

## POINTED OBJECTS OF THE MIERZANOWICE CULTURE (EARLY BRONZE AGE). A STUDY OF FUNCTION BY USE-WEAR ANALYSIS

Objetos apuntados de la Cultura de Mierzanowice (Bronce Antiguo).  
Estudio funcional mediante análisis de huellas de uso

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**ABSTRACT** This paper presents a small assemblage of pointed objects associated with the Early Bronze Age Mierzanowice culture of south-eastern Poland. The artefacts originate from the multicultural cemetery of Kichary Nowe and were found in male and female graves. They have been traditionally referred to as pins or needles. To establish their function, use-wear methodology was employed. Based on differing microwear patterns, it was inferred that artefacts with wide and flat perforated heads are in fact implements used for working fibrous materials (e.g. textile production or basket making), hence the strong striations visible on the surface. On the other hand, objects such as the ornamented pin with an L-perforated head, functioned as elements of clothing, used to fasten outer garments. Both categories were personal objects of everyday use, closely connected to their owners. Based on limited contextual data, it can be further inferred that ornamented pins were part of the costume of prominent adult members of the Mierzanowice culture society. Thanks to the applied functional approach, it was possible to go beyond classic typology and suggest new ways of thinking about this broad category of artefacts.

**Keywords:** Early Bronze Age, Mierzanowice Culture, Pointed Objects, Use-wear Analysis, Functional Analysis.

**RESUMEN** El presente artículo presenta un pequeño conjunto de objetos apuntados asociado con la Cultura de Mierzanowice, la cual se desarrolló durante el Bronce Antiguo en el sureste de Polonia. Los artefactos provienen del cementerio multicultural de Kichary Nowe y fueron encontrados en tumbas con individuos tanto masculinos como femeninos. Estos objetos han sido tradicionalmente clasificados como agujas o alfileres. De cara a establecer su funcionalidad, un estudio de huellas de uso ha sido llevado a

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cabo. Basándonos en los distintos patrones de micropulido, se ha inferido que estos artefactos con cabezas amplias y planas con perforación fueron en realidad utilizados para trabajar materiales fibrosos (por ejemplo, producción textil o cestería), de ahí que se aprecien marcadas estrías visibles en la superficie. Por otro lado, objetos como el alfiler decorado con una cabeza con perforación en forma de “L” funcionaron como elementos para la vestimenta, para abrochar o sujetar vestimenta más exterior. Ambas categorías fueron elementos de carácter personal para uso diario, íntimamente relacionados con sus propietarios. Teniendo en cuenta la limitada información contextual, podemos inferir que los alfileres decorados formaron parte de la vestimenta de adultos con un papel destacado en la sociedad de la Cultura de Mierzanowice. Gracias a la aproximación funcional, ha sido posible ir más allá de la tipología clásica y sugerir nuevas formas de considerar este tipo de artefactos.

**Palabras clave:** Bronce Antiguo, Cultura de Mierzanowice, Objetos apuntados, Análisis traceológico, Análisis funcional.

## INTRODUCTION

This paper aims to present a small assemblage of an understudied category of artefacts: pointed objects, found in male and female graves of the Early Bronze Age Mierzanowice culture of south-eastern Poland. The focus of this paper is to document a functional distinction between the analysed objects based on use-wear analysis.

The term ‘pointed objects’ is used here because of the intrinsic difficulty of applying morphology-based nomenclature to these artefacts. Commonly in the literature (see section 2.1. of this paper), longer, extensively worked (ground, purposefully polished and/or decorated) artefacts have been described as *pins* (e.g. clothing pins), or sometimes as *needles*, if they possess a perforated head. In the Early Bronze Age Mierzanowice culture context, a further distinction between pins and needles can be made based on morphological features, such as head shape and perforation and two basic types can be distinguished: (1) objects with perforated heads that are wider than the body and usually flatter, either more round or rectangular; (2) objects with heads that are oval or round in cross section having either L- or upside-down T-shaped perforation. Cruder items with a wider body, often with a fragmentary bone epiphysis as the head, are usually termed *awls*. Artefacts of both categories (pins/needles and awls) are sometimes ornamented – the ornament is either cut into the surface (e.g. herringbone, multifaceted) or drilled (concave dots). It is a classic, typological approach, but to understand these objects better further analysis employing use-wear methodology is required.

Use-wear studies have focused mainly on prehistoric stone and bone tools. According to the Merriam-Webster Dictionary a tool is ‘a handheld device that aids in accomplishing a task’. Pointed implements (needles, awls) utilised for working varied materials can be thus analysed using this methodology, because they fall well within the definition. On the other hand, clothing pins, although typologically similar, do not fit into the category of tools; they can be described as functional elements of clothing. They fulfil a purpose, fastening of clothes, but they are also

ornamental, and they can be categorised as body adornments. In this regard they are more like prehistoric beads made of osseous raw materials, and their surface modification (microwear pattern) is due to prolonged contact with clothing, as is the case of a bead necklace. It can be thus inferred that pointed objects belonging to these two categories (tools *sensu stricto* vs. functional elements of clothing) should exhibit different microwear patterns. Distinguishing between these patterns is possible, which is demonstrated by the assemblage of pointed objects from Mierzanowice culture sepulchral context that is presented here.

## REGIONAL SETTING AND CONTEXT

### Epi-Corded Ware cycle & Mierzanowice culture

The Mierzanowice culture belongs to the Epi-Corded Ware circum-Carpathian cultural cycle or circle (ECW; Kadrow, 2001:45). The term Mierzanowice culture was first defined by J. Machnik, who underlined an Early Bronze Age character of the Epi-Corded Ware cultures while still strongly exhibiting earlier Neolithic traditions of the Corded Ware and Bell Beaker cultures (Machnik, 1967). J. Machnik situated the ECW cycle in the Bronze Age, which was based on the gradual, yet irrevocable socio-economic changes connected to pan-European (or at least Central European) transformation caused by bronze metallurgy and consumption. As a Central European phenomenon, the ECW cycle covers much of the region and includes several cultural entities: the Mierzanowice and Strzyżów cultures (Poland, Ukraine), the Nitra group (Slovakia) and the Košťany group (Hungary). In short, the ECW has been characterised by:

- the microregional character of settlements (Kadrow, 1995:45-48)
- a social structure based on patrilocality (Kadrow, 2001:167-169)
- inhumation burial (Kadrow, 2001:120) including gender-determined positioning of the dead (females on the left side, males on the right); E-W axis; indications of shrouds, funerary boxes and stone constructions in graves;
- locally diversified ceramics with strong Corded Ware influences;
- typical elements of material culture including flint bifaces (points, knives, sickles), copper adornments (willow leaf-shaped), faience beads, and boar's tusk pendants.

Pointed objects —understood as a broad category of artefacts, including awls, needles, and pins, and other implements— often occur in these graves. There is over 100 published and unpublished items originating from Mierzanowice culture cemeteries in Poland including Iwanowice (Machnik *et al.*, 1987; Kadrow *et al.*, 1992); Krzyżanowice Dolne (Regional Museum in Pińczów, *unpublished*); Książnice Wielkie (Wilk, 2014); Mierzanowice, Wojciechowice, Złota (Bąbel, 2013a, 2013b); items from more recent excavations at Złota (Florek and Zakościelna, 2005a, 2006);

and Wilczyce (Florek and Zakościelna, 2005b) and other sites; and also from very recent excavations in Upper Silesia (M. Furmanek, *personal communication*). A detailed typology of pins has been compiled by J.T. Bąbel based on materials from 50 graves (60 items) of the Sandomierz Upland; he also included 10 awls (from 9 graves) in his study (Bąbel, 2013a:137-140). Pins – based on their archaeological context – have been interpreted as clothing pins (Bąbel, 2013a:212-214).

## The site

The objects described here originate from an archaeological site in south-eastern Poland, Kichary Nowe in Świętokrzyskie Voivodeship, ca. 10 km north of Sandomierz (fig. 1). This multicultural cemetery was systematically excavated over several seasons (1987–2013) by H. Kowalewska-Marszałek of the Polish Academy of Sciences in Warsaw. The site has been partly published with focus on the anthropological and taphonomic context of the burials (mainly: Kowalewska-Marszałek, 2000, 2007, 2014; Duday and Kowalewska-Marszałek, 2003, 2012; Kowalewska-Marszałek and Duday, 2013, 2014; Lundmark, 2016), and there is a large monograph in preparation. The archaeological context (burial type and grave inventories) places the site in the classic (2050-1850/1800 BC) and late

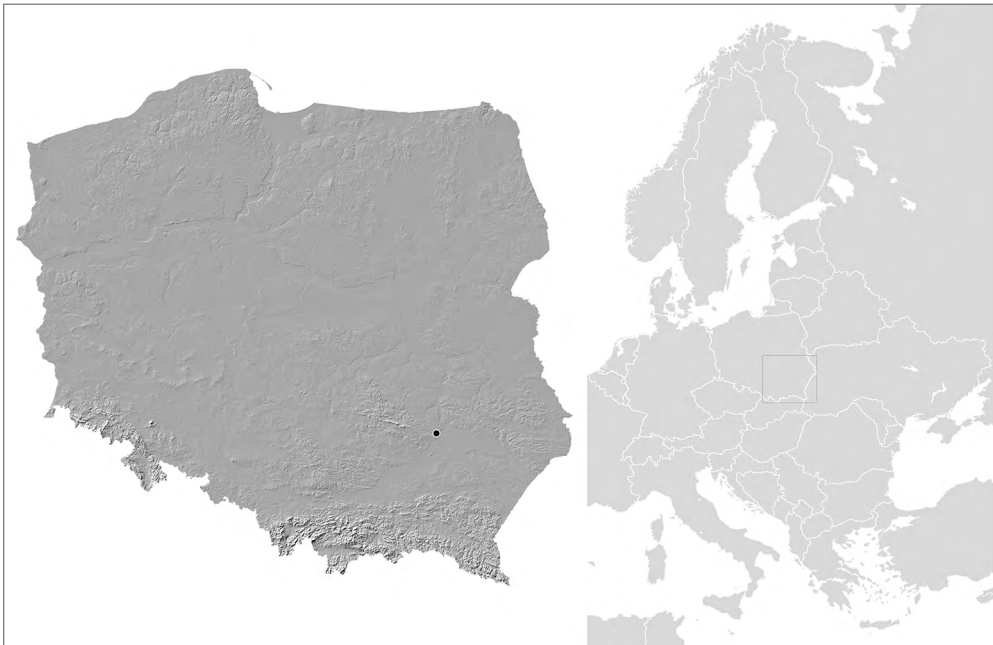


Fig. 1.—Location of the site Kichary Nowe in the macro-region (rectangle).

(1950/1880-1650/1600 BC) phases of the Mierzanowice culture (Kadrow and Machnik, 1997:100-102).

In total, 30 Mierzanowice culture graves have been excavated so far. Objects made of hard materials of animal origin (bone, antler, tooth, and shell) are numerous and varied. They were found in 16 graves, over half of the total number, both male and female. The whole assemblage consists of (as described by the excavators): pins/needles and awls, beads (e.g. several hundreds of shell beads!), bead separators, pendants, tools and other (undetermined). Most of the bone and antler bead collection has been analysed by the author (Winnicka, 2016).

The author has access to all bone materials except for the shell beads and pendants (Kurzawska and Kowalewska-Marszałek, 2010; Kurzawska, 2012) and most of the materials coming from recent (after 2005) excavation seasons. There are, however, some restrictions regarding unpublished items and parts of the documentation; the full archaeological context will be published by the principal investigator of the site, H. Kowalewska-Marszałek.

## MATERIAL AND METHODS

### The artefacts

In total, seven pointed objects described as pins/needles have been found in six of the 30 Mierzanowice culture graves (fig. 2; tab. 1). Only basic anthropological data is available; three of the burials are associated with female skeletons (n.° 30, 32 and 15), one with a male (n.° 10), two undetermined (n.° 27 and one from uncertain context). Therefore, any gender-related interpretations of the objects need to be treated with caution.

The assemblage consists of three well preserved items, including one with cut ornamentation, another ornamented object with a heavily eroded surface, and three fragmentarily preserved artefacts, including one heavily eroded distal fragment. Only the most heavily eroded object does not have a head (162/00/8), whereas the tip is missing in only one case (348/89/35). There are also four instances of fragmentarily preserved tips (162/00/8, 223/00/127, 344/00/282 and 70/90/97). Overall, there are only two complete artefacts with well-preserved natural surfaces (83/99/103 and 81/03/--).

Four objects (348/89/35, 70/90/97, 83/99/103 and 81/03/--) have broad and generally flat heads, rectangular or rounded. Four of the six artefacts with preserved heads are also perforated (344/00/282, 70/90/97, 83/99/103 and 81/03/--). Well-preserved ornamented object no. 344/00/282 has an L-shaped perforation, whereas the other ornamented artefact (223/00/127) does not and has a blunt, profiled head. There is a parallel to the L-shaped perforation from the Noua culture of Romania, Moldova, and Ukraine (chronologically younger: 1400–1200 BC; Parzinger, 2013:913), and the artefacts have been interpreted as implements for textile working (Prisecaru and Ilie, 2014:51–52; 65).



Fig. 2.—Pointed objects from Kichary Nowe.

The two ornamented items (223/00/127 and 344/00/282) have a dark grainy residue embedded in the cut marks. Furthermore, object no. 344/00/282 has an intense green colour – either acquired during burial (diagenetic staining) or by purposeful dyeing. Both problems have been investigated using spectroscopic methods, and the results will be published in the future.

### Methods applied in this study

In recent years, there has been an increasing tendency to move from qualitative analysis, i.e. simple microscopic observations and recording of the surface, towards objective quantification of microwear traces using different techniques (for discussion see Stemp *et al.*, 2016). This study, however, employs use-wear approach as a first step in the analysis of previously understudied bone artefacts from this context (EBA graves in Central and Eastern Europe).

Use-wear analysis on bone materials entails the application of microscopic techniques – low- to medium-range magnifications available for optical (reflected light) microscopy (50–200×) for the study of surface texture and identification of microwear traces (patterns) connected to use – handling/manipulating and working (e.g., Olsen, 1984; LeMoine, 1994; Buc and Loponte, 2007; Gates St-Pierre, 2007;

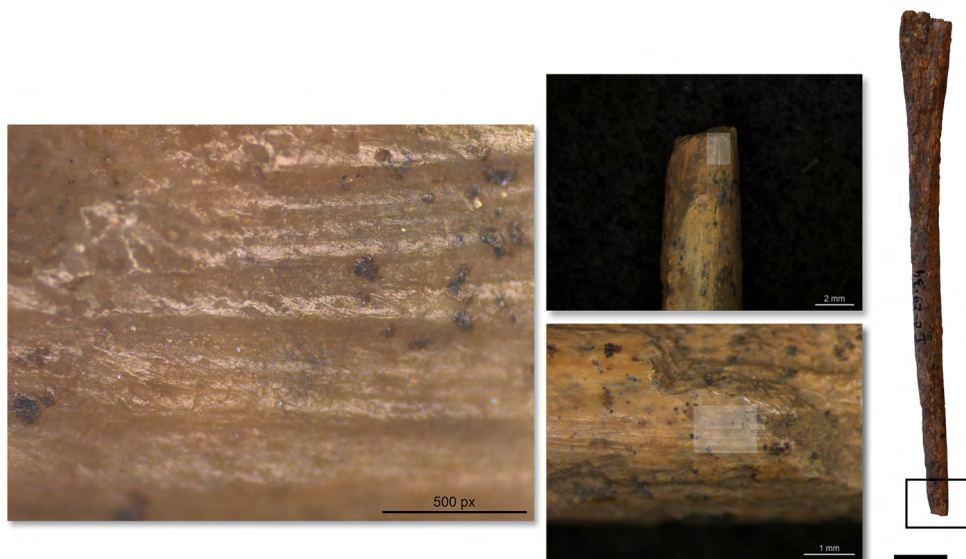


Fig. 3.—Artefact no. 348/89/35: non-distinct use-wear (distal area); 10 mm scale bar.

Van Gijn, 2007; Legrand and Sidéra, 2007; Legrand, 2008; Legrand and Radi, 2008; Buc, 2011; Gates St-Pierre *et al.*, 2016).

The author worked with three reflected light microscopes at the Laboratory for Artefact Studies, Leiden University (Netherlands) – two metallographic and one stereoscopic: Nikon Optiphot-2 (magn. 50×–1000×), Leica DM2700M (magn. 50×–200×) with a Leica MC120 HD camera and Leica M80 (magn. 7.5×–64×) with a Leica MC120 HD camera. Photomicrographs have been registered and edited using LAS Extended Annotation software.

All artefacts were photographed under a stereomicroscope, with focus on proximal and distal parts (head, tip). In the next step, the artefacts were divided into three categories according to their state of preservation and suitability for use-wear analysis. After macroscopic and low-power observations, one artefact (162/00/8) was rejected due to its poor state of preservation, three (223/00/127, 348/89/35 and 70/90/97) were selected for the investigation of potential areas of interest and three (344/00/282, 83/99/103 and 81/03/--) were analysed using a protocol designed for controlled study of the surface (fig. 3). The artefacts selected for an in-depth analysis are not fragmented and have at least 70% of the original surface preserved.

The selection of artefacts analysed only for their potential areas of original surface was based on low-power stereomicroscopic observations; the next step was carried out using the metallographic microscope and magnifications up to 200×. Photomicrographs were taken, documenting potential features of interest.

The protocol allowed for a controlled analysis of the surface, in four planes along the long axis of an artefact. The surface was divided into three zones, equal in length: proximal (head area), medial (body) and distal (tip area). Each zone was documented separately with a step of 5 mm; each step was numbered and corresponded to a photomicrograph taken with 100× magn. and, in the case of particularly interesting features, additional photomicrographs were taken under magn. 50× and 200×. This approach made it possible not only to compare different zones in different planes of one artefact, but to correlate zones of other artefacts as well. The observations were thus more precise in relation to the microtopography of the objects.

## RESULTS

As stated in the previous section, out of the Kichary Nowe assemblage one artefact (162/00/8) was rejected, three (348/89/35, 70/90/97 and 223/00/127) were selected for closer investigation and three (83/99/103, 81/03/-- and 344/00/282) were analysed using the protocol.

Diagenetic alterations visible on the surface include exfoliation and cracking, humic acid staining and deposition of calcite and loess particles. The surface might have also been influenced by the processing of the finds after excavation. No. 70/90/97 was suspended on a thread for exhibition purposes, which resulted in a smooth and bright area on the edge of the drill hole (fig. 4).

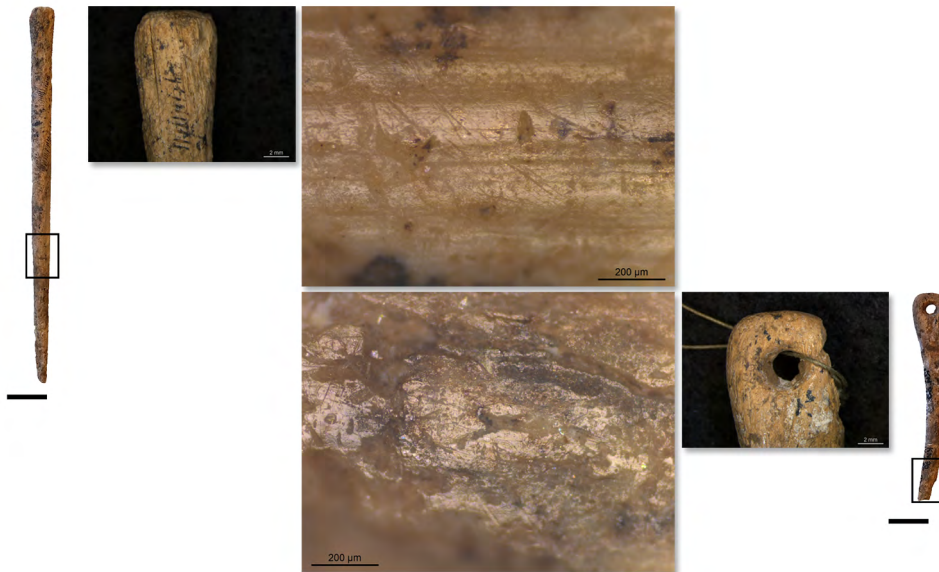


Fig. 4.—Artefact no. 223/00/127 (top); artefact no. 70/90/97 (bottom): proximal parts (heads) and areas with use-wear; 10 mm scale bar.



## Areas of interest

The objects analysed here are quite diverse: n.° 348/89/35 is 95 mm long and has a wide, flat, unperforated head, while n.° 70/90/97, although incomplete, is the shortest of the assemblage (55 mm) with a wide and round perforated head. N.° 223/00/127 is the longest of all the analysed objects (108 mm) and has an unperforated head and a herringbone ornament formed by bands of parallel cuts.

Despite significant erosion, one area of interest can be observed on the surface of n.° 348/89/35. There are grooves in proximal and distal parts of the artefact, generated by an implement with which the surface had been worked (scraped), the elevated areas are rounded and smooth (fig. 3), which indicates that the object was used. However, these features are non-distinct and might have been influenced by post-depositional factors and post-excavation activities, such as cleaning.

On the surface of n.° 223/00/127 (medial part; minute striations) and 70/90/97 (proximal and distal parts; lustrous) there are spots of original, very smooth surface (fig. 4), which were probably also influenced by post-excavation treatment and handling. On the surface of n.° 223/00/127 there are also manufacture-related parallel grooves, like the ones on the surface of n.° 348/89/35. Although, some use-related features are present on their surface, it is difficult to ascertain the objects' function. However, it can be assumed that the objects had been used before grave deposition.

## Protocol

Artefacts n.° 83/99/103 and 81/03/-- are typologically similar, with perforated, flat heads that are wider than the rest of the bodies. N.° 83/99/103 is shorter (86 mm; 81/03/--: 108 mm) and is characterised by a more rectangular head and 'cruder' body. Both objects are smooth to the touch and have a shine visible to the naked eye. In both cases, microscopic investigation under magnifications (50×, 100× and 200×) revealed differences in microtraces in the three zones (proximal, medial, distal). First, the edges of the perforation are rounded and smooth, which is visible under the stereomicroscope. Moreover, these features seem to be better developed on just one side of both artefacts. Under 100× magnification, the surface appears to have a distinct smoothness (fig. 5), which indicates that the perforation had been functioning as a suspension hole for some time. Because both artefacts possess perforations, it can be assumed that they were functional and that the items were somehow fastened (e.g. suspended on a string); consequently, some of the microwear might be attributed to repeated contact with clothing.

There is a difference in the microtraces which allows differentiation between handling and working areas (fig. 6a-d). Handling areas have a more homogeneous microtopography without pronounced striations (fig. 6a; 6c), while working areas (medial and distal zones of the artefacts) show heterogenous microtopography with clearly pronounced criss-crossing striations of varying depth, width, and length (fig. 6b; 6d). Deeper and longer striations tend to run parallel to the long axis of

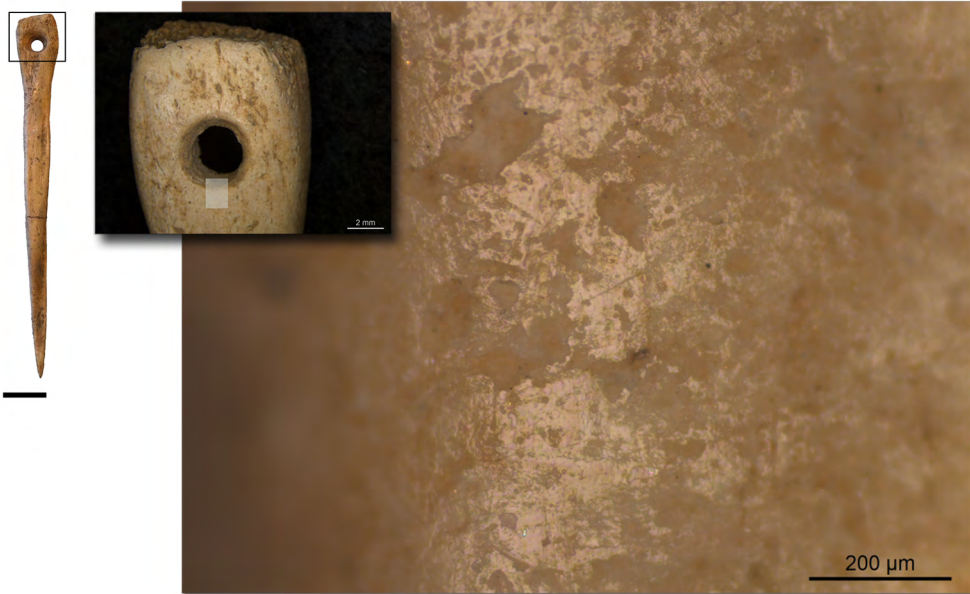


Fig. 5.—Artefact no. 83/99/103: use-wear of the perforation; 10 mm scale bar.

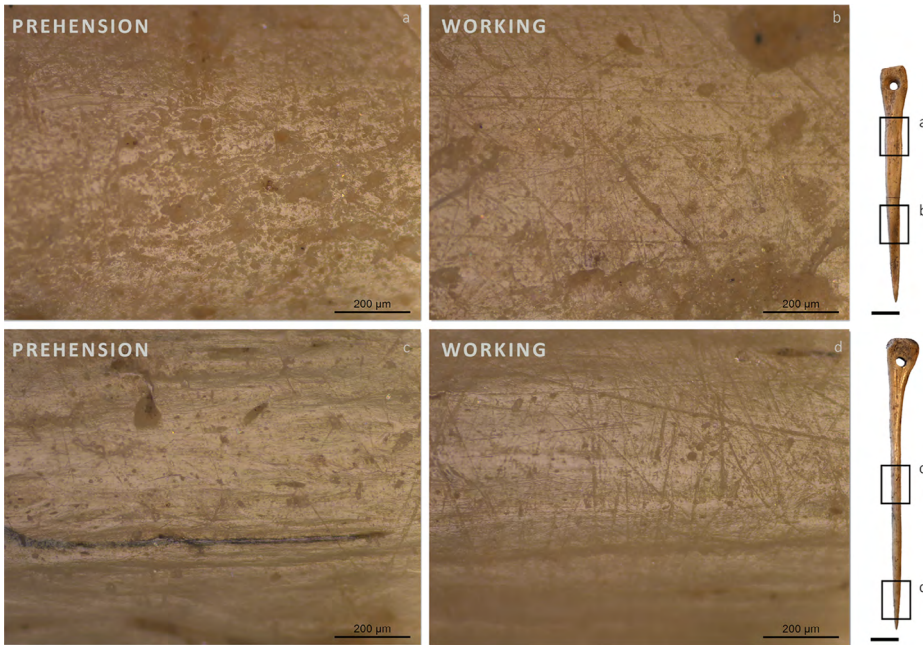


Fig. 6.—Artefact no. 83/99/103 (a, b); artefact no. 81/03/-- (c, d): handling and working areas; 10 mm scale bar.

the object, but most of the striations are short and criss-crossing. The tip itself does not show these features; they end just before it. The striations can be seen on the whole circumference of the working area (on all sides of the artefact), but they tend to be more pronounced (or better visible) on one side, which might be due to the user's preference in manipulating the object. The main difference between the artefacts is that the working area of 81/03/-- is restricted to the distal zone, closer to the tip of the artefact (the artefact is longer), so it is possible that it influenced the way it was handled while used. N.º 81/03/-- has also clearer and more regular microtraces, which might be attributed to the fact that it was used longer and acquired more legible use-wear. Judging from these features, it can be assumed that the action performed using the implements was repetitive, yet multidirectional, which resulted in irregular microtopography. The striations occurred while the objects were in contact with fibrous material worked by the user; this hypothesis is supported by published experimental research (e.g. Gates St-Pierre, 2007). Both objects can be thus interpreted as tools *sensu stricto*, used in activities vital for the community, such as textile and basket making.

The third analysed artefact, n.º 344/00/282 (92 mm in length), is an ornamented object with a characteristic L-perforated head (fig. 7a). Like n.º 223/00/127 it also has a herringbone ornament cut into the surface (fig. 7c). The top part of the head is somewhat rounded, but the microtraces generated by drilling are still clearly visible (fig. 7b), so it does not seem very used/worn by suspension. The item is

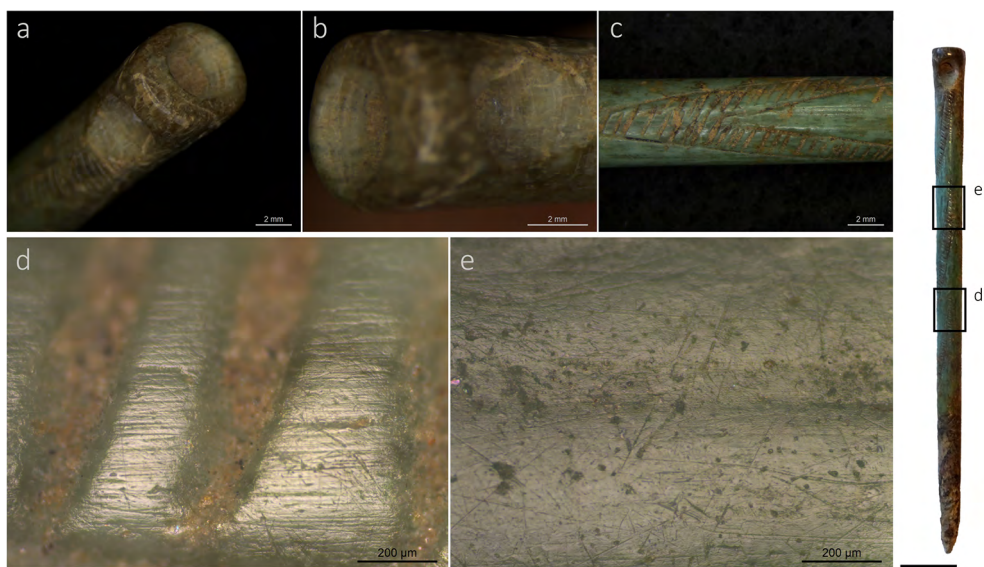


Fig. 7.—Artefact no. 344/00/282; a – L-perforation; b – drilling grooves; c – herringbone ornament; d – polishing striations; e – use-wear; 10 mm scale bar.

TABLE 1  
POINTED OBJECTS FROM KICHARY NOWE: BASIC INFORMATION

<i>Individual no.</i>	<i>Grave no. / Sex</i>	<i>Head shape</i>	<i>Perforation</i>	<i>Tip</i>	<i>Quantity</i>	<i>Width (mm)</i>	<i>Length (mm)</i>
162/00/8	30 / F	N/A	N/A	fragm.	1 fragm.	3x3	33
223/00/127	30 / F	Profiled	NO	fragm.	1	max. 6	96
344/00/282	32 / F	Profiled	YES; L-shaped	fragm.	1	7x6	92
348/89/35	10 / M	Wide, flat, rectangular	NO	NO	1	10x4	95
70/90/97	15 / F	Wide, round	YES	fragm.	2 glued fragm.	9x4	55
83/99/103	27 / ?	Wide, flat, rectangular	YES	YES	3 glued fragm.	11x5	86
81/03/--	? / ?	Wide, flat, round	YES	YES	1	12x4	108

very smooth and lustrous which is visible macroscopically. Close microscopic observations reveal uniform minute and shallow, but long striations running parallel to the long axis of the artefact (fig. 7d); they seem to be related to the finishing stages of the manufacture and deliberate polishing rather than to object's use. It is plausible that the pin had been polished using hide (for comparison see: Buc, Loponte, 2007:146; Gates St-Pierre, 2007:114), which contributed to the invasive polish across the whole surface. There are also more random striations of differing morphology (fig. 7e), and some of them might have been generated by use, e.g. fastening garments.

Based on use-wear analysis, it can be inferred that artefacts with wide and flat perforated heads appear to have clearly distinct handling (proximal/medial) and working areas (medial/distal). Handling areas are characterised by a smooth texture without very pronounced striations, whereas working areas have very defined criss-crossing striations of varied morphology. Perforations are worn more on one side indicating user's preference. The singular ornamented object with an L-perforated head seems to have a smooth surface like the other two objects, but microscopic observations suggest polishing techniques related to manufacture of the object rather than use-related modification of the surface. Generalised results of microwear analysis are presented in table 2.

## DISCUSSION

The results show that there is a functional difference associated with the formal variation of pointed objects found in the Kichary Nowe burials. Artefacts with wide and flat perforated heads are in fact tools *sensu stricto* – implements

TABLE 2  
POINTED OBJECTS FROM KICHARY NOWE: MICROWEAR FEATURES AND FUNCTIONAL INTERPRETATION (ADAPTED FROM: BUC 2011:547)

<i>Individual no.</i>	<i>Zone</i>	<i>Surface</i>	<i>Striations</i>	<i>Contact material</i>	<i>Function</i>
83/99/103	Proximal	Homogeneous	Absent or random and irregular, if present – shallow, short	Skin/clothing	Tool
	Medial	Heterogenous	Criss-crossing, varied depth, width and length	(Vegetal) fibres	
	Distal	Heterogenous	Criss-crossing, varied depth, width and length	(Vegetal) fibres	
81/03/--	Proximal	Homogeneous	Absent or random and irregular, if present – shallow, short	Skin/clothing	Tool
	Medial	Heterogenous	Criss-crossing, varied depth, width and length	(Vegetal) fibres	
	Distal	Heterogenous	Criss-crossing, varied depth, width and length	(Vegetal) fibres	
344/00/282	Proximal	Homogeneous	Absent or random and irregular, if present – shallow, short	Skin/clothing	Clothing pin
	Medial	Homogeneous	Parallel and longitudinal, shallow, long	Hide/textile	
	Distal	Homogeneous	Parallel and longitudinal, shallow, long	Hide/textile	

used for working fibrous materials (possibly textile working or basket making, or multipurpose), hence the strong striations visible on the surface. Such striations are comparable with microwear on experimental pieces. The implements have suspension holes with clear indications of intensive use, which suggests that the objects were everyday tools. Even if the anthropological context for two finds is unknown (these items cannot be associated with any gender), they must have served as important implements to be buried alongside their owners.

On the other hand, objects such as the pin with an L-perforated head, served as elements of clothing – clothing pins *per se*. The analysed artefact was found in a female grave, in its upper part, just below the front of the skull and in relation to other decorative items, e.g. an elaborate ornament made of hundreds of beads (H. Kowalewska-Marszałek, *personal communication* and *field documentation*). Furthermore, it can be inferred that the other ornamented object from this assemblage is also a clothing pin. This pin was found in a female grave with another pointed object that has been eliminated from this study due to poor preservation. It is possible that there were in fact two clothing pins used for fastening of garments associated with this grave. This can be substantiated by eight such instances from other Mierzanowice culture cemeteries (Bąbel, 2013a:137,213).

Ornamented pins have been found in richly furnished female and male graves. Out of 14 known examples, from the sites of Kichary Nowe (presented in this paper),

Krzyżanowice Dolne (*unpublished*), Mierzanowice (Bąbel, 2013b:15-17,26-28,34-39,58-59,104-108), Wilczyce (Florek and Zakościelna, 2005b) and Wojciechowice (Bąbel, 2013b:220-224,267-273), three ornamented pins were associated with females, eight with males and in four cases it was impossible to determine the sex of the individual. All skeletons belonged to adults, ranging from young adults to middle-aged individuals. Interpretations based on a low number of known objects need to be cautious, nevertheless it can be assumed that ornamented pins were part of the costume of prominent adult members of the Mierzanowice culture society. Both plain and ornamented pins were used to fasten outer garments; it is plausible that those were varied (regarding e.g. material type and weight) which can be inferred from the fact that at times two pins were required to fasten them.

The functional difference between the two types of pointed objects was observed on a limited number of artefacts from one site only. Further inquiry, based on a significantly larger assemblage from several cemeteries and combined with contextual data (sex, age; number and quality of other grave goods), could further develop the hypothesis that there are at least two categories of pointed objects deposited in the Mierzanowice culture graves: varied small tools and dress accessories in the form of clothing pins. It would be worth investigating whether specific tools (and activities) are gender-related or not. Similarly, it could be possible to determine whether there is any correlation between the dress and the social standing (and gender) of the Mierzanowice culture individuals.

## CONCLUSIONS

This paper presents the results of a use-wear study on seven pointed objects originating from the Early Bronze Age Mierzanowice culture of south-eastern Poland. It was possible to establish function of some of the items. There is a clear functional difference that relates to the variability of the objects' form. Use-wear analysis revealed that there are at least two categories of artefacts in this collection: tools for fibre working and functional elements of clothing (clothing pins). This functional approach to the archaeological material allowed interpretations that extended beyond classic typology and suggested innovative ways of thinking about a broad category of artefacts. The work is being continued on another, larger assemblage (n=23) from a contemporaneous site in south-central Poland (Krzyżanowice Dolne, Świętokrzyskie Voivodeship).

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