

Digging the Neolithic stamp-seals of SE Europe from archaeological deposits, texts and mental constructs

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ABSTRACT – *The article presents the archaeological and experimental data on the Neolithic stamp-seals from phenomenological perspective. An alternative view to their production, consumption and symbolic values is proposed by employing concepts of affordances, constraints, icons, indexes and symbols. It is argued that the stamp-seal motifs probably conveyed specific information, while objects were included in various networks of meaning. Similar importance is given to the fact that the stamp-seals probably evolved a secondary mode of use.*

IZVLEČEK – *V članku so predstavljeni arheološki in eksperimentalni podatki o neolitskih pečatnikih-žigih s fenomenološke perspektive. S pomočjo konceptov ponujenosti, omejitev, ikon, indeksov in simbolov oblikujemo alternativni pogled na njihovo produkcijo, rabo in simbolične vrednosti. Zago-varjamo tezo, da so bili pečatniki-žigi vključeni v različne pomenske mreže, njihovi motivi pa so bili nosilci specifičnih informacij. Enako pomembno se nam zdi dejstvo, da so pečatniki-žigi razvili sekundarne oblike rabe.*

KEY WORDS – *stamp-seals; affordances/constraints; icons; indexes; symbols*

Introduction

This article represents an attempt to enliven one of most visually striking categories of artefacts within Neolithic materiality that has petrified under layers of problematic interpretations and misuses within archaeological literature. The act of reanimating Neolithic stamp-seals from SE Europe is carried out in two steps: first, we lift up the dusty veil of unconsciously regulated discourse from the patient. Second, we bring the patient back to life with intensive work on the vital functions (*i.e.* on the cultural biography of Neolithic stamp-seals of SE Europe).

Archaeology of the texts

The basic material we are following in this part of the article comprises not the Neolithic stamp-seals of SE Europe themselves, but texts by different authors devoted to this subject. Since the main goal of the archaeological process could be described as “... *linguistic transformation of the object into a word into a text*” (Tilley 1998.141), this part of the article

deals with ways of transforming the material into the immaterial: with the help of 31 selected texts written by 21 different authors, we observe the relations between discourse, scientific thought and the observed phenomenon of the Neolithic stamp-seals of SE Europe. We use the following statement by C. Tilley (1998.147) as a methodological starting-point for the intended analysis:

“... *all archaeological texts are primarily literary constructions and can be analysed in an analogous manner to literary texts, bracketing aside the questions of truth, falsity, adequacy, or inadequacy in relation to the physical artefact world that are normally asked from the outset ... The concern might rather more pertinently be to do with the manner in which the language itself is structured and mobilised to create meaning and sense.*”

Within the Early Neolithic of Europe the phenomenon of stamp-seals is frequently taken advantage of

as a fundamental argument to support an author's theoretical model of Neolithisation. We want to analyse the use of the term within different archaeological discourses. The main questions we tackle are: has the meaning of the term 'stamp-seal' shifted through time? How does the term capture the reality of the artefacts it is used to discuss? Could the function of the stamp-seals be different from those described by our authors? Do the presented uses of the term help towards a better understanding of the past?

The sample of literature consists of 60 years writing about the Neolithic stamp-seals of SE Europe. It includes all the major works dealing with the subject,

a number of general surveys mentioning stamp-seals, as well as various book chapters and articles on stamp seals of different dates and of different styles of archaeological thinking. Thus texts, written within 'traditional', 'processual' and 'post-processual' discourse are presented within the sample.

No uniform terminology for the observed phenomenon is employed within the archaeological literature on the Neolithic stamp-seals of SE Europe. Since stamped/sealed material is not preserved, the use of the objects remains difficult to define. It has been suggested that these artefacts were used as pintaderas for adorning the human body (e.g. *Younger 1995*).

1. I. Kutzián (1944 and 1947), *The Körös Culture. Plates and Text*, 8
2. V. Gordon Childe (1950), *The Dawn of European Civilization*, sixth, revised edition, 25, 60–61, 81, 89, 91, 95, 103, 126, 135, 144–145
3. V. Gordon Childe (1959), *Der Mensch schafft sich selbst*, 180
4. John Nandris (1970), 'The development and relationships of the earlier Greek Neolithic' [22 pp.]
5. Marija Gimbutas (1984), *The Goddesses and Gods of Old Europe*, third edition, 91–92, 112–117
6. János Makkay (1984), *Early Stamp Seals in South-East Europe* [123 pp.]
7. Paul Halstead (1987), 'The economy has a normal surplus: economic stability and social change among early farming communities of Thessaly, Greece' [12 pp.]
8. Colin Renfrew (1987), 'Old Europe or Ancient East? The Clay Cylinders of Sitagroi' [33 pp.]
9. Colin Renfrew (1987), *Archaeology and Language. The Puzzle of Indo-European Origins*, 169–171
10. John G. Younger (1987), 'A Balkan-Aegean-Anatolian Glyptic Koine in the Neolithic and EBA Periods'
11. Marija Gimbutas (1989), *The Language of the Goddess*, 3, 13, 19, 25, 75, 81, 83, 89, 100, 122–123, 144, 167, 308–309
12. Mihael Budja (1992), 'Pečatniki v slovenskih naselbinskih kontekstih' [12 pp.]
13. John G. Younger (1992), 'Seals? From Middle Helladic Greece' [19 pp.]
14. Henrieta Todorova, Ivan Vajsov (1993), *Novo kamenata epoha v Bulgarija*, 233–234
15. Elisabeth Ruttkay (1993/1994), 'Neue Tonstempel der Kanzianiberg-Lasinja Gruppe' [17 pp.]
16. Paul Halstead (1995), 'From sharing to hoarding: the Neolithic foundations of Aegean Bronze Age society?' [10 pp.]
17. Artemis Onassoglou (1996), 'Seals', 163–164
18. Mihael Budja (1998), 'Clay tokens – accounting before writing in Eurasia' [16 pp.]
19. Mehmet Özdögan (1999), North Western Turkey: Neolithic Cultures in Between the Balkans and Anatolia, 216, 219
20. Doglass W. Bailey (2000), *Balkan Prehistory. Exclusion, incorporation and identity*, 109–110, 112, 234, 282
21. John Chapman (2000), *Fragmentation in Archaeology*, 85–91, 225
22. Catherine Perlès (2001), *The Early Neolithic in Greece. The first farming communities in Europe*, 44, 54, 63, 221–223, 252–253, 285, 288–289, 296–297
23. Mihael Budja (2003), 'Seals, contracts and tokens in the Balkans Early Neolithic: where in the puzzle' [15 pp.]
24. Tanya Dzhanfezova (2003), 'Neolithic Pintaderas in Bulgaria' [11 pp.]
25. Emanuela Montagnary Kokelj (2003), 'Evidence of long distance connections at the edge of the Balkans: economic or symbolic value' [8 pp.]
26. Catherine Perlès (2003), 'An alternate (and old-fashioned) view of Neolithisation in Greece' [14 pp.]
27. Mihael Budja (2004), 'The transition to farming and the 'revolution' of symbols in the Balkans. From ornament to entoptic and external symbolic storage' [22 pp.]
28. Mihael Budja (2005), 'The process of Neolithisation in South-eastern Europe: from ceramic female figurines and cereal grains to entoptics and human nuclear DNA polymorphic markers' [20 pp.]
29. Çiler Çilingiroğlu (2005), 'The concept of the 'Neolithic package': considering its meaning and applicability' [13 pp.]
30. Clemens Lichter (2005), 'Western Anatolia in the Late Neolithic and Early Chalcolithic: the actual state of research' [15 pp.]
31. Catherine Perlès (2005), 'From the Near East to Greece: Let's reverse the focus. Cultural elements that didn't transfer' [15 pp.]

Tab. 1. The sample of analysed texts.

on-line; Chapman 2000; Montagnary Kokelj 2003; Çilingiroğlu 2005), perhaps as stamps for printing onto organic materials such as textile, leather, bread, maybe as tools for decorating walls, or even as devices for stamping live animals (e.g. Makkay 1984.104; Chapman 2000.86; Perlès 2001.252; Montagnary Kokelj 2003.366). Most of the writers agree upon the fact that Neolithic stamp-seals – contrary to practices in the Aegean, where stamps for decorating ceramics and hearth rims appear from EH and EC onwards (Younger 1995.on-line) – were not employed for ornamenting ceramics. The majority of the authors also agree that the stamp-seals were not used as true seals. Nevertheless, some archaeologists (Bailey 1993.212; Onassoglou 1996a.163–164) see them as a marker for the development of the concept of private property.

In addition to the lack of direct evidence (*i.e.* imprints) in the archaeological record, archaeologists manage to overlook even the meagre evidence available. The fact that the modelling of motifs varies on the stamp-seals is mentioned only in very few of the texts analysed: Perlès (2001.252) emphasizes that the majority of Greek stamp-seals has the high-relief motif and only a few specimens have low relief motif.¹ There are also some undecorated specimens modelled as cones that were interpreted as tokens by Budja (1998; 2003). The authors of the selected texts are very often prone to forget that the bases of the stamp-seals are modelled not only as flat, but sometimes as conical or convex surfaces (*cf.* Makkay 1984.Fig.V: 10; Fig. X: 5, 9, 10, 13; Fig. XVI: 7; Fig. XXII: 8). It remains ambiguous – similarly to the case of undecorated cones – whether the group of stamp-seals with concave bases was actually used for stamping. Perhaps the group of artefacts with ornaments interpreted as proto-writing symbols constitutes a special category (e.g. Makkay 1984.Fig. XXIII: 1, 6).

When closely examining how stamp-seals are modelled (Fig. 1), it becomes obvious that the monolithic category of stamp-seals artificially unifies artefacts

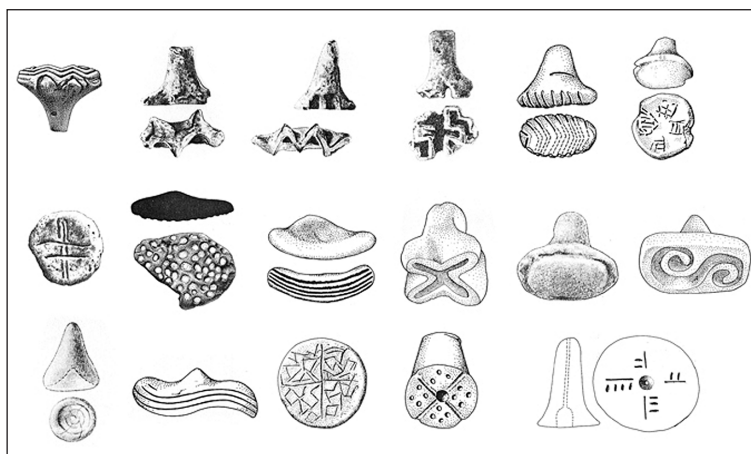


Fig. 1. A sample of Neolithic stamp-seals of SE Europe with differently modelled bases (Makkay 1984.Fig. V: 10; Fig. VI: 1, 4, 9; Fig. VII: 1; Fig. X: 5, 9, 10, 13; Fig. XV: 3, 4, 6; Fig. XVI: 7; Fig. XXII: 8; Fig. XXIII: 6; Fig. XXVII: 5, 8).

that probably had separate functions. Why is this so? The answer can be sought in the dichotomy of archaeological thought.² Archaeological thought has a tendency to expose and privilege identity and unity above difference. An additional problem stems from the unconsciously regulated discourse which directs scientific thought, shapes explanatory models, and even constrains the development of new, unbiased interpretations.

The main weak points of the analysed texts could be summed up as the self-evidence of their terminology and as their operating within an unconsciously regulated discourse which guides the authors in their thinking, in formulating arguments and in forming their interpretations.

All archaeologists ‘know’ what the terms ‘pintadera’ and ‘stamp-seal’ mean. Hence, it happens regularly that authors unite artefacts with only general, broad similarities, and probably distinct functions within one category. Because the meaning of these terms is self-evident, authors rarely define them. Instead of being clear and consistent, the semantic level of the term remains elusive and shifting. For Dzhafvezova (2003) and Çilingiroğlu (2005) the pintaderas they discuss are no longer stamps used for decorating the human body. As Dzhafvezova (2003.note 1) states:

“In this paper, the term [pintadera – our emph.] is not used in accordance with the functional defini-

1 The first group is interpreted as stamps for decorating textiles by Perlès (2001.252) and the second as true seals. The author does not define specifically what the second group sealed.

2 We are following the Derridean supposition of Western thought being based on dualities. There is no balance within dual pairs; one concept always has primacy over another. Some examples of such dualities: speech/writing, presence/absence, identity/difference (Yates 1990.261).

tion of the finds. Here pintadera denotes those kinds of ceramic objects called 'stamp seals' and having a handle, shaped body and 'decorated' base."

Thus the term *pintadera* becomes a terminological substitute for the term stamp-seal. The use of both terms unconsciously guides archaeologists on how and what to write about the artefacts discussed. Nowadays, the illusion of positivism in science is gone. The following quote from Tilley (1998:152) conveys the criticism of unconscious discourse with particular clarity:

"... all writers ... including myself, inhabit a discourse, a series of largely anonymous and habitual rules and constraints for thinking and writing, that structures, in part, both what can be written and what can actually be thought. Because of the discourse we inhabit, and because it acts largely unconsciously, archaeologists are doomed to repeat it, whether in the form of the spatial structures of their narratives, the types of diagrams they employ, or the modes of explanation adopted."

The symptoms of unconsciously regulated discourse can also be recognized within the first group of analysed texts. This group consists of works that employ diffusionist models for the explanation of the earliest appearance of stamp-seals in Europe (Kutzián 1947; Childe 1950; 1959; Nandris 1970; Makkay 1984; Özdögan 1999; Perlès 2001; 2003; 2005; Montagnary Kokelj 2003; Çilingiroğlu 2005; Lichter 2005). In each of the listed works we observe one or more of the following characteristics: an obsession with origins, typological arrangements of stamp-seals, formulating the text as a grand narrative. Our aim is to show not only how diffusionist discourse leads authors unconsciously to the questions they raise, but also how it directs their line of thought and influences the way their thoughts are formulated.

Stamp-seals belong within diffusionist discourse – like figurines, red slipped and painted pottery, altars, M amulets, marble and stone bracelets, discs, beads, celts, fine stone bowls, polishers, belt hooks, *spatulae*, sling bullets and ear studs – among a group of small finds that represent the main component of the 'Neolithic package', along with domesticates (Çilingiroğlu 2005:3). The presence of the listed arte-

facts at European Neolithic sites is taken as a proof that these sites can be defined as Neolithic. Typological similarities between small finds from the European and Near Eastern sites are considered as an argument, supporting theories conditioning the beginning of the Neolithic in Europe with migration or the diffusion of cultural elements from the Near East (cf. Makkay 1984; Perlès 2001).

Diffusionist models in which stamp-seals appear as one of the main arguments supporting the Neolithisation scenario are formulated as grand narratives.³ Authors from Childe to Perlès assume the existence of something linking European Neolithic stamp-seals both at the regional and inter-regional level. Within the diffusionist paradigm this something is, understood as a single origin and the same modes of use. An additional argument that should have supported those assumptions becomes in diffusionist models the narrative itself: authors tend to diminish the value of data that weaken their theories; hypotheses are often backed up with various tables listing elements of the 'Neolithic package' and with distribution maps, all with intent of proving that the elements of the 'Neolithic package' diffused from Anatolia to SE Europe (cf. Renfrew 1987; Perlès 2001; 2003; 2005; Çilingiroğlu 2005; Lichter 2005). The spatial and narrative courses are as essential as arguments themselves: authors define the earliest examples of stamp-seals (they are from Anatolia) and describe their motifs. They point to Nea Nikomedeia as a crucial European Neolithic site in the second step and then list all the types of motifs documented in both Anatolia and SE Europe, using them as proof of connections between the two regions (cf. Makkay 1984; Özdögan 1999; Perlès 2001; 2003; 2005; Lichter 2005). Thus narrative lines become implicit arguments supporting the basic premise of European Neolithic stamp-seals being linked to the Anatolian specimens.

Yet in their aspiration to unify and link the Neolithisation process in the Near East and Europe the authors are incapable of thinking, let alone accepting facts that they (in passing) mention, and which deconstruct diffusionist discourse. Archaeologists tend to 'overlook' the fact that Neolithic stamp-seals do not appear until painted pottery came in use, the fact that similar artefacts from the Near East and Europe are sometimes dated from several centuries or even millennia apart, and the fact that grounding

³ We observe the characteristics of grand narrative also in autochthonous models. However, since such models do not deal with stamp-seals, we leave them out of our analysis.

connections between Anatolia and Europe on the basis of stamp-seal motifs is extremely problematic.

Archaeological discussion of Neolithic stamp-seals is repeatedly threatened by doubts as to whether the artefacts so named are not disparate things after all. Archaeological writings on stamp-seals consist of constant definitions, redefinitions and modifications of terminology. Perlès (2001:252) writes of stamps and 'true' seals, while Budja (1998) eliminates undecorated cones and cylinders from the group and treats them as tokens. There are also some (cf. Kutzián 1947; Barber 1991) who express doubts as to whether cylindrical objects with incised decoration can be defined as stamp-seals at all.

As already stated, the simple act of closely examining how stamp-seals are modelled leads towards the recognition that only a superficially uniform group of artefacts consists of functionally disparate objects. Yet this cannot be accepted in the archaeological discourse. Why can we not assume that Neolithic stamp-seals comprise (like Neolithic figurines⁴) a group of multifunctional objects? Why can we not accept the supposition that the function, and equally the meaning, of an undecorated clay cone from Porodin-Tumba are essentially different from the function and meaning of a stone stamp-seal with a labyrinth motif from Achilleon? Furthermore, why can we not recognize the difference in meaning and function of stamp-seals having the same motifs? A response to these questions can be sought in the following quote from Tilley (1998:155):

"Perhaps this is a failure to think and allow for difference, a desire to tame and domesticate the difference of the past within a single narrative structure."

The selected texts also share a tendency to link the SE European and Anatolian region together with the help of the typological similarities of stamp-seal motifs. This principle, of course, originates from studying ceramic typological sequences. 'Traditional' archaeology used these not only to set up relative chronologies, but also to define relations between neighbouring regions: typological sequences, along with style analysis, were supposed to help define the place of origin from where the influence in ceramic design dispersed to regions nearby. We find the described principle as applied to stamp-seals problematic, to

say the least. True, designs on painted pottery, through their complexity, enable an opportunity to study social interactions among neighbouring as well as among distant communities.⁵ In contrast, stamp-seal motifs remain simple geometrical designs. Arguing for diffusionist theories with the help of these is, in our opinion, questionable at least. Even though some stamp-seal motifs are documented in both regions, the designs are so simple that we find diffusionist models to explain their appearance in Europe unnecessary and redundant. Similarly to the case of entoptics (Budja 2004; 2005), the stamp-seal motifs are universal.

The idea of the stamp-seals sharing a single origin is represented in all of the texts from the first group. Through the 60 years of writing on the topic, perspectives shifted in that the place of origin, still defined as the Levant by Childe, was transposed to Anatolia: Mellaart's excavations in Central Anatolia (i.e. Çatal Höyük and Hacilar) caused a shift in the perception of the Anatolian region, formerly interpreted as peripheral to the Levant, and defined Anatolia as one of the centres of the 'Neolithic revolution'. Neolithic stamp-seals are interpreted within diffusionist discourse as an element of the 'Neolithic package' that came to Europe either with migrants or by cultural diffusion. Why arguing for the origin of European Neolithic stamp-seals in Anatolia on the grounds of their motifs is questionable to say the least has already been explained above.

Deconstructive claims that inhibit

In order to show how deconstructive elements inhibit the meaningfulness of the texts, we analytically read works by Makkay (1984) and Perlès (2001; 2005). Immediately after, we debate some texts in the second group (Bailey 1993; 2000; Budja 1992; 1998; 2003; 2004; 2005; Chapman 2000; Dzhanfezova 2003) which offer the opportunity of alternative readings of the phenomenon of the stamp-seals.

Although, even today, Makkay's work (1984) remains unsurpassed as a catalogue, it contains many contradictory claims that weaken and deconstruct the author's interpretative model. The analyzed text is written in diffusionist discourse and in a reductionist manner: the Neolithisation process is thus equated with defining the origins of the earliest Neolithic pottery of South East Europe and with defining courses of cultural diffusion. Since the paper is written with

⁴ Cf. Talalay (1987; 1993).

⁵ Cf. Plog (1980); Hodder (1978; 1979; 1981); Talalay (1993).

conviction, the Early Neolithic in Europe formed under Anatolian influences, Makkay (1984.75–79) introduces Europe as a secondary production centre for the clay stamp-seals. The production and use of stamp-seals would have reached this region by cultural diffusion simultaneously with the diffusion of painted pottery from Anatolia. The first cultural impulses should have reached the central and northern Balkans across the plains of Thrace and eastern Macedonia, where Nea Nikomedeia is situated. Since some of the stamp-seal motifs from Nea Nikomedeia are similar to the motifs from Çatal Höyük, while others share similarities with SE European stamp-seals, the site retains the utmost importance for those aiming to prove cultural diffusion from Anatolia to SE Europe. The excavator of the site, R. J. Rodden (1965.85), who was the first to use the stamp-seals from Nea Nikomedeia (along with ear plugs, pins, belt-hooks, pottery decoration, architecture and the economy) as proof of similarities between SE Europe and the Anatolian region, wrote:

“Nea Nikomedeia thus exhibits a distinct European character, although it has traits in common with sites as distant as Tepe Siyalk. This suggests that South-eastern Europe was not peripheral to the region within which the Neolithic revolution began, but was an integral part of it.”

If Rodden (1965) used the listed artefacts and features to emphasize the equivalence of the SE European region and Anatolia, other authors exploited the same parallels to support their diffusionist and migratory models (cf. Makkay 1984; Renfrew 1987b; Perlès 2001; 2003; 2005).

Deconstructing elements appear in Makkay’s work (1984) from the outset. Eighteen Early Neolithic stamp-seals from Nea Nikomedeia should prove the typological similarities and consequently chronological synchronicity of Nea Nikomedeia’s stamp-seals with stamp seals from Çatal Höyük layers VI–II. Nevertheless, it gradually becomes obvious that the typological arguments are far weaker than the author would like them to be. Thus motifs, as the most important element of stamp-seals, do not connect the stamp-seals from Nea Nikomedeia and Çatal Höyük (Figs. 2, 3). It appears that the only characteristics they shared are the techniques used in their making and the material employed, or as Makkay (1984.73) states:

“All of the 21 stamp seals found in EN levels VI–II of Çatal Höyük were made of clay. Their material

and characteristic features are very similar to some of the Nea Nikomedeia seals and suggest a real contemporaneity, or rather, a cultural connection. In fact, these similarities are apparent in shapes and decorative techniques (i.e. the deeply-cut incised lines) rather than in their patterns.”

Could the same preferences for material and modelling techniques truly suffice to prove cultural connections between the two regions? Hence, Makkay’s hypothesis deconstructs itself right at the point that is supposed to connect both regions: there are no typological similarities between the stamp-seals from Nea Nikomedeia and Çatal Höyük. On the other hand, Makkay’s model lacks an explanation of the motifs appearing exclusively in the SE European region (Makkay 1984.101–102):

“In the case of South-East European clay cylinders and stamp seals, one sees the result of direct or indirect influences, but at the same time, one witnesses the signs of a simplified technique and use. Early and Late Neolithic cultures adopted the manufacture of these artefacts and adapted them to their own heritage and needs. Accordingly, the EN stamp seals do not seem to have differed from their Anatolian parallels, either as regards their typology or their use.”

Since parts of the motifs (e.g. some derivatives of a labyrinthine motif, zigzags, a motif of impressed shallow bosses on the oval base, a motif of ‘barbotine’-like bosses) appear on European objects exclusively, the author’s interpretation of European stamp-seals as identical with Anatolian specimens or as their simplified derivatives, strikes the eye even more strongly.

The interpretation of Greek stamp-seals represents a special problem within Makkay’s model. Some of them, unlike other SE European specimens, are made of stone. Accordingly, the author puts forward the hypothesis that cultural impulses for the production and use of Greek stone stamp-seals came by a different route than for other SE European specimens. Since the Levant is defined as the oldest primary production centre for stone stamp-seals, Makkay (1984.79–80) argues that it was also from here that the production of stone stamp-seals spread into Thessaly:

“... these Thessalian stone seals do not appear to be a local variant of the Anatolian Neolithic seals, associated with them as an influencing group from

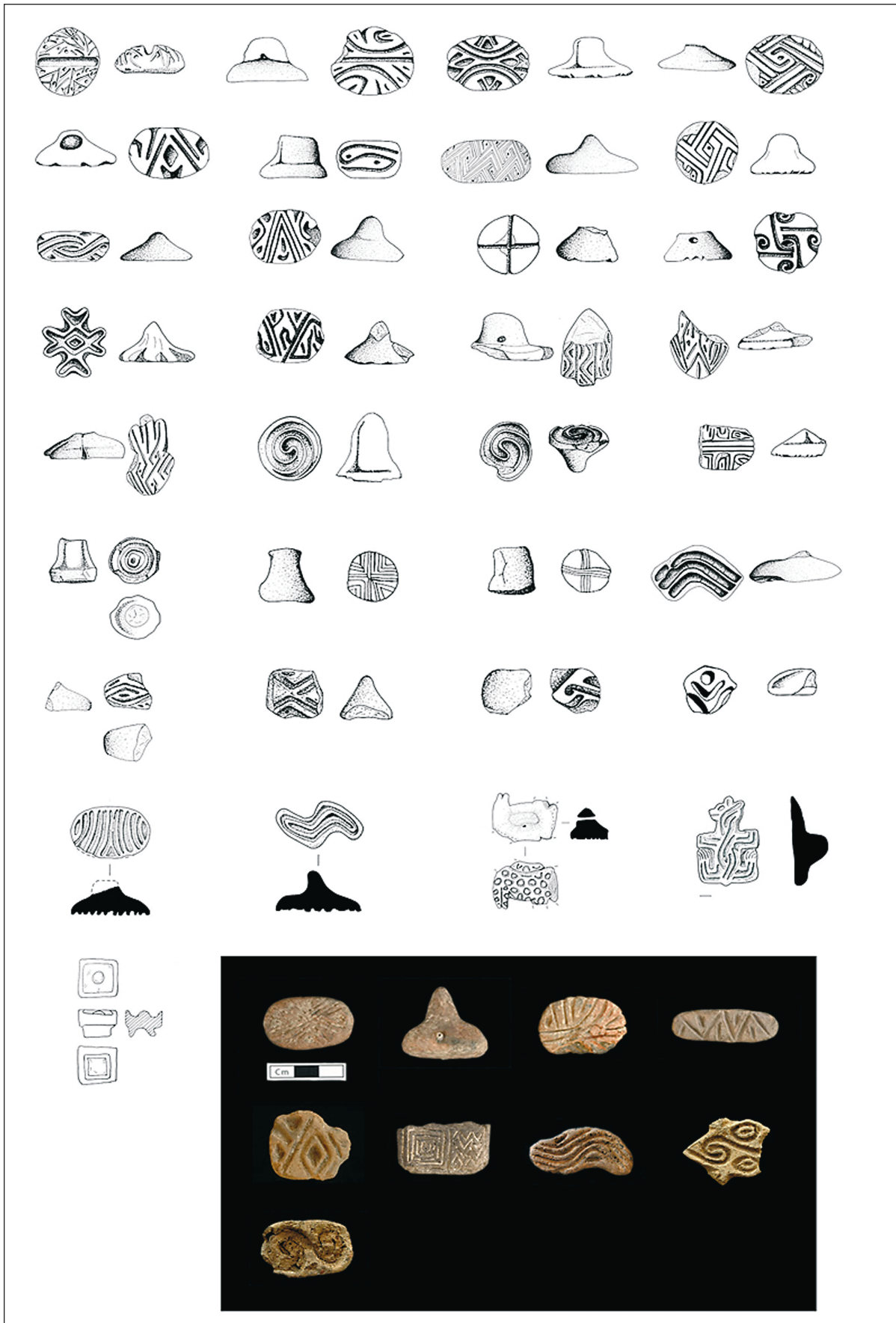


Fig. 2. Stamp-seals from Çatal Höyük (after Türkcan 1997; 2003; 2004; 2005).

the beginning. It may also be noted that a great part of these Thessalian seals – bearing very little resemblance to the Anatolian or Levantine Neolithic seals [our emph.] – cannot be securely dated ... The use of stone draws a distinction between the Greek, and the Karanovo and Körös-Starčevo seals ... But these differences could also indicate the existence of independent connections with Cyprus and the Levant, undiscovered as yet.”

Makkay therefore anticipates the transmission of cultural impulses for production and use of stamp-seals in the Early Neolithic via two different routes: the first should have been a continental one, leading through the plains of Thrace and Eastern Macedonia; the second should have been maritime, connecting Anatolia or The Levant with Thessaly (Makkay 1984: 81). The described exposition of the genesis of Thessalian stamp seals contains several deconstructive statements: first, Makkay stresses a small typological similarity not only between Thessalian and Anatolian objects, but also between the Thessalian and Levantine specimens. Then, in spite of the stated, he conditions, merely because of the use of the same material, the appearance of stamp-seals in Thessaly with the cultural diffusion from Levant. Why this kind of hypothesis? The answer, of course, could be sought in diffusionist discourse that does not allow the author to consider, let alone mention, the possibility of stamp-seals having been independently invented in SE Europe.

The analyzed model represents Europe merely as a passive recipient of external influences. External impulses are not only seen as a trigger for the beginning of the production and use of stamp-seals in SE Europe, but also as a precondition. According to Makkay, in the Middle Neolithic, when there were no cultural impulses from Anatolia, the industry of stamp-seals in SE Europe almost died out. This kind of reasoning would make sense if author succeeded in proving continuing contacts between Anatolian and SE European Neolithic sites, in showing why these contacts were crucial for the production of stamp-seals in Europe, and in defining the role of stamp-seals for such contacts. Makkay's hypothesis contains none of these. Instead, the author merely mentions that the spread of stamp-seals along with painted pottery was a result of cultural diffusion from Anatolia.

Perlès' model of Neolithisation (2001; 2005) has some features of Makkay's scenario. Thus Perlès (2005: 286) also argues for the idea of two main routes (maritime for Greece, continental for the rest of SE

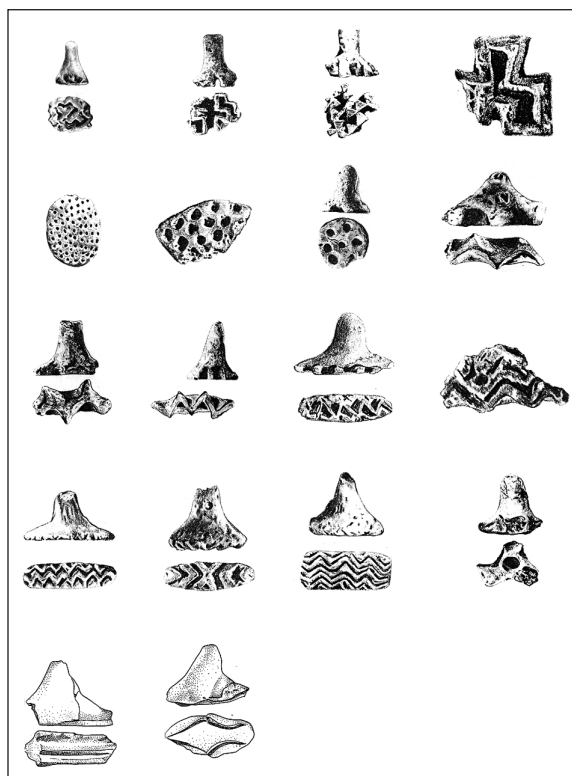


Fig. 3. Stamp-seals from Nea Nikomedeia (after Makkay 1984. Fig. III: 10; Fig. IV: 2, 3, 4, 6, 7; Fig. VI: 1, 2, 4, 5, 8, 9, 10; Fig. X: 1, 7, 8, 12, 14).

Europe). Yet there are also some major differences between the models. Contrary to Makkay (1984), who builds his model upon idea of cultural diffusion, Perlès (2001; 2005) asserts that small groups of colonists settled in Europe. The author constructs her theoretical model not only with a comparison of ceramic sequences and typological similarities between the stamp-seals of both regions (as Makkay does), but also by paralleling other elements of the 'Neolithic package' within SE Europe and Anatolia. The main problem when citing small objects (such as sling bullets, discs, belt-hooks, ear studs, stamp-seals, stone bowls, bone *spatulae* etc.) from the 'Neolithic package' as evidence of diffusion lies in the fact that some of the similarities arise merely from the function of the objects (as in the case of sherd spindle whorls, sling bullets and axes). On the other hand, objects requiring particular technical knowledge, and stylistically distinctive artefacts (such as figurines, bone hooks, earstuds and stamp-seals), which could suggest connections between Europe and Anatolia/ Levant, are quite often dated several centuries apart. The contextual isolation of small objects is another big hindrance. These problems are recognized by author, yet they are immediately suppressed: Perlès (2001: 54) supports her Neolithisation model exactly with those analogies

previously described as problematic. Since the author is trying to solve the problem of the huge temporal discrepancies between similar elements of the 'Neolithic package' in the Levant, Anatolia and Europe, she introduces the idea of small groups repeatedly colonizing Greece (Perlès 2005:280):

"I have already argued (Perlès 2001) that I viewed the colonisation of Greece as a maritime phenomenon, by small groups of different origins – mostly Levantine – and, I would now add, at different periods. Many stylistic and technical parallels can be underlined between the two regions ..."

This hypothesis triggers the questions why would Levantine colonists abandon their homeland and migrate into Greece at different periods. If Perlès (2001) looked for the reasons for the departure of colonists within the PPNB exodus and the collapse of the ritual elite in the first place, the new variant of the model leaves many questions unanswered: did different communities abandon their land for the same reasons? What kinds of reasons were they? Over what kind of time span did these colonisations occur?

Deconstructive claims can be found in the case of stamp-seals also. Greek specimens are thus chronologically and typologically compared with Çatal Hüyük stamp-seals. As Perlès (2001:54) writes: "... the bone hooks, stamp-seals and ear studs from Thessaly undoubtedly strongly resemble those of Çatal Hüyük." Hence, interpretations by Perlès (2001:54) and by Makkay (1984:79–80) are diametrically opposite to each other. If Perlès (2001:54) compares Thessalian stamp-seals with objects from Çatal Hüyük, Makkay (1984:79–80) on the other hand, sees no typological similarities between Anatolian and Thessalian stamp-seals at all. Instead, he emphasizes resemblances between Levantine and Thessalian objects. Therefore, the case of Thessalian stamp-seals raises the question of scientific objectivity in searching for typological parallels between stamp-seals from different regions. Looking for the place of origin with the help of a typology of motifs is extremely problematic, since patterns on Neolithic stamp-seals consist of simple geometrical designs which are not culturally and chronologically specific. Perlès (2001:288–289), obviously aware of this fact, refers to it when writing about the problems of individual identification on the grounds of luxury stone stamp-seals:

"Stone 'stamp-seals' are not only rare, but, on first reading, they would seem to be good candidates

for individual identification. Unfortunately, this is the one interpretation that can be thoroughly rejected: the motifs consist of a small range of geometric patterns that can be found from the Indus to the Carpathians. There is clearly no attempt at any individualization of the motifs, and therefore, of their owner."

The author employs the universality of the motifs as an argument against the individualization of stamp-seals, yet she 'overlooks' the same argument the moment she uses stamp-seals to support her Neolithisation model.

Now, it is appropriate to note also some of the approaches that offer alternative perspectives on Neolithic stamp-seals of SE Europe. An analysis undertaken by Dzhafezova (2003) has shown a correlation between the shapes of the bases and the types of motifs found on them. Equally significant is the fact one group of stamp-seals shares decorations with other categories of artefacts (particularly with contemporary ceramic vessels, figurines and 'altars'), while the other does not (Dzhafezova 2003:103–104). Consequently, the author concludes that stamp-seals constitute a multifunctional group of artefacts, some of them carrying more specific types of information than others.

On the other hand, Chapman (2000) observes stamp-seals through the prism of fragmentation. Statistical analysis has shown the majority of the stamp-seals were not intentionally broken. Unlike the group of objects with 'incised signs', the purpose of stamp-seals was not to enchain information within two intentionally broken pieces, but to imprint the motif on some other kind of material.

We conclude this short review by summing up some points presented by Budja (2003). Stamp-seals are sometimes documented at Neolithic sites together with figurines, 'altars', pins, amulets, anthropomorphic and zoomorphic vessels, and painted pottery. Budja propose that these assemblages indicate the function of stamp-seals (Budja 2003:124).

While the majority of works treat stamp-seals as an element of the 'Neolithic package' and therefore as inactive material reflections of the Neolithisation process in SE Europe, as a typological fossil which should help locate their place of origin, as static, fixed entities within firmly defined social networks and last, but not least as the immovable foundation stones of meta-narratives, we strive towards alter-

native approach. In order to enliven the Neolithic stamp-seals of SE Europe, we employ a phenomenological approach towards material culture, expressed through the concept of the cultural biographies of artefacts (cf. Hoskins 1998; Gosden, Marshal 1999; Tilley 2004; Knappett 2005; Hoskins 2006; Tilley 2006; Skeates 2007). Cultural biographies of stamp-seals and therefore both their material and non-material attributes are thus presented through the concepts of affordances, constraints, semiotic triad, icon, index and symbol (cf. Knappett 2005).

Within networks of meaning

Affordances and constraints

Neolithic stamp-seals are first and foremost objects used for stamping; and therefore artefacts meant for reproducing the motifs they carried on their bases.⁶ We shall prove this statement with an analysis of the *physical affordances*⁷ of the objects. Since affordances derive from the material characteristics of artefacts, let us describe them first.

What we can observe directly in the case of stamp-seals, without using cultural knowledge, is that they are portable objects, having a decorated base, and a handle growing out vertically from the base. The surface of the base is usually flat, or sometimes slightly convex/concave. In all of the three cases, the centre of gravity of stamp-seals remains in the lower part of the object. The artefact therefore reaches optimal stability when placed on a flat surface in such a way that the base and surface are parallel. It is crucial to note that the motif, when in this position, despite being the most important constitutive element of a stamp-seal, is not visible (Fig. 4).

The majority of the documented objects (Makkay 1984; 2005) are of clay, although some stone speci-

mens occur in Greece.⁸ Both materials give solidity to the objects. Bases range in size from around 3 and 7 centimetres, while the height of the objects varies between 5 and 8 centimetres. Bases are modelled in various rectangular, circular, oval, rhomboidal forms, sometimes even in cross-like or foot-like forms.⁹ They are decorated with geometrical motifs in high or low relief. Patterns include circles, dots, spirals, labyrinths, crosses, chevrons, triangles, and straight, curving and zigzag lines. Some handles are perforated. Since the handle is usually small and formed in a cone-like fashion, we reach optimal graspability if we handle it with the thumb and second finger, with the other fingers closed. If the handle is big enough, it can be grasped with all fingers forming a fist (Fig. 4).

The following four characteristics are reckoned among the physical affordances of stamp-seals: the affordance to stand in the most stable position on the level surface when the base is in parallel with the surface; the affordance to manipulate the stamp-seal easily when the handle is grasped; the affordance to imprint geometrical designs on various surfaces; the affordance to be suspended on a string as a pendant in the case of stamp-seals with perforated handles (Fig. 4).

The crucial affordance of stamp-seals to transfer geometrical designs to various materials originates from the following combination of physical affordances: that of having a handle, to imprint geometrical designs with the base of a stamp-seal on various surfaces and to stand in the most stable position on level surface when the base is parallel with the surface. Because of these, the principles of making images with stamp-seals differ greatly from those of making images with other types of tools. As Skeates (2007: 194–195) puts it:

⁶ However, this does not mean all stamp-seals were included in the same networks of meaning; neither did they share the same functions. We intend to demonstrate that stamp-seals gradually developed some secondary functions.

⁷ The concept of affordances was introduced by psychologist James Gibson (1979) when developing the notion of direct perception (Knappett 2005: 44–58). The potential of objects for various forms of actions (*i.e.* affordance) was described by Gibson (1979: 139) as follows: “The observer may or may not perceive or attend to the affordance, according to his needs, but the affordance, being invariant, is always there to be perceived. An affordance is not bestowed upon an object by a need of an observer and his act of perceiving it. The object offers what it does because of what it is.”

⁸ We list Greek Neolithic sites and the number of stone stamp-seals discovered on them. Achilleion: 1 (Gimbutas 1989b: 212); Nemea: 1 (Blegen 1975: 272); Nessonis: 3 (Makkay 1984: 41–42; Theocharis 1973: Fig. 272: e); Pyrassos: 1 (Makkay 1984: 47); Sesklo: 2 (Arachoviti 1996a: 333; 1996b: 333); Tsani magoula: 1 (Makkay 1984: 62); Zerelia: 1 (Makkay 1984: 66); a stamp-seal of unknown provenience from the museum in Larissa (Onassoglou 1996b: 332). See Fig. 11.

⁹ Stamp-seals with a base in the form of a foot were documented at 4 Neolithic sites in SE Europe: Gura Vaii (Romania), Bikovo-Dončova mogila (Bulgaria), Nessonis (Greece), Szentes (Hungary) (Makkay 1984: 13, 26, 41, 70). A handle in the form an animal head is the other special characteristic of a stamp-seal from Szentes.

The type of stamp-seals with a base shaped like a foot has wide chronological and geographical distribution. It appears not only at Neolithic sites in SE Europe, but also in the Neolithic Byblos, as well as at Minoan and Levantine Bronze Age sites (cf. Younger 1995).



Fig. 4. Physical affordances of stamp-seals. Photograph by B. Širca.

“What sets such objects apart from other hand-held artistic tools, such as brushes, gouges and sharp points (which were also used in the Neolithic to produce similar images on a range of media), is their ability to reproduce – simply, quickly and manually – a large number of almost identical copies of an original graphic image ... “

Can we recognize some of the *constraints*¹⁰ that represent decisive counterpart to the objects’ affordances? First, let us describe some of the physical and logical constraints which can be defined through the undertaken experiment.

The experiment was undertaken with the aim of testing three different types of stamping techniques: stamping on unbaked, unleavened bread, stamping on textile, and printing on human skin. Therefore, some replicas of stamp-seals with high and low relief motifs were made.

When examining stamping on different materials, we came to the following conclusions: if stamping unbaked, unleavened bread, all types of motifs are clearly imprinted on it, no matter in what kind of relief they are designed. The major constraint of marks of this kind is thus not connected

with the type of relief motif, but with the property of the unleavened bread. When unleavened bread is baking, air bubbles appear in the dough, therefore reducing the visibility of the motif (Fig. 5).

The main constraint, when stamping on textiles originates from the modelling bases of Neolithic stamp-seals. If the textile to be stamped is put on a solid flat surface, only the stamp-seals with completely level bases leave imprints on it. This condition is rarely fulfilled in the case of Neolithic stamp-seals, whether a motif is in high or low relief. The majority of objects has, as a consequence of manual modelling, a pattern on the slightly unevenly levelled surface of the base (cf. Makkay 1984).¹¹ Now, when examining stamping on textile, the following question should be asked: did the people of the Neolithic know how to fix dyes on textiles? Contrary to the recognized fact that people employed dyes made from minerals, plants or animals in the Neolithic (Barber 1991.223–243), the question as to whether people knew of a sub-



Fig. 5. Baked unleavened bread with imprinted motifs. (A, B, C) various types of motifs. Photograph by B. Širca.

¹⁰ Norman (1998.82) defines constraints as “... whereas affordances suggest the range of possibilities, constraints limit the number of alternatives.” We need to distinguish four types of constraint. Physical constraints are thus conditioned by the material and physical characteristics of an object; semantic and logical constraints rely upon the meaning of the situation in which an object resides; while cultural restraints are preconditioned by cultural conventions (Knappett 2005.52–54).

¹¹ We managed to get good quality imprints only when a soft backing (i.e. foam) was put under the textile (Fig. 4).

stance for fixing dyes and preventing discolouration when in contact with water, remains unanswered.¹²

Like bread, the skin is a type of soft material enabling good imprints of all types of motifs (Fig. 6). Therefore, constraints when stamping human skin are less conditioned by the physical properties of objects than by cultural contexts. Some of the cultural constraints could be associated with these questions: on what occasions do people decorate their skin with paintings? Do modes of decorating men and women differ? Who is allowed to decorate their skin with paintings? When printing on skin, how many pintaderas and colours are employed?

Let us reiterate: due to the physical constraints we observed through experiment, it is very probable that stamp-seals were not used for stamping solid and flat surfaces (such as walls or textiles placed on solid surface). More probably, they were employed for stamping soft materials (e.g. bread, skin).

The semiotics of stamp-seals: iconicity, indexicality, symbolism

Since stamp-seals are primarily objects designed to carry and reproduce motifs on various surfaces, we should analyze the semiotics¹³ of the imprints foremost. Inasmuch as imprints are not preserved, we can partially reconstruct their semiotics through the observation of motifs modelled on the bases of stamp-seals. However, we should not forget when defining networks of meaning between stamp-seals, people and other artefacts, that we are primarily defining relations between a type of tool, people and other objects. Some aspects of relations between imprints, objects and other people will remain unreachable.

Iconicity

When considering *iconicity*¹⁴, we must ask what type of artefacts stamp-seals resembled. Since iconi-



Fig. 6: Examples of the body paintings – done either with sharp points or with pintaderas – of the people of Kau and from the experiment. Photographs by Riefenstahl 1976; Širca.

city of stamp-seals resides primarily within their visual characteristics, various motifs, as the main components of analyzed objects, are the most important sources for the relation of visual similarity between Neolithic stamp-seals and other categories of objects.

In the case of cylinder seals and stamp-seals, the similarity of the motifs remains broad: both types share basic geometrical designs. Yet there are also some major differences. Motifs on cylinder seals are thus often executed in zones; moreover, rolling of the cylinder enables the filling of a larger surface continually than stamping itself (cf. Collon 1990).

It has been shown that similar patterns are shared by certain stamp-seals and other types of artefacts: synchronic vessels, figurines and 'altars' may be decorated with patterns of straight or curving parallel lines, zigzag lines, concentric circles, spirals, and meanders, or with deeply engraved or impressed dots, which appear on some stamp-seals (Dzhanfezova 2003). However, we can assume that motifs on stamp-seals exhibited a visual similarity with weaving, basketry decorations and wall paintings also.

¹² Barber (1991.175) mentions a textile find from the site at Lago di Ledro which was described by the excavator as a textile decorated by stamping with resinous substances. Perhaps these substances were used to fix dyes.

¹³ When writing on the semiotics of artefacts, we employ a modified Peircean model (cf. Pharies 1985; Peirce 2004; Knappett 2005). Three different types of signs are thus acknowledged: an icon, an index and a symbol. Each of those signs is defined by specific relationship existing between object and a sign, which in Peirce words "... stands for something, its object" (Pharies 1985.14). According to Peircean model various things such as objects, animals, plants, people, emotions, when having a specific relationship with their object, become sign (Prijatelj 2007.85–87).

¹⁴ Peirce defines an icon with following words: "I call a sign which stands for something merely because it resembles it, an icon." (Pharies 1985.34). Thus a portrait is an icon of the portrayed person (visual similarity), onomatopoeic words are icons for animal sounds or natural phenomena (aural similarity), a ship-like cloud is an icon for a ship (visual similarity), and artificial leather is an icon for genuine leather (visual and tactile similarity) (cf. Knappett 2005.95–100; Prijatelj 2007.88).

Since none of these are preserved, assumptions are grounded on ethnographic studies (cf. Ortman 2000) and excavations of Anatolian Neolithic sites. The excavated material from Haçilar, Can Hasan and Çatal Höyük yielded stamp-seals, pottery fragments, parts of wall paintings and wall reliefs with identical motifs of a rotating meander with a central dot, a vegetal motif, a hand, a bear, and a leopard (Milojčić 1964: 59–62; Türkcan 2003.on-line; 2007. in this volume) (Figs. 7, 8).

A special form of visual similarity could be recognized among a few specimens of anthropomorphic, zoomorphic stamp-seals, people, animals and certain types of objects. Contrary to the majority of analyzed objects, having a base and handle modelled as a simple geometrical body, these specimens are characterized by a base or handle designed as part of human or animal figures.¹⁵ That is why this particular group of Neolithic examples could be interpreted as icons for man or animal but also as icons for human, animal figurines, as well as anthropo- and zoomorphic vessels (Fig. 9).

Visual similarity represents the loosest mode of possible relationships between stamp-seals as icons and their objects. Hence, artefacts, corded together with visual similarity, share only associative connections. Stamp-seals can be therefore understood as icons of cylindrical seals, meaning, in the case of settlements

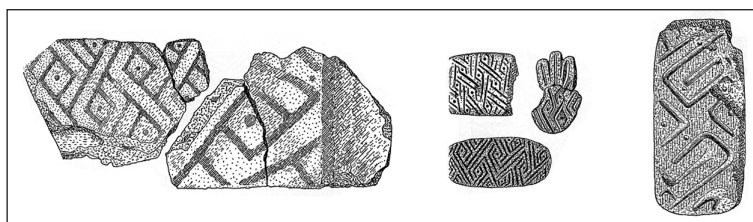


Fig. 7. Anatolian stamp-seals and fragments of wall paintings with identical motifs (after Milojčić 1964. Abbs. 1, 2).

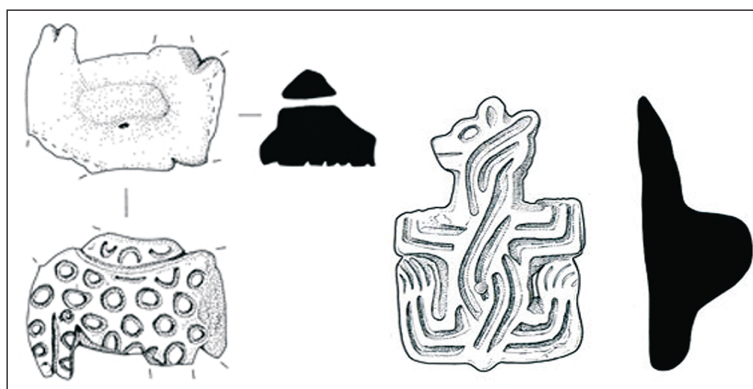


Fig. 8. Stamp-seals with leopard and bear from Çatal Höyük (after Türkcan 2003.on-line).

where both types were used (e.g. Sitagroi) (cf. Renfrew 2003), the view of one could trigger an association of the other (and vice versa). Similarly, stamp-seals could also become icons of vessels, human and animal figurines, 'altars', textiles, basketry or wall paintings, when having identical motifs. Therefore, when seeing a stamp-seal with a specific motif, pots, figurines, 'altars', textiles, basketry or wall paintings with similar motifs could come to the mind of a Neolithic observer. Likewise, anthropo- and zoomorphic stamp-seals could become icons for people, animals or anthropo- and zoomorphic vessels and figurines. Again, the view of anthropo- and zoomorphic stamp-

seals could initiate associations with other types of artefacts modelled on human or animal forms. Presumably, during associative lines of thought, not only objects come to mind due to their visual similarity with stamp-seals, but so do activities and ideas which are indivisibly connected with them (cf. Knappett 2005.114).

However, if we wish to define tighter connections between stamp-seals, people and other types of objects, we need to search for other modes of relationships between them.



Fig. 9. Zoomorphic stamp-seal (after Makkay 1984. Fig. XXX: 1) and anthropomorphic examples (after Makkay 1984. Fig. XII: 9; Gimbutas 1984. Fig. 47; Bilbija 1985. Fig. 3).

¹⁵ The only known specimen of a stamp-seal with zoomorphic handle comes from Szentos, Hungary (Makkay 1984.70). Five documented examples with anthropomorphic handles derive from Usoe, Bulgaria (Makkay 1984.63); the neighbouring area of Dikili Tash, Greece (Makkay 1984.18); Cerje-Govrelvo, Macedonia (Bilbija 1985.36); Zelenikovo-Slatina, Macedonia (Makkay 1984.66) and Smederevska Palanka, Serbia (Gimbutas 1984.91).

Indexicality

When exploring the *indexicality*¹⁶ of stamp-seals, one must consider relationships of *contiguity*, *factorality* and *causality*. To recognize these we need to tackle the following questions: what kind of artefacts do we usually find in spatial contiguity with stamp-seals? To what extent is the stamp-seal an index for various other objects, activities and thoughts (cf. Knappett 2005.114–115)?

One of most obvious aspects of contiguity relates to the question of how stamp-seals were used for making imprints. Were colours applied to the bases of stamp-seals and then stamped on human skin, walls, textiles or wooden objects? Were stamp-seals merely impressed onto softer surfaces, or were they heated to stamp wood, human or animal skin? Even though imprints do not survive, different traces on the bases of stamp seals hint at various uses: several objects with traces of colour on the bases have been documented,¹⁷ one with an extremely burnt base,¹⁸ and some with heavily worn base surfaces have also been found. Considering the preserved traces on the bases of stamp-seals, as well as the results of the undertaken experiment, the Neolithic stamp-seals of SE Europe can be interpreted as indexes for the use of colours, and as indexes that speak against stamping on solid and flat surfaces.

A further aspect of indexicality relates to the modes of production of stamp-seals. The way it is modelled indicates the input of effort and work invested into the making of a specific object. Every stamp-seal could therefore be seen as index of all those activities that caused the artefact to take on its final form. Different levels of precision can be recognised in the modelling of stamp-seals.¹⁹ The range in quality is most obvious in the modelling of motifs. While designs on clay objects vary from accurate to superficial, the execution of motifs on the stone specimens is extremely precise (Fig. 10).

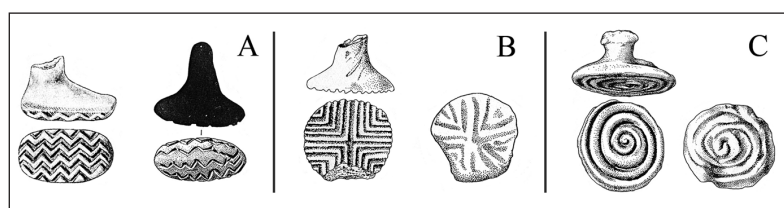


Fig. 10. Selected examples of differences in modelling the same motif. A: zigzag (after Makkay 1984.Fig. IV: 1, 8). B: cross (after Makkay 1984.Fig. XV: 189; Fig. XXIII: 4). C: spiral (after Makkay 1984:Fig. XVIII: 1, 6).

Stone stamp seals (which derive exclusively from Greek Neolithic sites) could therefore be understood as causal indexes for the great skill, effort and time that were put into their production, most probably by craftsmen specialized in making stone objects (cf. Perlès 2001.288–289). These specimens (Fig. 11) share a magical quality, since they are produced with such technical virtuosity that they catch the observer's attention and enchant him/her (cf. Gell 2006; Hoskins 2006).

Given that stamp-seals are not only causal indexes for modes of their production, but also causal indexes for agents who used them, we need to pose the following question: were stamp-seals employed by specific gender, age or status groups? In order to approach the answers, we analyse the spatial contexts in which stamp-seals are embedded. First, we analyse the relationships between stamp-seals themselves within closed archaeological contexts. Second, we observe the associations between stamp-seals and other categories of objects within closed archaeological contexts. Finally, we analyse the intra- and intersite distribution of contemporary stamp-seals.

When dealing with the problem of the spatial contexts in which stamp-seals are embedded, one is confronted with several taphonomic filters: publications of archaeological sites usually quote only those archaeological layers in which stamp-seals were found, while data on archaeological features are usually missing. It may even happen (especially in older literature) that even facts on the archaeological layers in which stamp-seals were found are not presented.

¹⁶ Peirce defines an index as a sign which "signifies its object solely by virtue of being really connected with it. Of this nature are all natural signs and physical symptoms" (Pharies 1985.39). An index can be in one or more of the following types of relationship with its object: contiguity, causality and factorality. Thus puddles are icons for rain (causal relationship), a market sign is an icon for a market (relationship of contiguity and factorality), and the smell of freshly baked bread is an icon for the bread (contiguity and causality) (cf. Knappett 2005.91–95, 97–100; Prijatelj 2007.88–89).

¹⁷ Traces of colour were discovered on the following objects: on 3 stamp-seals from Frumușica-Cetățuia (Makkay 1984.23), on a stamp-seal from Oltszem (Makkay 1984.42) and on a cylinder seal from Sitagroi (Renfrew 1987b.343).

¹⁸ Only one specimen from Frumușica-Cetățuia is mentioned within Makkay's catalogue as a stamp-seal with burnt base (Makkay 1984.42).

¹⁹ Modelling clay stamp-seals is not a demanding and time-consuming task. With only basic skills in modelling clay, one could make a stamp-seal within half an hour.

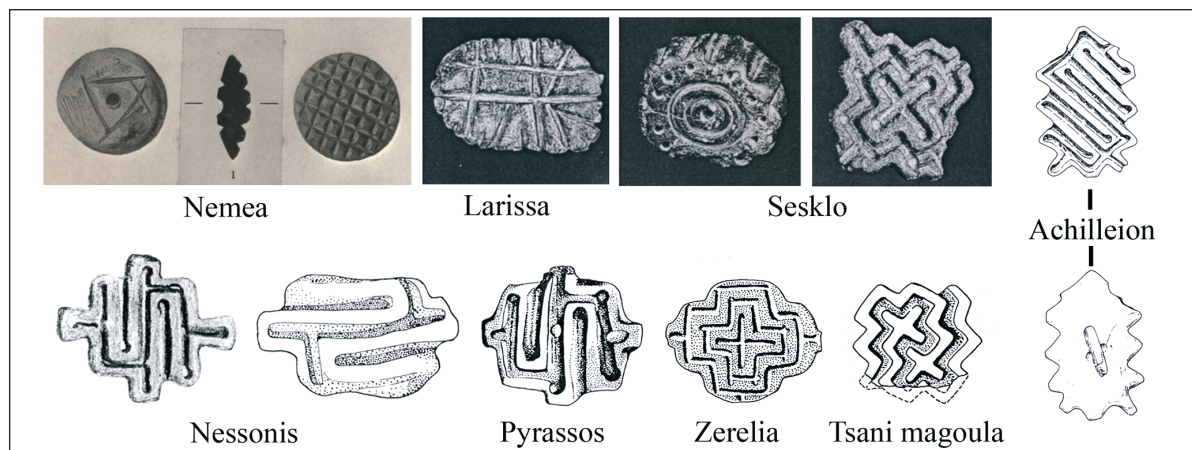


Fig. 11. Stone stamp-seals from Greek Neolithic sites (after Blegen 1975. Plate 69: 1; Makkay 1984. Fig. III: 1, 3, 6; Fig. XII: 1, 2; Gimbutas 1989b. Fig. 7.73; Arachoviti 1996a. Fig. 280; 1996b. Fig. 281; Onassoglou 1996b. Fig. 278).

The publications of the following sites Frumușica-Cețățuia, Gura Baciului (Romania); Karanovo, Rakitovo, Vinica-Kljisedjik (Bulgaria); Achilleion, Eutresis, Sesklo, Sitagroi (Greece); Cerje-Govrlevo (Macedonia); Grabovac-Vinogradi (Serbia), Endröd 39, Alpár-Nagyvárdomb and Hódmezővásárhely-Zsoldos (Hungary) are exceptions. These are sites at which stamp-seals were discovered, as well as documented, within closed archaeological contexts.²⁰ The listed sites yielded stamp-seals within buildings, working areas or waste pits (Tab. 2). Since the role of objects in waste pits as a filling is secondary, we focus primarily on other archaeological features.

We must stress that stamp-seals appear within buildings and working areas regularly as one specimen and only exceptionally as two or three specimens, which is the most indicative fact that can be extracted from Table 2. All archaeological features, from the platform in Gura Baciului, the burnt building in Karanovo, the sanctuary and public building in Rakitovo, the building in Vinica-Kljisedjik, the clay bench and street near to one of the buildings in Achilleion, the working space in Sitagroi, the building in Govrlevo up to the building in Grabovac-Vinogradi, yielded only one stamp-seal (Tab. 2). The number of stamp-seals differs only in two cases: two were discovered within the area of a lower platform near to one of the hearths at Frumușica-Cețățuia, while three stamp-seals were found in House A in Sesklo (Tab. 2). Even though the number is higher in the cases men-

tioned above, the motif remains the same: both examples from Frumușica-Cețățuia shared a spiral design, while all three examples from House A in Sesklo are decorated with concentric circles.

This pattern is typical of the Anatolian site at Çatal Höyük also. Even though the stamp-seal contexts within the site are more diverse and include, besides dwellings and waste material, shrines and burials (*Türkcan 1997.on-line; 2003.on-line; 2004.on-line; 2005.on-line*), the distribution pattern of one stamp-seal within a building (either a dwelling or a shrine) (*cf. Milojević 1964.61*) remains similar to the SE European pattern.

Recognized distribution patterns (Tab. 2) indicate that specific motifs were connected with particular Neolithic households and were therefore used as identification signs for those households. Although this hypothesis needs further examination through an analysis of the spatial distribution of synchronic stamp-seals within a site, the fact that several from the same closed context shared the same motif, sustains it for the moment.

Now let us observe the relationship of contiguity between stamp-seals and other categories of objects within closed archaeological contexts (Tab. 3).

While doing so, we need to consider the following: the available examples from sites at Gura Baciului,

²⁰ We list the complete literature on analysed closed archaeological contexts: Frumușica-Cețățuia (*Makkay 1984.23*); Gura Baciului (*Lazarovici 1995.368, 396*); Rakitovo (*Radunčeva et al. 2002.17-22, 26-30; Matsanova 2003.65*), Karanovo (*Makkay 1984.31*), Vinica-Kljisedjik (*Makkay 1984.64*); Achilleion (*Winn, Shimabuku 1989.53-54, 63-64; Gimbutas 1989b.212, 215, 217*), Eutresis (*Makkay 1984.21-22*), Sesklo (*Kotsakis 1981*), Sitagroi (*Renfrew 1986.212-217; 2003.416; Nikolaidou, Elster 2003.456-458*); Cerje Govrlevo (*Bilbija 1985.35-36*); Grabovac-Vinogradi (*Makkay 1984.24*); Endröd 39 (*Makkay 1984.19-20*), Alpár-Nagyvárdomb (*Makkay 1984.10*); Hódmezővásárhely-Zsoldos (*Makkay 1984.28*).

Site	Dat.	Cultural feature	Closed context / all documented stamp-seals	motif												
				zigzag	conc. circles	spiral	impressed dots	labyrinth	conc. squares	square with parallel lines	grid	parallel lines	unusual signs	Anthropomorph. s.		
Frumușica-Cețațuia	LN	dwelling	2/8			•										
	Cucuteni A	lower platform near the hearth				•										
Gura Baciului	EN	dwelling	1/1				•									
	Starčevo-Criș IVA	Platform 6a (horizon IV)														
Karanovo	LN	dwelling	1/9												•	
	Karanovo VI	burnt building														
Rakitovo	EN	sanctuary?	1/2													
	Karanovo I-II	House 8 (phase I)					•									
Rakitovo	EN	public building?	1/2	•												
	Karanovo I-II	House 10 (phase I)														
Vinica-Kljisedik	LN/En	dwelling	1/1		•											
		House 3														
Achilleion	MN	clay bench	1/2						•							
	Achilleion IIIb/Sesklo	near to large, circular hearth														
Achilleion	MN	dwelling/courtyard/street?	1/2		○											
	Achilleion IVb/Sesklo	at E wall														
Eutresis	LN	waste pit	1/2						•							
Sesklo	MN III	dwelling	3		•											
Sitagroi	LN	dwelling/outer working area	1/6			•										
	Sitagroi III	burnt building; square MM, layers MM 17, 21-50														
Cerje-Govrlevo	MN	dwelling	1/1												•	
	Anzabegovo-Vršnik IV	House 2 (horizon IV)														
Grabovac-Vinogradi	EN/MN	dwelling?	1/2						•							
Endröd 39	EN/MN	waste pit	3/5	•					•							
	Körös	pit 1, upper ashy layer			•											
Alpár-Nagyvárdomb	EN/MN	waste pit	1/1								•					
	Körös															
Hódmezővásárhely-Zsoldos	EN/MN	waste pit	1/2	•												
	Körös															

Tab. 2. Types of stamp-seals appearing within closed archaeological contexts.

Rakitovo, Achilleion, Sitagroi and Govrlevo differ in their chronology, cultural group affiliation, size of settlement, spatial organization, and way of life. Hence, there are major differences between the listed sites according to the variety and amount of excavated material. Acknowledging mentioned, the search for patterns within closed archaeological contexts remains a demanding and even a somewhat problematic task.

However, when analyzing the listed examples, we notice the following: there are several examples of buildings in Rakitovo, Sitagroi and Govrlevo, which due to the excavated material, are described as ob-

jects with special functions. All four buildings from the sites mentioned above yielded artefacts which are rare in other parts of settlements (Tab. 3). The sanctuary in Rakitovo (House 8, Phase I) is thus where both anthropomorphic vessels from the site were discovered, as well as twelve bucrania from the thirty within the site's documented specimens (Fig. 12). House 8 also yielded an unusual structure, perhaps an altar, without known analogies and great quantities of painted pottery (*Matsanova 1996; Radunčeva et al. 2002; Matsanova 2003*). A special status for House 10 in Rakitovo has been assumed due to its spatial organization (*Macanova 2000.60; Radunčeva et al. 2002*). A peculiar character for

Site	Dat.	Cult. feature.	Nr. of stamp-seals	Artefacts from closed archaeological deposits								
				painted pottery	anthropomorph. pottery	zoomorph. pottery	figurines	animal figurines	altars	amulets/bucrania	obsidian tools	other
Gura Baciului	EN	dwelling	1									Stone tools, pottery
	Starčevo-Criș IVA	platform 6a (horizon IV)										
Rakitovo	EN	dwelling	1	●	● (2)					● (1)	● (12)	Stone, polished and bone tools, biconoid and round sling bullets, pottery
	Karanovo I-II	House 8 (phase I)										
Rakitovo	EN	public b.?	1	●								Stone, polished and bone tools, biconoid and round sling bullets, pottery, bobbins, loom-weights
	Karanovo I-II	House 10 (Phase I)										
Achilleion	MN	clay bench	1	●			● (7)		● (1)		●	axe, grinders, querns, fine pottery, ladle
	Achilleion IIIb/Sesklo	near to the large, circular hearth										
Achilleion	MN	dwelling/courtyard/street?	1		● (1)		● (7)					broken stone tools, grinders, querns
	Achilleion IVb/Sesklo	near E wahn										
Sitagroi	LN	dwelling/outer working area	1	●		● (2)	● (29)		● (6)			Stone, polished and bone tools, querns, pottery, ladles, spindle whorls, miniatures, ornaments (spondylus bracelet)
	Sitagroi III	burnt building; square MM, layers MM 17, 21-50										
Govrlevo	MN	dwelling	1	●	● (1)				● (1)			Stone and bone tools, quern, askos
	Anzabegovo-Vršnik IV	House 2 (horizon IV)										

Tab. 3. Stamp-seals and other categories of objects within closed archaeological contexts.

House 2 in Govrlevo is suspected because of an anthropomorphic vessel found there, or perhaps a figurine, also with no known parallels and because of the anthropomorphic altar, which is one of the specifics of the Anzabegovo-Vršnik cultural group (Bilbija 1985.35–36; Zdravkovski 2006.109) (Fig. 13). While the described buildings at Rakitovo and Govrelvo are marked as shrines by excavators, a burnt house from phase III at Sitagroi (Fig. 14) is defined as a place for extracting copper ore. Special finds excavated within the building include plastic vessels, a stone vessel, fourteen miniature models (of houses, hearths, vessels, furniture and axes), and objects used as mnemonic devices (Elster, Nikoladiou 2003.441–442; Nikoladiou, Elster 2003.456–458).

The four cases described show stamp-seals appear within contexts with rare and exceptional ritual objects. Unlike figurines and altars connected with various cults and rituals, yet appearing in larger numbers at Neolithic sites, anthropo- and zoomorphic vessels, bucrania and miniature models are found in much smaller numbers. The presented pattern of spatial contiguity between stamp-seals and exceptional objects is confirmed once again in the two cases from Achilleion: there, a stone stamp-seal was found on a clay bench together with figurines, an altar and a ladle (Fig. 15). In a second case (Fig. 16), a clay stamp-seal was discovered with an anthropomorphic vessel (Gimbutas 1989b.215, 217–218).

However, there are also some contexts in which no spatial contiguity between stamp-seals and cult objects was documented. Such is the case of platform VIa at Gura Bacuilui (Fig. 17). Three obsidian blades might be pointed to as significant finds among the pottery, stone and bone tools excavated within the platform (Lazarovici 1995. 368).

These assemblages indicate that stamp-seals appear in a relationship of contiguity with cult objects. However, it is also evident that stamp-seals were discovered with a great number of everyday objects (e.g. coarse ware, stone and bone tools, grinders, querns,



Fig. 13. Cerje Govrlevo, House 2. Selection of artefacts (after Bilbija 1985.Fig. 2; 3, 4).

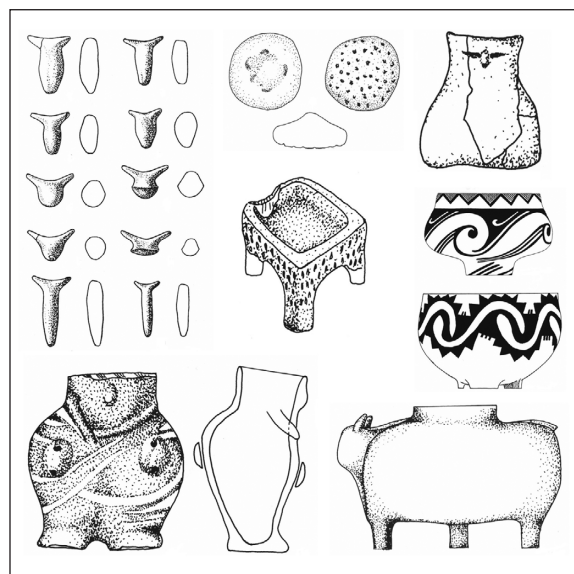
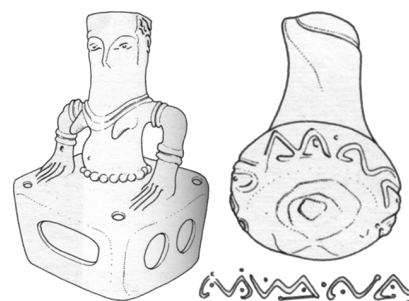


Fig. 12. Rakitovo, House 8, (Phase I). Selection of artefacts (after Budja 2003.Fig. 7.1).

loom weights). Even though the analyzed sample allows the interpretation of stamp-seals along with cult objects as a factorial index, indicating complex rituals, further investigations of a larger sample are needed to confirm this.

Given that negative data are as important as positive data, when describing the spatial contiguity of stamp-seals and cult objects, we have to mention the absence of stamp-seals within the ritual building²¹ at Nea Nikomedeia. The only building from the site with completely published material, consisting of 5 female figurines, 2 oversized axes, 2 unusually gourd-shaped pottery vessels, 2 large caches of unused flint blades and several hundred clay roundels (Rodden 1964.114), did not yield even one stamp-seal, although the site is known as one with the highest



21 Several interpretations are offered for the building of unusual size, ranging from its being a collective ritual building (Rodden 1964; Pyke 1996), the dwelling of a family involved in long-distance trade (Halstead 1995), to being a public place with economic and social functions (Talalay 1993).

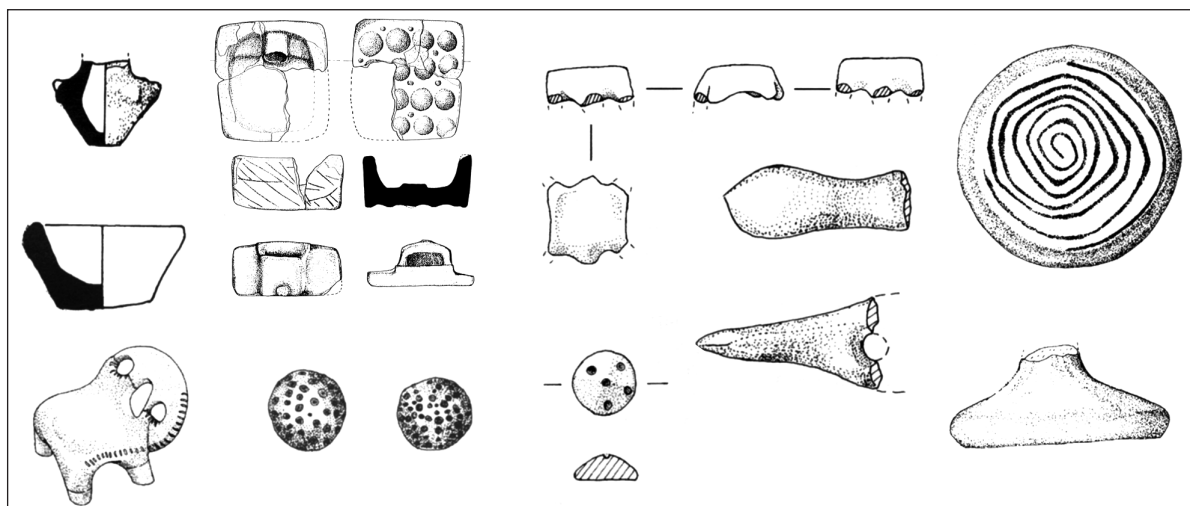


Fig. 14. Sitagroi, burnt house (phase III). Selection of artefacts (after Renfrew 1986.Fig. 8.20; Elster, Nikolaidou 2003.Fig. 11.25; Fig. 11.34; Fig. 11.39; Fig. 11.45; Fig. 11.53; Renfrew 2003.Fig. 10.6; Fig. 10.7; Fig. 10.8).

number of stamp-seals discovered.²² Could it, therefore, be assumed that stamp-seals are indexes of people whose high status was not conditional upon material wealth or ritual leadership, but on other parameters? Since the relationship of factorality between stamp-seals and other objects from Nea Nikomedeia remains, due to (un)published data, unknown, these questions remain unanswered.

In continuing our discussion on factorality, we shall observe the spatial distribution of stamp-seals with same motifs at the regional level to discover what type of meaning networks conditioned with the use of stamp-seals existed between Neolithic settlements. We need to acknowledge when writing on the spatial distribution of motifs on a range of objects (*e.g.* stamp-seals, figurines, 'altars', vessels, wall paintings, textiles) that we are broaching the subject of style. Therefore, the recognized large-scale distribution of motifs of zigzag, labyrinth, impressed dots and spirals (*Halstead 1989; Bailey 2000; Perlès 2001; Budja 2003*) could be understood as a factorial index for the inner dynamics of the style or *common difference* (*cf. Wilk 1995; 2004*). It was actually common difference that influenced the selection of motifs in such a way that some were limited to small-scale distribution (*e.g.* motif of shallow impressed dots, labyrinth) while others (*e.g.* motif of zigzag, spiral) occurred across large areas of the Balkans.

When analyzing the spatial distribution of motifs appearing over large areas, we have to consider large variations in their execution, as is most evident in the case of the zigzag and labyrinth (Figs. 18. 19).

That said, there are some stamp-seals with completely or nearly identically executed motifs. Now, let us allege some of those cases (*cf. Prijatelj 2007*). First, the most familiar and also the only one quoted in texts (*Halstead 1989; Perlès 2001*) is the motif of a complex linear labyrinth occurring on stone stamp-seals from Pyrassos, Nessonis and on a clay stamp-seal from Philia (Fig. 20).²³ There are only two slight differences in the execution of the motif. Thus lines of the labyrinth are wider on the specimen from Pyrassos, which is probably a consequence of using clay as raw material. The specimen from Nessonis lacks a central dot.

The similarity of the complex concentric labyrinth motif on a stone example from Sesklo and a clay specimen from Tsani magoula is inescapable (Fig. 21). The only difference in design derives from the fact that the Tsani magoula example has two concentric ways modelled around the central cross, while the Sesklo example has only one.

Stamp-seals with identical motifs occur outside Greece also. Thus we mention one from Transilvanian

²² While stamp-seals generally appear in small numbers, ranging between one and four per site (*cf. Makkay 1984*), higher numbers of specimens found were documented at the following sites: Tordos (15 stamp-seals), Kovačevo (15), Asprovalta (16), Sesklo (12), Nea Nikomedeia (21), Maliq (17) (*Makkay 1984, Korkuti 1995; Adam-Veleni et al. 2002; Dzhanfezova 2003*).

²³ Halstead (*1989*) lists in this group a specimen from Tsangli. We excluded it from our analysis, since the similarity of the motif between the Tsangli stamp-seal and others is broad only.

Zăuan and two from Karanovo that share a motif of a plastically modelled zigzag base with zigzag incisions (Fig. 22).

Similar principles of modelling also connect three Bulgarian stamp-seals from Kirdžali, Separeva Banja and Kovačevo. All three specimens have a base with a plastically modelled zigzag edge and central hollow (Fig. 23).

We bring the list of examples with identical motifs to an end by citing two objects from the Copper Age Moravian site at Znojmo and a burial from the Hungarian site at Pilismarót-Basaharc, thereby going beyond the geographical and temporal framework of the article (Fig. 24) Both examples have a honeycomb motif with centrally impressed dots. The slight difference in the execution is in the number of centrally impressed dots: while the Moravian stamp-seal has four, the Hungarian example has three.

These examples with identical motifs might be understood as objects having the relationship of factorality. Consequently, stamp-seals could be – like split-leg figurines (*Talalay 1993*) – interpreted as indexes of social networks among Neolithic villages. Stamp-seals with identical motifs might take on a secondary function and therefore represent indexes for inter-settlement contacts such as alliances, obligations, exogamy or long-distance trade. Perhaps these stamp-seals could have been used to ‘attach, reveal, reinforce and reproduce a range of culturally and personally significant concepts: of classification, identity, status, genealogy, production, ownership, order, authority, protection, fertility, potency, quality, authenticity, morality and value’ (*Skeates 2007.195*), therefore defining relationships between individuals or whole distant communities. Of course, this hypothesis needs further

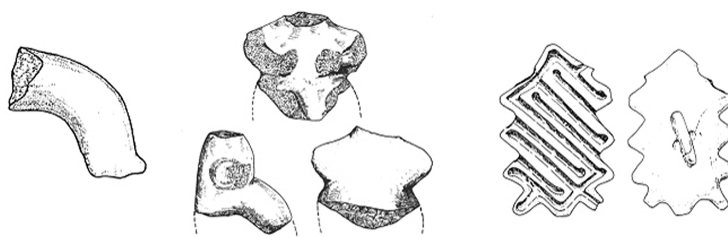


Fig. 15. Achilleion, clay bench near to large, circular hearth (phase IIIb). Selection of artefacts (after Gimbutas 1989 b.Fig. 7.73: 1; Fig. 7.124; Fig. 7.125).

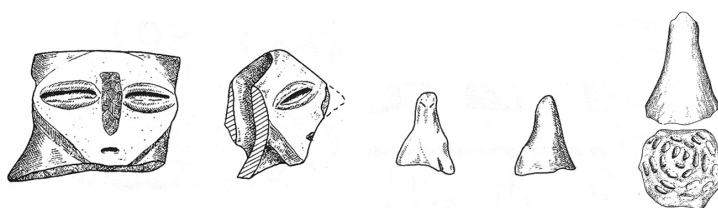


Fig. 16. Achilleion, street/courtyard? (phase IVb). Selection of artefacts (after Gimbutas 1989b.Fig. 7.73; Fig. 7.23: 1; Fig. 7.54: 3).

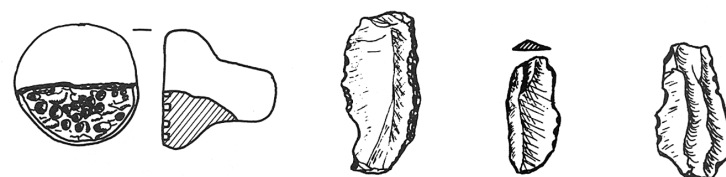


Fig. 17. Gura Baciului, platform VI a (after Lazarovici 1995.Fig. 17: 1, 17, 22; Fig. 30: 5).

testing. If other indexes of networks between the settlements as mentioned above are found, the proposed model of stamp-seals having secondary functions would gain weight too.

Symbolism

When writing of the *symbolism*²⁴ of stamp-seals, we join those authors (e.g. *Thomas 1996; Knappett 2005; Pinney 2006*) who do not separate the practical/functional and symbolic/communicative aspects of an object. We prefer to say that functional as well as symbolic and communicative characteristics can be recognised in any object.²⁵ While the functional attributes of objects are conditioned by their materiality and could be therefore recognized through defining the physical and logical affordances and

²⁴ Peirce defines symbol as “a sign which refers to the Object that it denotes by virtue of a law, usually an association of general ideas, which operates to cause the Symbol to be interpreted as referring to that Object ... The symbol is connected with its object by virtue of the idea of symbol-using mind, without which no such connection would exist” (*Pharies 1985.40*). Paradigmatic examples of symbols (signs, having relationship of formal convention with their objects) are thus writing systems and numerals.

²⁵ The following example conveys this with particular clarity: as late as in 1983, old people from Grgarske Ravne (Goriška) were telling how pagans around the time of the First World War were brandishing sickles in the air in order to cut through the storm clouds and lightning to chase away storms (*Medvešček 2006.135*).

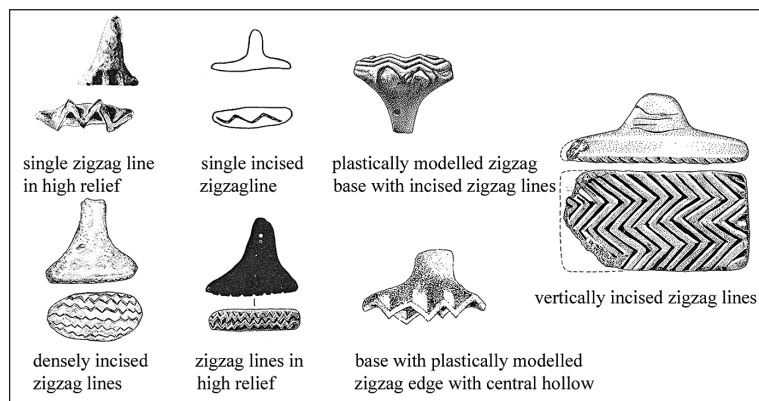


Fig. 18. Motif of zigzag, variants (after Makkay 1984. Fig. IV: 9; Fig. V: 10, 11; Fig. VI: 3, 4; Fig. VII: 8; Fig. XXIX: 1).

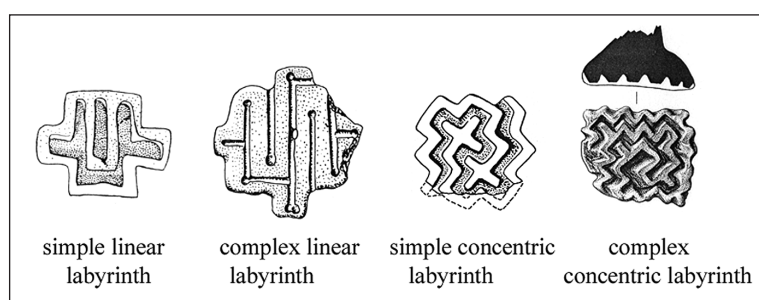


Fig. 19. Motif of labyrinth, variants (after Makkay 1984. Fig. III: 4, 5, 9; Fig. XII: 2).

constraints of an object, its attributes as a sign derive from networks of meaning in which objects and people are incorporated. Defining different types of relationships (*i.e.* similarity, contiguity, causality, factorality, formal convention) between objects or between objects and people, enables us to distinguish various semiotic levels – often unrecognized by archaeologists – within artefacts more clearly.

A symbol is a sign having a relationship of a formal convention or code with its object. Without knowing the formal convention or code, the interpretation of a sign remains problematic. Because access to cultural knowledge (*i.e.* to shared knowledge, forming codes) is severely limited, we shall define the elements of symbolism of stamp-seals without interpreting them.

Since the primary role of stamp-seals was to transfer motifs onto various surfaces, we first need to analyze the symbolism of imprints. The meaning and communicative characteristics of an imprint were constructed through a combination of motif, the colours used for printing and the type of stamped material. However, the act

of stamping itself might also carry symbolic meaning.

Considering various designs, we would like to draw attention to a group of stamp-seals with motifs that are possibly equivalent to linguistic or numeral units. This group consists of stamp-seals from Emen Cave (Makkay 1984.19), Karanovo (Makkay 1984.31), Asprovalta (Adam-Veleni *et al.* 2002.181) and Nēmčice na Hanou (Makkay 1984.40–41) (Fig. 25). Motifs on these stamp-seals could be interpreted as linguistic or numerical signs, since they meet the following requirements: asymmetry of the motif, the use of the most basic abstract elements (lines and dots), and the use of vertical and horizontal dividing lines between individual signs (*cf.* Merlini 2005.239–241).

Now, let us ask ourselves how much the meaning of the motifs presented above differs from the meaning of other stamp-seal motifs? To paraphrase, how does one distinguish between the communicative value of numerical/linguistic signs on the one hand and the communicative value of ornamentation on the other? Could the majority of stamp-seal motifs be marked as ornaments at all, or do they have specific communicative value also? According to the fact that only one type of motif is presented within closed archaeological contexts, we can assume each motif on a Neolithic stamp-seal became a bearer of concrete information through formal convention.

The symbolic aspect of an imprint depended on the use of various types of colours also. From finds at Frumușica-Cețățuia, Oltszem and Sitagroi (Makkay 1984, Renfrew 1987b) we know that colours (red-

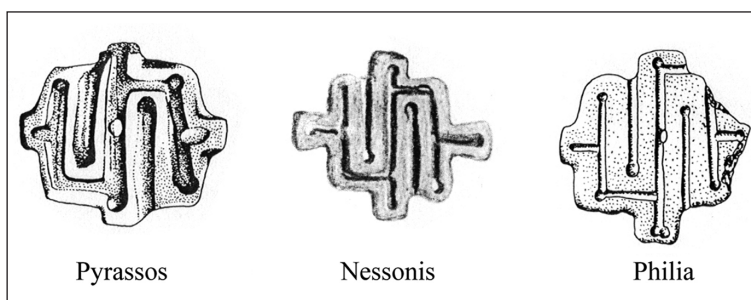


Fig. 20. Stamp-seals with identical motifs of a complex linear labyrinth (after Makkay 1984. Fig. III: 1, 3, 4).

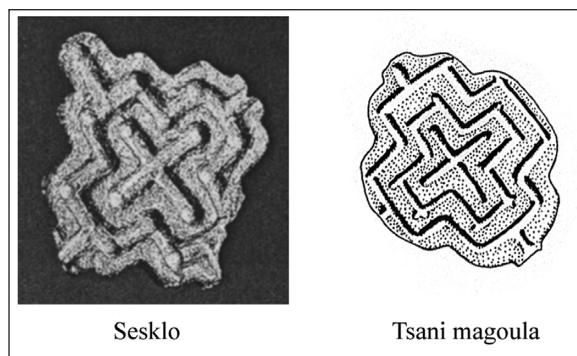


Fig. 21. Stamp-seals with identical motifs of a complex concentric labyrinth (after Makkay 1984.Fig. XIII: 1; Arachoviti 1996.Fig. 280).

dish yellow, red and white) were used for printing at least on some occasions. It has been stated that colours are communicative media, influencing the meaning of the ideas which they help to construct. Their meanings depend on the types and combinations of colour used, as well as on the colour relationship between base and imprints. Colours are able to cause emotional reactions, synaesthesia, or convey the specific social contexts of which they are part (Young 2006.173–185). Hence, we can assume this was also the case with colours used for stamping in the Neolithic.

However, thought must be also given to a secondary symbolic aspect of stamp-seals. According to factorial relationships between Neolithic stamp-seals with identical motifs, a hypothesis was advanced that stamp-seals could be seen as indexes of social relationships between various settlements at a regional level.

Conclusions

Stamp-seals constitute a multifunctional group of objects being used from the Neolithic up to the present. The grounding characteristic of a group nowadays uniting such various objects as official stamps, pintaderas for decorating the human body, stamps for marking bread, and stamps for decorating textiles, originates in the affordances and constraints of those objects. Those namely condition listed objects as tools, meant to transfer motifs onto various surfaces. While those objects are unified by the principle of stamping/sealing, they differ greatly from each other according to the networks of meaning in which they are incorporated.

The same holds for Neolithic stamp-seals. According to the various contexts in which they were found in Anatolia, SE Europe and Italy, we assume stamp-seals

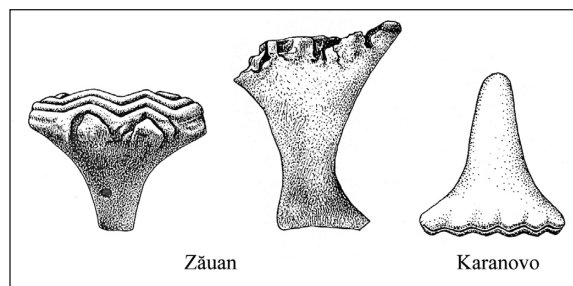


Fig. 22. Stamp-seals with identically modelled zig-zag base with zigzag incisions (after Makkay 1984. Fig. V: 10, 12, 13).

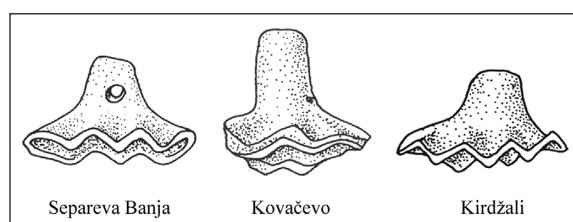


Fig. 23. Stamp-seals with identically modelled base with zigzag edge and central hollow (after Todorova, Vajsov 1993.Fig. 167: 2, 4, 6).

from these three regions were included in various networks of meaning (cf. Prijatelj 2007). Different traces on the bases of the stamp-seals show even these had different functions and meanings. Rather than for stamping solid and flat surfaces, they were employed for printing on soft materials (e.g. bread or skin), as indicated by experiments.

The analysis of the available data has shown only one stamp seal and one motif (in rare cases modelled on several stamp-seals) was connected with closed archaeological contexts. Hence, we might assume the motif on a stamp-seal was an index of a specific Neolithic household. That said, the value of the motif could not be merely decorative; they probably conveyed specific information.

We find the fact that stamp-seals probably evolved a secondary mode of use of similar importance. The

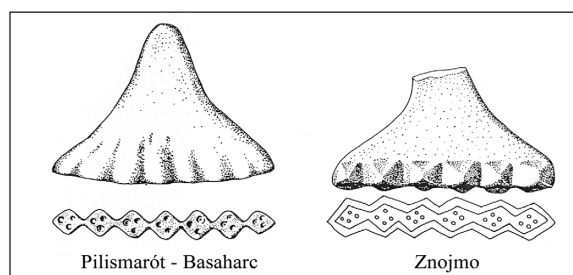


Fig. 24. Stamp-seals with identical honeycomb motif with centrally impressed dots (after Makkay 1984. Fig. XXVIII: 10, 11).

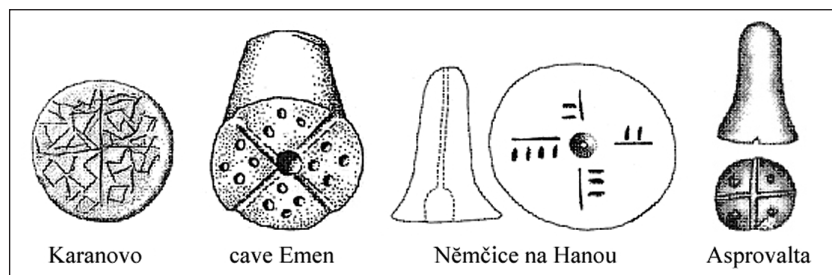


Fig. 25. Selected examples of stamp-seals with unusual motifs, numerical/linguistic signs perhaps (?) (after Makkay 1984.Fig. XXIII: 6; Fig. XXVII: 5, 8; Adam-Veleni 2002.Fig. 8).

spatial distribution of stamp-seals with identical motifs indicates the analyzed objects might have become a symbol for various social interactions among Neolithic settlements. Ultimately, the presented hypotheses require further testing. The qualitative leap forward in the case of Neolithic stamp-seals of SE Europe will not be possible until archaeologists start trying to answer following questions: is the pattern of stamp-seal motif as an index for specific Neolithic households confirmed or negated by larger test sam-

on stamp-seals, with the help of concepts of affordances, constraints, icons, indexes and symbols, should not be difficult ones.

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