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THE QUALITY AND VALUE IN NEOLITHIC EUROPE: AN ALTERNATIVE VIEW ON OBSIDIAN ARTIFACTS

Boban TRIPKOVIĆ*

Abstract

In current studies, obsidian is considered both as a highly valuable commodity, of exotic origin, and in other cases as a raw material with practical use only. The answer to the problem is not an easy one, since the basic qualities of obsidian are also found in many other raw materials, often easily accessible from prehistoric settlements. In this assessment of the subject of distribution and the chronology of obsidian finds I have tried to view obsidian exclusively on the basis of its chronological and cultural context. Such methodological premise leads to a conclusion that the role, importance and value of obsidian in the life of prehistoric communities can be best understood during the period of neolithization of the European continent and later on, when obsidian becomes an integral part of the complex changes in the perception and the use of the environment.

1 - Obsidian studies as an archaeological discipline

In spite of an interdisciplinary approach and the establishment of the obsidian studies as a separate scientific discipline, the study of obsidian is still directed towards two general subjects: one is the technology of the artifact production with a special interest in the knapping techniques and statistical analysis, the other studies the exchange mechanisms, where sample characterization and the detection of the source of raw material were conducted in order to reveal the patterns of its distribution. It is then quite understandable why H. O. Pollman in his *Obsidian – Bibliographie* containing almost 2800 items, used a title *Artefakt und Provenienz* (1999). However, even after the prospection of the sources of the raw material, the method of its exploitation and trade mechanisms, a key question remains unanswered; what was the role of obsidian in prehistory and how can we determine its value. In current studies, obsidian is considered both as a highly valuable commodity, of exotic origin, and in other cases as a raw material with practical use only (Gopher, Barkai & Marder 1998; Balkan-Atli *et al.* 1999; Ammerman & Polglase 1993; Özdogan 1994; Renfrew & Bahn 1991). The answer to the aforementioned question is not an easy one, since the basic qualities of obsidian are also met by many other raw materials, often easily available in the environment of the prehistoric settlements. Additionally, it must not be forgotten that obsidian was mainly used in the production of chipped tools and that its utilitarian role is confirmed by contextual data and by the use-ware analyses. Having in mind these general observations, it is then necessary to determine why obsidian appears in large quantities at certain sites, unrelated to the long distance from the source and the restrictive conditions of acquisition. Could it be that obsidian might have a different role, besides an utilitarian one?

The answers to these questions, however, cannot be reached by comparison with other kinds of exotic goods which were also subject to intercultural exchange. Unlike most of these objects/raw materials obsidian is differentiated by its clear utilitarian role and by its deposition within a cultural context. A good example can be seen in the case of artifacts made of *Spondylus* shell, whose appearance peaks in Europe almost at the same time of the widest obsidian use (Seferiades 1995; Müller 1997; Todorova 2000), and suggests that that distribution is a result of similar or the same exchange mechanisms that brought in obsidian. However, *Spondylus* shells were primarily used to produce specific types of items (necklaces, bracelets, amulets) which are decorative and by their use are linked to individuals. It is to no surprise then, that the *Spondylus* shell objects are mostly contextualized as a grave goods i.e. as the property of the buried individual (Müller 1997). On the other hand, in certain parts of Europe, a contextual analysis of obsidian has shown

* Faculty of Philosophy, Department of Archaeology, Čika Ljubina 18-20, YU-11 000 Belgrade B.Tripkovic@f.bg.ac.yu.

that its sole usage is as a flint alternative, being discarded or lost after a certain period of use, without a significant deposition in cultural context (Tripković 2001).

From a general point of view, technical, functional and aesthetic qualities of obsidian imply that its role might not have been strictly functional, and that the long period of use, from Middle Paleolithic times until the end of prehistory, could have occasionally produced a different usage for it. At the Neolithic site of Çatal Hüyük in Anatolia obsidian has been used for mirror production, besides its usual role in chipped industry (Mellaart 1965: fig. 54), whilst in the Aegean Bronze age it was used in the production of seals and vessels (Betancourt 1997; Warren 1969: 135-136). Varied use and a long chronological sequence require a comprehension of obsidian through time and cultural context that provide the role and value to the artifact.

2 - Fragmentation of time

The first appearance of obsidian on the European continent is seen in the Middle Paleolithic cultures of the Central European area, becoming very common by the Upper Paleolithic (Williams-Thorpe, Warren & Nandris 1984). However, this is not a general rule on the continent, since in some areas (Central and Western Mediteranean) utilization does not appear until the beginning of Neolithic (Tykot 1996), whilst in other areas it is isolated to certain sites before the Neolithic times (Franchthi cave in the Peloponese – Pantelidou-Gofas 1996: 13). In any case, the long time-span of use, covering several tens of thousands of years, demands a break down of the period of the obsidian use into smaller chronological sequences, in order to realize how the obsidian was exploited, delivered to the site and processed, and what were the relations of the prehistoric communities towards it. Such a rough division into the basic cultural-historical sequences such as Paleolithic, Mesolithic, Neolithic, Copper age, etc. could be practical for an analysis, since its use is mainly established by specific technical, technological and social criteria.

In this way, an opportunity for the association of obsidian with the specific cultural and historical tradition arises. However, the impossibility of a clear separation of the mentioned cultural and historical periods is a fundamental problem, since our view of the Neolithic as a time of sedentism, food production and complex social organizations, is just a simplified association of basic values with certain cultural and historical principles. Even in the time of the developed Neolithic these cannot be applied to all areas. It must be then taken into account that when we speak of neolithization, we speak of a world in transition, which prolongs existing and accepts new values. Therefore, the examination of the process of neolithization on the European continent can lead to a better understanding of the development of obsidian use and the manner in which its value was formed (Tripković in press). Key questions are:

- What is the value of obsidian? Trade and exchange are economic categories and the involvement of goods in an exchange presumes an existence of a certain value;
- How does it differ from the rest of the chipped stone industry and what knowledge was necessary for the knapping of obsidian?
- What were the motives for the purchase of obsidian? Acquirement was not necessary since the environment of the most prehistoric settlements already contains primary or secondary sources of an alternative raw material.

3 - Obsidian as a part of the Neolithic sequence

Over the millennia, raw material was involved in an exchange network in the regions of Near East and Anatolia. In these regions, it is present since the Paleolithic times, but it only appears in large amount at the time of the first Neolithic sequences, usually in a significant percentage on most of the sites (Moore 1982). Therefore, concerning the role of exchange as a means of transmission of information, knowledge, experience, raw material and technology in the process of neolithization (Runnels & Van Andel 1988; Yakar 1996), one cannot forget the significance and the role of obsidian. It was Andrew Sherratt who suggested that on Çatal Hüyük domesticated cattle was exchanged for high altitude area resources, one of which is obsidian (1982: 254). The value of cattle does not present a dilemma in this example, moreover since has been clearly confirmed by several ethno-archaeological studies (Russell 1998; Russell 1993). The interesting concept in this relationship between the highland and lowland resources is the value of obsidian; how did this come about and what are the motives for its acquirement in such large quantities?

A similar situation occurs on the European continent. Simultaneously with the spread of Neolithic across Europe, the territorial expansion of obsidian finds appears with the exploitation of outcrops not previously used (Tripković 2001). It is very important to pay attention to the spatial extent of the oldest Neolithic cultures and their position with regard to the obsidian outcrops (fig. 1). Greece, as a separate cultural unit, utilizes obsidian outcrops located on the island of Melos (Perlès 2001: 201); the Starčevo-Körös-Criş cultural complex employs obsidian sources in Hungary and Slovakia (Tripković 2001), while the Cardium-Impresso cultural complex acquires obsidian from

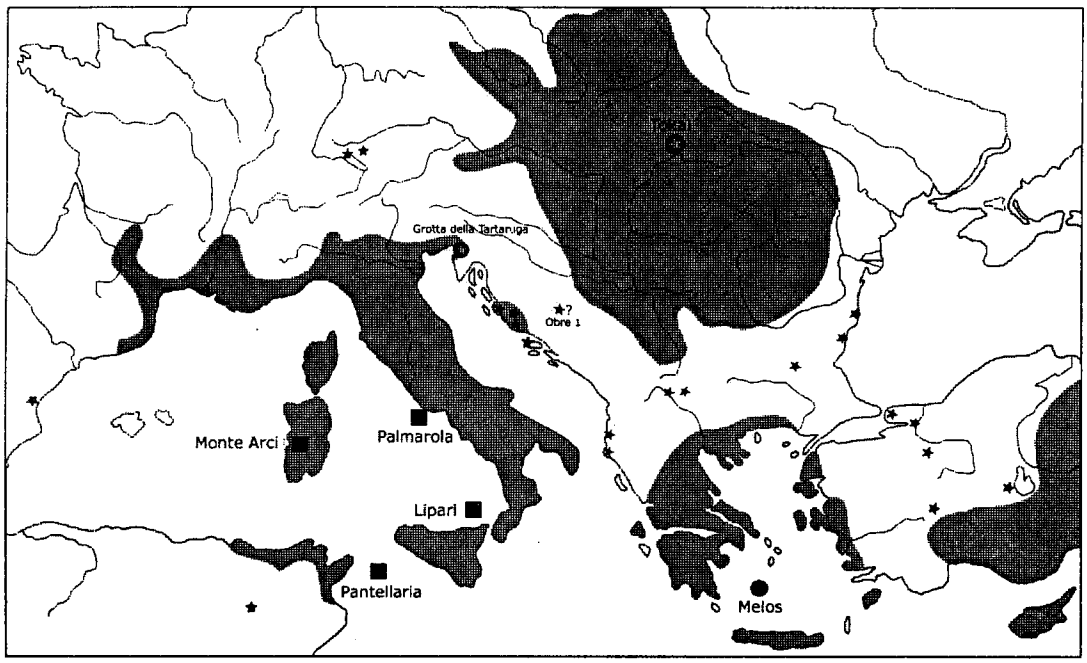

Figure 1. Distribution of obsidian across Europe in the Neolithic and Copper Age (modified after Willms 1983); ★ - not characterized obsidian.

the island outcrops of the central Mediterranean (Tykot 1996). It is remarkable that the cultural complex encompassing the obsidian outcrop in one area restricts the territory within which the distribution of obsidian occurs; obsidian originating from the outcrops of one cultural complex is not distributed to another. Exemptions from this rule are extremely rare and are usually found in the border areas, where cultural complexes generally overlap, as is in the case of Middle Neolithic sequence of Obre 1 site in central Bosnia, with reported obsidian finds originating from Sardinia (Greif 1995: 85). In the widest sense, this could indicate that cultural boundaries, pottery styles and technological experiences register the operational level of certain trade mechanisms.

It is important to mention that, like in the Near East, obsidian in Europe plays an important role in the transmission of Neolithic knowledge and experiences. This can be best illustrated on the example of the Carpathian basin, where Mesolithic communities of the Jaszag area, with a certain percentage of obsidian in chipped tools assemblages appear between Neolithic Starčevo-Körös culture and the obsidian sources (Kertesz 1996; Makkay 1996). It is clear that Neolithic communities within this cultural complex did not have a direct access to obsidian outcrops, which perhaps explains why obsidian is uncommon in South Pannonia, at the time of the earliest Neolithic cultures of the region. On the other hand, it is to be expected that these contacts between north and south have somehow begun the transformation of conservative Mesolithic communities and have prepared them for the application of the Neolithic technologies, which were to follow several hundred years later (Tripković 2001; Tripković in press).

4 - The domestication of the volcano and other obsidian stories

One question remains unanswered in this short review of the distribution of obsidian finds; why did the Neolithic communities rely on obsidian, despite all difficulties associated with its acquirement. In one of the shrines on Çatal Hüyük a potential answer is given on the northern wall of the shrine in horizon VII, where an urban settlement is depicted, with houses with approximately identical dimensions and plans. The landscape of the settlement is dominated by the eruption of a volcano, with smoke, flames and fireballs rolling down the slope (Mellaart 1965: fig. 51, 52). In this dynamic projection of a landscape, dominated by a settlement and a volcano, one man-made and one natural feature, archaeologists tend to recognise Neolithic Çatal Hüjük and the Hasan Dag volcano, located on the east part of the Konya Plain (Mellaart 1965: 83-84). The transition of the volcano from the outer, wild and unpredictable world, into the inner,

domesticated area, makes it domesticated in the same sense as the clay, transformed into figurines, altars or vessels became a domesticated form. In the same manner, the representation of the volcano eruption on the northern wall of the shrine could have represented a way of a affirmation of the *domus* principle. It is then clear, that the volcano was not domesticated in the sense of behavioral control, but in the sense of the control of its resources, resulting in abundant quantities of obsidian on Çatal Hüyük, and giving to it a symbolic meaning in the process of domestication, in a similar way as female and bovine figurines or bucrania represent values of the period.

With all this in mind, obsidian can be observed as a domesticated form, taken from nature, as an integral part of the Neolithic world, together with food production technology, items made from fired clay and new patterns of social organization. It is feasible to assume that the place of obsidian in the Neolithic narratives should also be the reason for its expansion, along with other Neolithic values. However, like most of the finds in the Near East and Anatolia, obsidian tools on European continent show distinctive traces of everyday use. Besides infrequent, isolated examples, religious and symbolic aspects of obsidian are not visible. One of such distinctive examples originates from the island of Cres, located in the eastern Adriatic, Croatia (Greif 1995: 87). W still unpublished medallion made of obsidian and dated to Neolithic period was found on the island. The medallion is interesting because of the representation of a hunt, giving him a deeper meaning. Several times in the past, I have pointed out that this representation could not be understood without its publication, but there are certainly two aspects present on it: obsidian as a part of the Neolithic world, is a clear metaphor of the period, and the representation of the hunt as a part of an older tradition (Tripković 2001; Tripković in press). The precise chronology of the find is still uncertain, but what makes it interesting is the fact that the island contains both Mesolithic and Neolithic sites (Batović 1979: 481, 488), thus making the representation of the hunt on the medallion a possible way in which the syncretism of old and new traditions could have been locally portrayed.

Conclusion

In this assessment of the distribution and the chronology of obsidian finds I have tried to view obsidian exclusively on the basis of its chronological and cultural context. Such a methodological premise leads to the conclusion that the role, importance and value of obsidian in the life of prehistoric communities can be best understood during the period of neolithization of the European continent and further on, when obsidian becomes an integral part of the complex changes in perception and the use of the environment. It is noticeable that, during Neolithic, obsidian is not contextualized into specific, individual contexts (graves), which could reveal its role on an individual level – a level of relation between an individual and an artifact. With this in mind, it is certain that, if buried with an individual, obsidian did not suggest a recognizable text. I have argued that the role and the value of obsidian on the European continent were formed through a process in which exchange of knowledge and experience and the introduction of new technologies were of governing importance. As a chipped stone tool, obsidian has had a utilitarian purpose, but it also served as a metaphor of time and value brought by neolithization. It is then highly probable that the Mesolithic and Neolithic communities accepted or rejected the use of obsidian, depending on the preference of their ideological basis towards adjustment to the coming, or the preservation of the existing time. It must be said that such processes can, certainly, be viewed on a local level, only.

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Bibliography

AMMERMAN, A. A. & POLGLASE, C. 1993. New Evidence on the Exchange of Obsidian in Italy, in C. Scarre & F. Healy (eds.), *Trade and Exchange in Prehistoric Europe*. Oxford: Oxbow Books: 101-107.

BALKAN-ATLI, N. *et al.* 1999. Obsidian: Sources, Workshops and Trade in Central Anatolia, in M. Özdogan (ed.), *Neolithic in Turkye*. Istanbul: Arkeoloji ve Sanat Yayinlari: 133-145.

BATOVIĆ, Š. 1979. Jadranska zona, in A. Benac (ed.), *Praistorija jugoslavenskih zemalja* 2-neolit. ANU BiH, Centar za arheološka istraživanja. Sarajevo: 473-634.

BETANCOURT, P. P. 1997. The Trade Route for Ghyali Obsidian, *AEGAEUM* 16: 171-175.

GOPHER, A. BARKAI, R. & MARDER, O. 1998 Cultural Contacts in the Neolithic Period: Anatolian Obsidians in the Southern Levant, ERAUL 85: 641-650.

GREIF, T. 1995. Obsidian v neolitiku na območju med centralnim Balkanom in vzhodno jadransko obalo, *Balcanica* 26: 75-108.

KERTESZ, R. 1996. The Mesolithic in the Great Hungarian Plain: A Survey of the Evidence, in L. Talas (ed.), *At the Fringes of Three Worlds. Hunter-gatherers and Farmers in the Middle Tisza Valley*. Szolnok: Damjanich Museum Press: 5-34.

MAKKAY, J. 1996. Theories about the Origin, the Distribution and the End of the Körös Culture, in L. Talas (ed.), *At the Fringes of Three Worlds. Hunter-Gatherers and Farmers in the Middle Tisza Valley*. Szolnok: Damjanich Museum Press: 35-49.

MELLAART, J. 1965. *Earliest Civilization of the Near East*. London: Thames and Hudson.

MOORE, A. M. T. 1985. The Development of Neolithic Societies in the Near East, *Advances in World Archaeology* 4: 1-69.

MÜLLER, J. 1997. Neolithische und chalkolithische Spondylus-Artefakte. Anmerkungen zu Verbreitung, Tauschgebiet und sozialer Funktion, in C. Becker, M. L., Dunkelmann, C. Metzner-Nebelsick, H. Peter-Röcher, M. Roeder & B. Teržan (dir.), *Xrovos. Beiträge zur prähistorischen Archäologie zwischen Nord- und Südosteuropa. Festschrift für Bernhard Hänsel*. Espelkamp: 91-106.

ÖZDOGAN, M. 1994. Obsidian in Anatolia: an Archaeological Perspective on the Status of Research, *Archaeometry* 94: 423-431.

PANTELIDOU-GOFAS, M. 1996. Ties Across the Sea in Neolithic Times: Attica and the Cyclades, in *The Colloquia of the XIII International Congress of Prehistoric and Protohistoric Sciences. Section 9 – The Neolithic in the Near East and Europe, Colloquium XVII*: 11-20.

POLLMAN, H.-O. 1999. *Obsidian – Bibliographie. Artefakt und Provinienz*. Bochum: Deutschen Bergbau Museum.

PERLÈS, C. 2001. *The Early Neolithic in Greece. The First Farming Communities in Europe*. Cambridge: Cambridge University Press.

RUNNELS, C. & VAN ANDEL, T. H. 1988. Trade and the Origins of Agriculture in the Eastern Mediterranean, *Journal of Mediterranean Archaeology* 1(1): 83-109.

RENFREW, C. & BAHN, P. 1991. *Archaeology. Theories, Methods and Practice*. London: Thames and Hudson Ltd.

RUSSELL, N. 1993. *Hunting, Hearding and Feasting: Human Use of Animals in Neolithic Southeast Europe*. Unpublished doctoral dissertation. Berkeley: University of California.

RUSSELL, N. 1998. Cattle as wealth in Neolithic Europe: where's the beef? in D. Bailay (ed.) *The Archaeology of Value. Essays on prestige and the processes of valuation*, BAR 730: 42-54.

SEFERIADES, M. L. 1995. Spondylus Gaederopus: The Earliest European Long Distance Exchange System, *Poročilo o raziskovanju paleolitika, neolitika in eneolitika v Sloveniji* 22: 238-256.

SHERRATT, A. 1982. Mobile Resources: Settlement and Exchange in Early Agricultural Europe, in A. Sherratt (ed.), *Economy and Society in Prehistoric Europe. Changing Perspectives*: 252-269. Edinburgh: Edinburgh University Press.

TODOROVA, H. 2000. Die Spondylus-Problematik heute, in S. Hiller & V. Nikolov (dir.), *Karanovo III. Beiträge zum Neolithikum in Südosteuropa*. Wien: Phoibos: 415-422.

TRIPKOVIĆ, B. 2001. Role of Obsidian in the Neolithic: Utilitarian Objects or Means of Prestige, *Journal of Serbian Archaeological Society* 17: 21-42 (in Serbian).

TRIPKOVIĆ, B. in press. Role of Obsidian in the Neolithic. A Symbolic Expression of Human Domestication? *Paper presented at XIVth UISPP Congress, held in Liège, Belgium, 2-8 September* 2001.

TYKOT, R. H. 1996. Obsidian Procurement and Distribution in the Central and Western Mediterranean, *Journal of Mediterranean Archaeology* 9(1): 39-82.

WARREN, P. 1969 *Minoan Stone Vases*. Cambridge: The University Press.

WILLIAMS-THORPE, O., WARREN, S. E. & NANDRIS, J. G. 1984. The Distribution and Provenance of Archaeological Obsidian in Central and Eastern Europe. *Journal of Archaeological Science* 11: 183-212.

WILLMS, C. 1983. Obsidian im Neolithicum und Äneolithicum Europas, *Germania* 61(2): 327-352.

YAKAR, J. 1996. The Neolithic Transformation in the Near East and Anatolia's Role in the Neolithization of Southeastern Europe, *Poročilo o raziskovanju paleolitika, neolitika in eneolitika v Sloveniji* 23: 1-13.