), we considered the discovery and the location of ex-sledge producers in such a rich agricultural area an easy task. During the years 1992-3, several villages of the plain were visited, with the hope that they would yield the main body of information regarding the sledge production in the region (cf.

Karimali 1994). It was soon realized, however, that communities specialized on sledge production were unlikely to be found on the vast plains of Thessaly. Given the predominant occupation of plain residents with farming, we soon discovered that it was highly unlikely that they would ever be interested in sledge production. Aided by informants, we were finally able to locate several producers at the highest mountainous areas of the region.

Specifically (cf. Fig. 3), we interviewed producers of the village of Anatoli, who were only temporarily involved in sledge production during the Nazi occupation, as well as producers from a specialized sledge production community (Kokkinopilos), founded on a high altitude of the Olympos mountains in the beginnings of the century. The consumer point of view was also provided through interviews with farmers of the plains (Megalo Monastiri). To our surprise, consumption sites did not always stay strictly adhered to consumption. Rather, it was customary to turn to independent domestic specialization when special conditions (i.e., risk, stress) appeared. This observation, along with the realization that long-term specialized production was triggered only by special conditions (i.e., agricultural poverty etc.) added one more goal to our inquiry, to detect the circumstances that favor either temporary or permanent specialized production. Thus, the objectives of the survey were formed as follows:

- Identification and characterization of the mode (s) of sledge production employed in the region, as well as its diachronic changes,
- Understanding of the special mechanics of sledge distribution in the region (i.e., along main trade routes, cultural ties etc.), and
- Detection of the special conditions favouring specialisation.

The ultimate goal was to juxtapose the modes and causes of production identified in the modern case to the archaeological expectations prevailing in the field of prehistoric exchange (cf. Renfrew 1975) and test their validity.

LOCATING PRODUCTION AND CONSUMPTION SITES

a. Anatoli

The village of Anatoli, founded on the mountain of Ossa (eastern Thessaly), provided us with information regarding two periods:

- before the 1940s. According to the recalls of consumers, the village was supplied by itinerant producers who were coming from a highly mountainous village (Katafigi) of mount Pieria (Macedonia). These were famous carpenters, mastering the technique of sledge manufacture for years, who made year-round trips away from home (~60-100 km) in order to find and use stone and wood resources. Upon their short visits to Anatoli, they manufactured sledges upon request, by using local wood (pine) and stone resources from the area around the village.
- during the Nazi occupation and the Greek Civil War. Information was gained by the two carpenters of the village, who decided to turn to sledge production when all trade routes connecting the village to the main city were disrupted and all other alternative means of getting sledge supplies were cut off. According to their testimony, they would choose one day of early summer to visit the nearest chert sources (1-2 km away). During their visit, they would collect suitable cobbles of whitish chert (*stournares*) after testing them carefully for possible flaws and carry them by donkey back to their village. Then they processed them at the carpenter's store, located at the village's central square. Knapping involved flaking with a heavy hammer and geared to the production of irregular flakes, which were subsequently hammered into the slots of the sledge. The wooden planks were manufactured of pine found in abundance at the village's immediate vicinity. Sledges were exchanged for bags of wheat offered by the farmers. By the early 1950s, with the re-opening of the trade routes, the local threshing sledge production system came to an end

In sum, the production system in Anatoli comprised two phases: one, during which the village was only a consumption unit, served by itinerant foreign producers from Katafigi, and another during which the village turned to local production. The two systems differed in terms of structure, skill and time span. The former was a formally organized production system, involving the skillful manipulation of chert and local pine by specialized producers, who by being itinerants, satisfied a wider demand in the region. In contrast, the latter was a local, rather opportunistic industry, practiced on a small scale by amateur knappers to satisfy local needs for a limited period of time. The two systems never existed side by side, rather once the former was disrupted, it was replaced by the other.

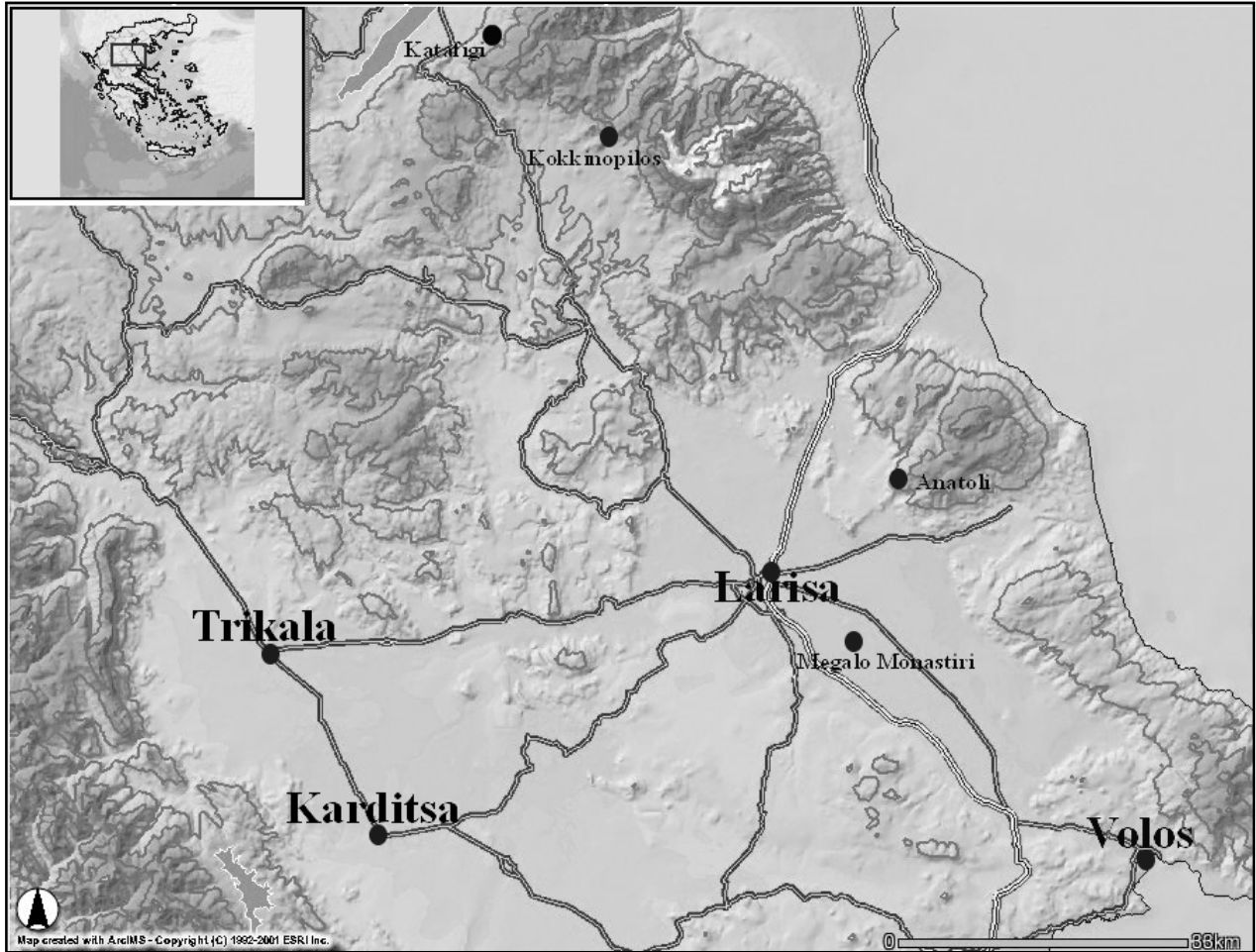


Fig. 3. Map of Thessaly showing the villages discussed in the text.

b. Kokkinopilos.

The village of Kokkinopilos, founded on the mountain of Olympos (northern Thessaly) by Vlachs in the early century, was the second village visited during the survey. Kokkinopilos was a specialized threshing-sledge production community until the 1960s. Specialized sledge production developed on a part-time, family basis, as a safeguard mechanism against agricultural poverty. The main labor unit was confined to members of the nuclear family, namely the father, who undertook all stages of production, and his wife and children who assisted him in raw material collection and workshop maintenance.

All manufacture activities were carried out in the family's courtyard during the summer months. The family members would visit the closest sources lying at the valley of Sarantoporo to collect the most suitable cobbles for blade/flake production. Nodules of white chert ("*stourmares*") were carefully chosen after testing their quality by hammer flaking. Subsequently, they were transferred and piled up at the producer's courtyard until the wooden part of the threshing-sledge became ready (i.e., wooden planks were locally manufactured of local pine). Nodules were decorticated by men with the aid of a heavy hammer, were broken up by women into smaller blade-flakes with no special preparation and were hammered by men into the slots (Fig. 4). Slots were opened up with the aid of a steel chisel. Manufacturing waste was piled up at the peripheral zone of the courtyard until it was discarded away into river streams. Ready threshing-sledges were loaded on donkeys and distributed with direct visits to the villages of the immediate vicinity (~1 week distance, by donkeys). From the 1938 and on, sledge producers were organized to a village corporation. Distribution now was accomplished through stores located at the main big cities of Thessaly (i.e., Larisa). Unification regularized production and maximized returns. Despite its small-scale, this village industry served the farmers of the neighboring plains for almost half century until sledges came out of use.

In general, threshing-sledge production at Kokkinopilos shares similar features with the system originated from Katafigi (see above). By being highly mountainous villages, both Kokkinopilos and Katafigi had to turn to sledge production due to risky environmental conditions leading to poverty. Both villages developed specialised production systems, with special technical knowledge and skill transferred from generation to generation. Distribution of sledges was based on itinerant moves. Yet, there is a clear-cut difference in mobility patterns. Producers from Kokkinopilos used local stone resources available within their vicinity, produced the sledges at home, and then moved only in order to distribute them. In contrast, producers from Katafigi followed a seasonal round away from home, collecting sources around the villages they visited. The latter system (i.e., 'long-distance, year-round itinerant movement') is similar to that described in Cyprus by Pearlman (1984).

c. Megalo Monastiri.

The village of Megalo Monastiri, inhabited by Greek-speaking immigrants from Bulgaria, is lying at the Larisa plain, 10-15 km away from the modern city of Larisa. This site provided us with a first-hand account of the consumer point of view. The village was never a production site itself, as its position on the fertile plains made farming a flourishing activity. Yet, at the same time when Anatoli was served by the itinerants from Katafigi (before the 1940s), Megalo Monastiri was supplied by fellow countrymen, that is, Bulgarian itinerant producers, who traveled long distances in order to serve its needs. Specifically, elder informants recalled a case of a Bulgarian producer who visited their village regularly in order to supply them with sledges. The latter had been manufactured in his workshop in Bulgaria. From the villagers' testimonies, it also became clear that the producer belonged to a specialized community of Bulgaria, who supplied a high number of Greek villages inhabited by Greek-speaking immigrants from the north. After the death of the producer in 1942, cultural ties with Bulgaria weakened and villagers turned to local stores and regional markets for getting their supplies.

Lastly, other informants from the same village recalled the manufacture of gunflints from stones collected from river streams, brought occasionally to the village by shepherds.

In sum, flint-knapping production activities in Megalo Monastiri had a dual character: one securing the supplies of threshing-sledges based on cultural affiliations, and one domestic, supplying gunflints (i.e., "embedded procurement").

DISCUSSION

Ethnographic fieldwork in Thessaly highlights a number of important points, outlined as follows:

1. There was never a single production system operating in the whole region of Thessaly. At the diachronic level, production networks were not static organizations conducted in the same way over the years, but active

behavioral systems adjusted to the wider socio-economic setting in which they operated. As a natural consequence, they could suddenly come into existence, subject to major structure transformations (i.e., in terms of labor structure, techniques), or cease to exist. Clearly, villages played different roles (i.e., production versus consumption) in the whole economic system, depending on the self-sufficiency of their subsistence base.

2. With regard to the prevailing modes of production and exchange, the main mode of sledge production was the specialised village industry. Such industries displayed variations in mobility, reminiscent of the types of mobility linked with hunter-gatherers (cf. 'residential and logistical mobility patterns, Binford 1980). In our case, two such variants were identified: one (Kokkinopilos) in which producers used local resources and moved at certain intervals over affordable distances only to distribute their products. Upon the delivery of their products to consumers, producers returned back to the village for new loads. And a second one (Katafigi; see also in Cyprus, Pearlman 1984), in which producers made round year trips over large distances to produce sledges upon request. Other modes of production included the village-based domestic mode and the embedded mode employed for the procurement of gunflint stones.
3. Division of labor developed mostly along family lines. At Kokkinopilos, production activities were carried out at certain parts of the residence by all family members, each having definite responsibilities. Eventually, skillful and long-lasting production established the village as expert at the market community, and thus, production became a communal activity. Unification of all family production units under the auspices of a formal corporation facilitated pursuing common goals and maximizing economic gain.
4. Distribution of merchandise followed long-term cultural ties. Due to the village, small-scale character of these industries, and the multinational features of the networks, distribution had to follow long-established cultural ties between communities sharing common ethnic-linguistic features. In other cases, proximity counted as a measure of 'relatedness' or 'familiarity' established between neighboring communities sharing common interests. This resulted to the following paradox: two neighbouring villages may not have participated in the same distribution network, as would be ideally expected. Rather, they could have been simultaneously supplied by different supplying industries linking them into separate networks, on the basis of cultural ties developed between producers and consumers. Such features underline the multi-central character of the sledge networks operating in Thessaly. Different but overlapping systems of production dominated different parts of the region, depending on several interrelated factors such as proximity, cultural affiliation, or consumption needs.
5. By all accounts, agricultural poverty was the key-factor behind any decision turning towards specialized production (cf. absence of craft- specialization in the plain). Stress conditions on the other hand, such as economic and/or cultural isolation (i.e., Nazi occupation) compelled carpenters to temporary, domestic specialization in order to insure village self-sufficiency.

ARCHAEOLOGICAL AND ETHNO-ARCHAEOLOGICAL INFERENCES: A MATTER OF ANALOGY?

Having described the organizational features of a modern production system, I return to the main question raised in the beginning of the paper: on which grounds is it legitimate to transfer cross-cultural knowledge to archaeological (lithic) modeling? For example, what is the exact relevance of the parameters brought out above to the parameters pertaining to the organization of obsidian production and distribution in the Aegean during the Neolithic? In the following paragraphs we assess the inferential basis of a few such archaeological parameters (i.e., distance, Renfrew *et al* 1965; long-distance movement of producers, Perlès 1990) in the light of the results generated from ethnoarchaeological cases and we discuss their degree of relevance.

- **DISTANCE.** The parameter of distance plays a prominent role in any current discussion of obsidian exchange (Renfrew *et al* 1965; Torrence 1986, Perlès 1990). Fall-off models focus predominantly on distance, as being the key-variable in monitoring the quantity of material distribution in sites situated over long distances from the source. Yet, current calculations of distance in fall-off models stem from modern notions of distance, as being a stable and measurable (in km) variable. When human relations are at stake however, distance is analogous to the nexus of these relationships developed along kinship or socio-cultural ties (Karimali 2000, 2002). That was the case in our modern, pre-industrial case (Megalo Monastiri), in which products were distributed along commonly shared affiliations. Clearly, similar ties (i.e., linguistic) may not be extrapolated for the Neolithic; yet, the fact that human relationships are deeply entrenched on the degree of 'familiarity' developed among human groups assigns a new content to the concept of 'distance', with effective analogies to the Neolithic (i.e.,

exchange partnerships developed along kinship lines, familiarity developed on the basis of site proximity to certain loci of the landscape such as trade routes or meeting points).

- **LONG-DISTANCE MOVEMENT OF PRODUCERS (OR ITINERANT MODE OF PRODUCTION).** It has been long accepted that members of sedentary societies are reluctant to travel long distances to obtain material goods. Due to energy and transportation costs, there is always a marginal threshold of exploitation, above which exploitation of resources is considered 'uneconomic' and is avoided (cf. Browman's 'exploitable territory thresholds model', 1976). Instead, as ethnographically demonstrated (Féblot-Augustins & Perlès 1992), materials are channeled indirectly through culturally bounded networks (cf. 'down-the-line'). This results to indirect procurement systems, in which production of exchange items is likely to be discontinuous in time and space (sequential production, Ericson 1984:4). Recently, the old preconception of the sedentary people as being attached to one place and not moving around has seriously been challenged in the light of several ethnographic testimonies (cf. Whittle's list of spectrum of movements, from residential to logistical mobility and short-term to embedded sedentism, 1997:21). Yet, these challenges do not question the long-lived ethnographic observation that sedentary consumers rarely visit distant sources (i.e., over 300 km) by themselves.

To compensate for the long-distance distribution of materials in sedentary societies, apart from the down-the line exchange mechanism, models draw upon the mechanism of specialized traders or middlemen, for being responsible for carrying materials away from the source. The 'free-lance/middlemen' trade, or the itinerant mode of production, as a type of 'commercial trade', appears in the literature of exchange from the very beginning (cf. Renfrew's list of mechanisms of exchange, 1975). A variant of the mechanism (implying village-based rather than commercial specialization) was first employed by Perlès (1990) to account for the distribution of obsidian prepared cores to sites of the Aegean situated over 300 km away from the source of Melos. According to the model, the distribution was at the hands of specialized itinerant knappers of the continent, who prepared the cores at the source and distributed them as far as Thessaly (~300km).

Long-distance movement of itinerant producers has been ethnographically reported in various degrees (Arnold 1985; Féblot-Augustins & Perlès 1992). Yet, attention should be paid on the context in which such movement takes place. The notable difference in context for example, between the currently recorded ethnographic groups (i.e., pre-industrial societies) and the Neolithic sedentary societies should not be overlooked.

The long, round trips of knappers from northern Cyprus to the south (200 km; Pearlman 1984:124), or the Katafigi producers from Macedonia to Thessaly (max. 100 km) are cases of village-based specialization running within modern states, in the absence of territorial boundaries. In the case of Megalo Monastiri, where the thresholds of an extra-national network (Bulgarian) are attested, the partitioning of the landscape into states guarantees cross-national, long-distance movement of producers. Similarly, in the ethnographic record round-trip movement of producers is reported mainly in historical or pre-industrial cases, where modern transportation is employed. Certainly, this is true for ceramic producers: as Arnold's (1980, 1985) detailed survey of ethnographic sources pertaining to ceramic production has shown, only in cases in which modern transportation (railroad, cart or truck) is employed producers exceed the maximum distance threshold of 7-9 km for clay and temper.

Obviously, among sedentary groups non-linked by linguistic or national ties mobility contexts are expected to have counted differently. In the latter case, long distance movement would be seriously jeopardized by the multi-cultural partitioning of the landscape. Producers would be seriously dissuaded from making long-distance, round trips to obtain resources in cases 'where the source is some distance away, or the country between is peopled' (Sillitoe 1978:266). The only group widely reported to be able to penetrate distant lands is that of the middlemen, specialized in seafaring and long-distance movement (Harding 1967). For all these reasons, it is suggested that the round-based, itinerant mode of production should be applied to prehistory with caution, given the specific conditions needed to warrant safe communication.

- **DIVISION OF LABOR:** The most notable difference between the production unit of a prehistoric and a pre-industrial, village-based industry is structure. Obviously, in the pre-industrial cases we examined, labor was evenly distributed to the members of the nuclear family or to the men of the village, when a village corporation was founded. In prehistory, the most notable residential and social unit was the extended family or the lineage, a fact pointing to a different division of labor in prehistoric settings.
- **CAUSES OF SPECIALIZATION:** As shown by the pre-industrial cases we examined, agricultural poverty, as well as conditions of stress, were the main causes turning villagers to specialized production. That resulted to a pattern in which only villages founded on high altitudes had to turn to specialization. Yet, habitation of

marginal areas in Greece dates back to the historical periods. As recent surveys of Thessaly show (Gallis 1992), in all Neolithic periods there was a clear preference for plain habitation. In contrast, human presence was minimal on the mountains. Clearly, poverty in the Neolithic owed more to risky environmental conditions (i.e., floods, extreme weather conditions; Halstead 1989) and less to settling on mountainous habitation zones.

- THE CONCURRENT PRESENCE OF EXCHANGE MECHANISMS: The observation that a number of exchange mechanisms occur concurrently, linking villages to different networks is a well-taken point in recent models of obsidian distribution in the Aegean (Perlès 1990). This pattern, best exemplified by innumerable ethnographic and historical cases (cf. Féblot-Augustins & Perlès 1992), was also ascertained by our survey. Fluidity in distribution patterns is inextricably linked to fluidity in human relationships along which networks operate, and that can be considered a norm in past and present.

EPILOGUE

This paper calls for caution in using inferences drawn from modern or historical ethnoarchaeological cases to prehistory. As shown, certain behavioral patterns observed in the ethnographic record are not directly applicable to past cultural systems. Moreover, systems of production acting within different social and political/historical contexts have different aspects, and thus, they should not be analogically related. Given the important differences in context between pre-industrial and prehistoric societies, it is postulated that inferences drawn from the former to interpret the latter, should be treated with caution. After all, scrutinizing the ethnographic record is only the beginning for discovering a world of differences and varieties.

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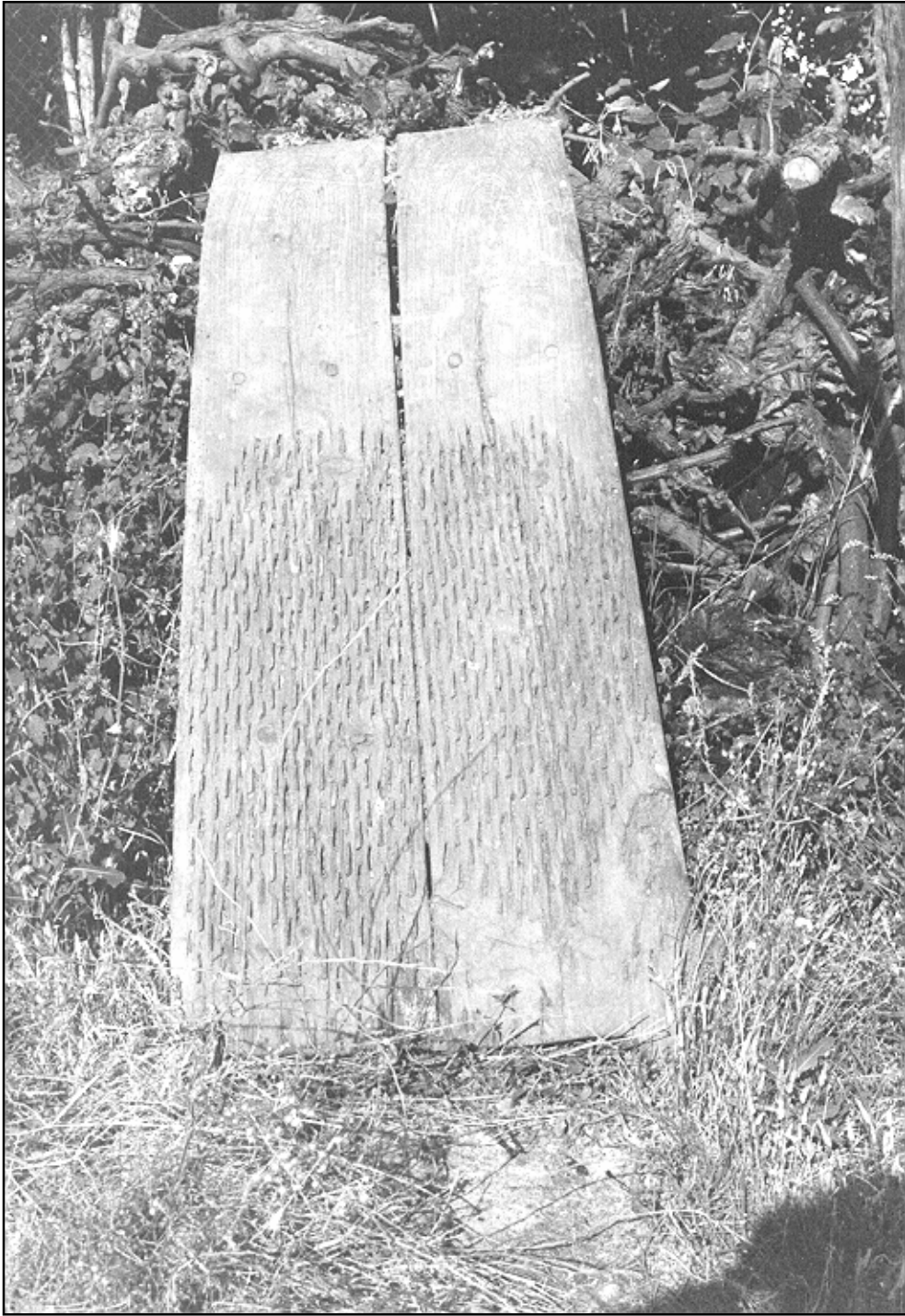


Figure 1: Threshing - sledge. Lower View.

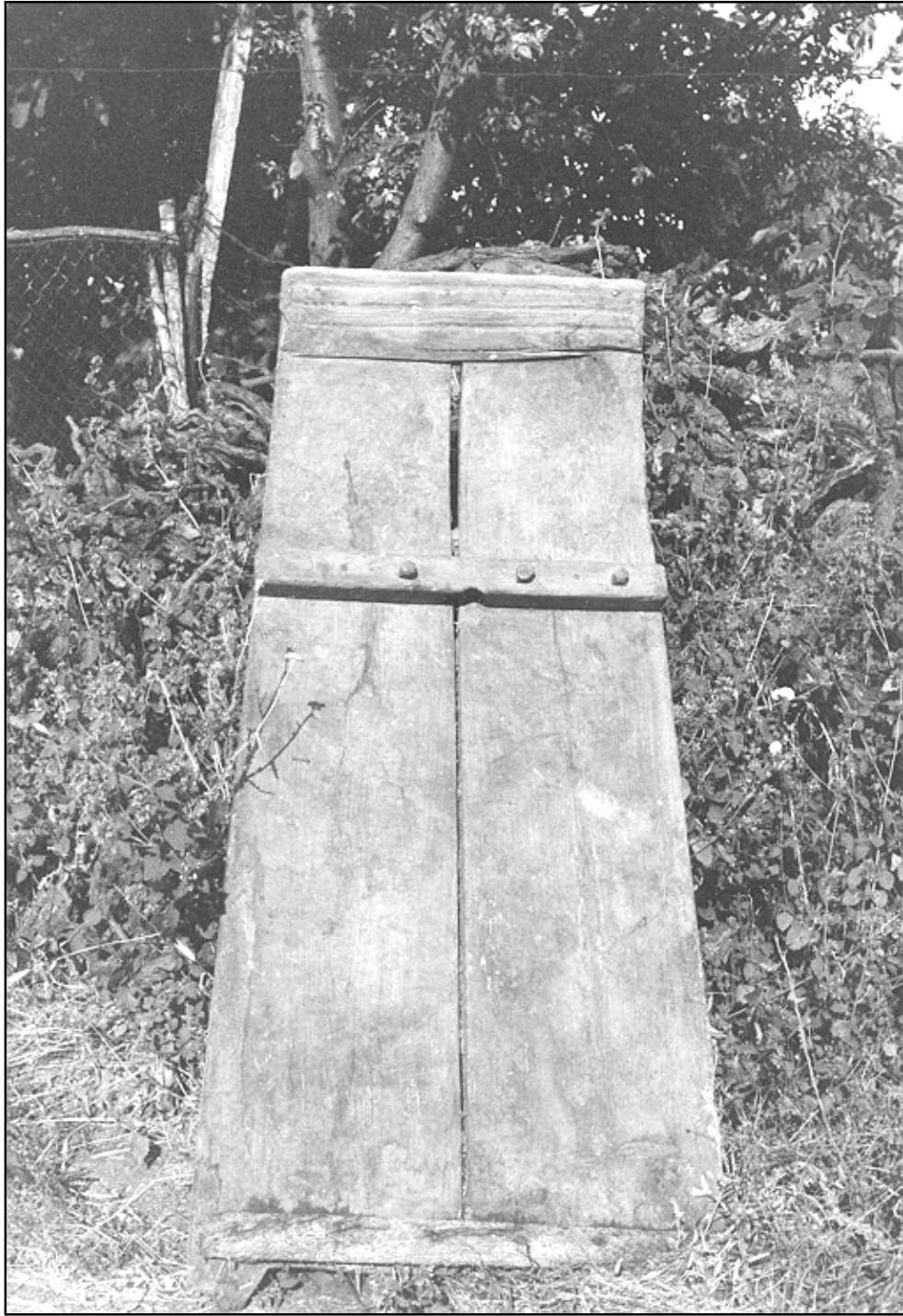


Figure 2: Threshing - sledge. Upper View.



Figure 4: Demonstration of flint-knapping at Kokkinopilos.

