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COGNITIVE VALUES OF OSSUARIES FROM THE CEMETERY AND THE CHURCH OF ST. NICHOLAS IN GNIEW, POLAND

Abstract: Exploring churches and cemeteries we often come across human remains placed in one common burial pit. We register the fact, and while working with site material we barely mention excavated ossuaries, not thinking, how much important knowledge can be obtained from them. During exploration seasons in the Church of St. Nicholas in Gniew (Pomerania, Poland) between 2009-2016 we registered various ossuaries from the modern period, placed inside and outside the church. The most significant information was obtained from the ossuary situated in the southern crypt of St. Anne's Chapel, where, apart from bone relics, we found the most numerous archaeological collection of silk textiles in Poland. This material helps us to define details concerning the time of the individuals' death. This represents a unique situation in ossuary studies, as usually ossuaries do not provide any additional material data. Human remains themselves help to recreate the history of local populations, as they provide indications of living conditions, pathological changes and the numerical size of the populations under examination. Therefore, archaeologists and anthropologists should work together in these complex sites.

Keywords: Pomerania, Gniew, Modern Period, ossuary, human remains, silk

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Introduction

The *ossuary* (Lat. *ossarium* – bone casket, from *os* – bone) has functioned as a receptacle for the burial of human bones since antiquity. The oldest preserved ossuaries took the form of a stone chest – a kind of miniature coffin – or sarcophagus, where a completely skeletonized human body would be deposited. Many objects of that kind have been excavated in Israel,¹ for example, where bones were placed in containers without attention to anatomical order. That was a secondary burial, what is one of the determinants of all kinds of ossuaries in the present meaning of the term. In the past, the name was also used for mass graves, regardless of whether they were the original or secondary

place of human eternal rest.² These receptacles could be made of other materials (wood, ceramics, leather, etc.). Funeral urns and ash containers, commonly used in periods when that kind of burial rite predominated in the development of our civilization, can also be regarded as a kind of 'ossuary'. Moreover, despite the significant level of lack of order among the deposited in them, they are distinguished from other artefacts of similar type, because they were usually original places for the deposition of the bone remains after a body was cremated. Therefore the idea of an 'ossuary' is related to the 'substance' kept in it, and not the form of that 'container', nor the material of which it is made.

Economics of death

The main reason for using individual and mass ossuaries was first of all to save on space and volume,

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¹ Regev 2001, 39.

² Ubelaker 1974, 8.

which could be taken up by another form of burial (practical aspect), but also protection from destruction, desecration and even theft. Sometimes, there were ossuaries whose purpose was to arrange expositions of bones (eschatological aspect).

During intense development of human settlements and towns in later periods – with the particular role of urbanization processes and the growth in the number of inhabitants in these kinds of settlements, people faced the need to bury the dead bodies of their community members somewhere. Such was the role of cemeteries and burial grounds inside and outside urban spaces, which consisted mainly of individual or family graves. In the periods of the consolidation of Christianity, cemeteries were frequently located in the neighbourhood of chapels and town churches³ which served many cultural functions (mostly religious – the worship of God, receiving sacraments), but also social – as places of regular local community meetings. Wishing to be the closest to the Absolute after death, people wanted to be buried as close to the holy building as possible, the most desired place – a church interior. Hence, town churches became sometimes prestigious cemeteries,⁴ but in a long course of using them in that function, space designed for the dead could no longer accommodate any more burials. Dead bodies were buried then in layers, and finally there was no other choice, but disposal of existing graves, collecting any remaining bones and depositing them in another place (specially designed or suitable for that). During these clearing works, special care was turned to minimize the volume of mortal remains whilst still respecting them, in particular – skulls and the biggest bones of skeletons: limb long bones (humerus, femur, tibias, sometimes forearm bones, rather than bones of other types). It may have been caused by – on the one hand – easy identification as human bones (*crania* in particular), but on the other hand – these had the biggest volume (the volume of human skull – a neurocranium and facial skeleton can measure even over 3 litres) and/or one of sizes of three-dimensional space (e.g. femur can be about half a metre long, or even more). It is easy to calculate that a concentration of 1000 well-preserved human skulls will take up a little more than 3 m³, adding empty space between them (a skull can be compared to a ball is shape, rather than a cube – taking into account its three main dimensions: length (g-op), ‘height’ (b-pr) – here without a mandible and its width (eu-eu), the approximate value for an unequal cube with sizes of about: 20 × 10 × 15 cm,⁵ i.e. volume of at least 3 litres).

Half-a-metre-long bones with the biggest diameter of a few cm at epiphysis (e.g. femur – it is estimated in medial side dimension for about 10 cm, and in front-back dimension about 5 cm with approximate length 45 cm) placed alongside, parallel to the long axis of the shaft in case of skeletons of 500 persons (1000 femurs – left and right) will take up about 2.25 m³.

By contrast, a single individual grave of an adult person (on average – 2 m long, 1 m wide and 2 m deep) takes up about 4 m³. The calculation is evident, speaking for practical solutions of creating, after full decomposition of the corpse, more or less organized bones concentrations, called *ossuaries* in the same space: 1 skull vs about 1200! or 2 femurs vs about 2000! The differences are bigger and space profits significant with regard to the ground surface, where a cemetery is located, removing several hundred single graves.

The largest skeleton elements are preserved in the best condition; they are the easiest to notice and excavate from a grave, to transfer them into another location. A human skeleton consists of about 205 bones, half of which are small bones of the distal part of limb skeleton: hand (27 bones) and foot (26 bones). There are 24 vertebrae, 24 ribs – especially fragile and breaking prone. The fact determines bone inventory excavated from ossuaries, and not all bones found in them refer to their number in human skeleton. The other problem is lack of original grave equipment and goods deposited to a grave, not present in an ossuary – this form an absence of the individual context.

In all locations where space was precious and strictly limited (e.g. in churches and the area around them), and where the grounds designed for the dead could not mix with and penetrate freely the areas designed for the living (in cities), over time the local inhabitants decided to build ossuaries as absolutely necessary objects. We have examples of such concentrations of bone remains excavated in cemeteries and churches, such as the ossuary in Płonkowo from 15th-19th centuries,⁶ although in this case we speak about a church located in a village. Another instance is a location near St. Barbara’s chapel at the basilica of the Premonstratensian nunnery in Strzelno,⁷ and St. James Church in Toruń.⁸ Similar ossuaries and mass graves were also excavated in Lublin, near the Holy Ghost Church,⁹ or Dominican square in Gdańsk, where over 100 thousand human bones and their parts were excavated from this type of object.¹⁰

³ Chisholm 1911, 349.

⁴ Cieślak 1992, 10-11; Grupa 2005, 26; Grupa et al. 2015a, 11.

⁵ Florkowski and Kozłowski 1992, 129.

⁶ Grupa et al. 2015b, 41.

⁷ Sulowska-Tuszyńska 2006, 138.

⁸ Information from Krystyna Sulowska-Tuszyńska conducting the exploration.

⁹ Kozak-Zychman and Szarlip 2015, 246.

¹⁰ Pudło 2017, 10.

Eschatology and *memento mori*

“Expositions” of human remains, being most often of a sacral character are a particular type of ossuary. Sometimes, bones excavated from graves were not re-deposited in the ground, but exposed to public view in crypts and chapels. They also served as material for building altars, covering walls or preparing all manner of religious artefacts, including candlesticks. Some examples can be listed here, like the skull chapel in Kudowa Zdrój;¹¹ the ossuary in Ss. Peter and Paul’s Church in Mielnik, containing the remains of as many as 10,000 persons;¹² and the unique cemetery chapel in Kutná Hora (Czech Republic), where the bones of 40,000-70,000 persons, mainly victims of plague in the 14th century and casualties of the Hussite Wars, have been collected along with those of other victims.¹³ Similarly large ossuaries are located in St. James’ Church in Brno,¹⁴ and one of the biggest European ossuaries in a form of exposition, is situated in the Catacombs of Paris, containing the remains from most of the Paris cemeteries, that were closed down at the end of 18th century.¹⁵ They were created, mainly due to practical reasons (economics of death), but also eschatological motivations (*memento mori*). They were to remind the living, how fragile human existence is, and that life passes away very quickly; they were intended to be a cause of reflection and constant unity with God. Today, with progressing secularization, some of them have lost their spiritual function completely and are treated only as peculiar tourist attractions, visited after purchasing a museum ticket.

It should be remarked here, that a kind of ‘exposed ossuary’, small but impressive, is being created after archaeological explorations of the burial crypt in St. Nicholas’ Church in Gniew. The crypt under St. Anne’s chapel is glazed and visitors can see coffins resting there and selected skulls and bones of people deposited there in the past. A part of the local ossuary is also exhibited in a museum in Dominican square in Gdańsk.¹⁶

Ossuaries in Gniew

When the authors of this article first visited St. Nicholas’ Church in Gniew there was no hint of further nine seasons of exploration. In 2009, a preliminary reconnaissance of the interior of the southern crypt in the Chapel of St. Anne was carried out on film materials recorded inside the chapel.¹⁷

The task seemed to be easy. The research team did not see any difficulties in testing and analyzing five coffins and the misplaced equipment, recognized in the film. With the consent of the District Historical Monuments Restoration Office in Gdańsk, the researchers decided to clear and order the crypt within a week, and if the initial estimation had been true, one week¹⁸ would have been enough to complete the project inside the crypt. Unfortunately, archaeological reality usually changes and brings surprises, when you get down to work.

The first day brought unexpected results. There were six, rather than five coffins belonging to adult persons (Fig. 1). The equipment placed inside them had been probably scattered around by a few generations of martens inhabiting the crypt in various periods. Their habitats were located inside the coffins. The animals were not able to move a long and heavy coffin lid, but their sharp, strong teeth managed to make a hole in it and they got inside. The disorder must have also been caused by intruders penetrating the crypt in the 19th century. Some of the coffins contained two human skulls.¹⁹ Having cleared the interior and documented the coffins and the found goods, work began on exploring the layers situated below the burials (Fig. 2). The ground delivered a big number of human bones in various stage of decomposition, which was the result of transporting them from other parts of the church.²⁰ As we have stated, for centuries the space under churches floors was cleared to obtain new burial locations, and researchers usually assume, that cemetery burial pits contain human remains, which probably were excavated from graves under church floors. There were a few layers of them sometimes,²¹ therefore the number and volume of remains in an ossuary increased depending on space used as a cemetery inside a church, although ossuaries were not always placed outside sacred buildings.

Despite very complicated exploration, dealing first of all with site disarrangement and material destruction, ossuaries are very precious, albeit underestimated sources of information on historical human populations, and

revealed a bricked vault directly under the floor tiles. The parish priest, Fr Zbigniew Rutkowski, cooperated with local firms to test the interior using industrial vision camera lowering it inside the crypt through a hole drilled in a side brick of the vault.

¹⁸ Work in the crypt lasted in fact five weeks.

¹⁹ Grupa et al. 2015a, 12-16.

²⁰ Grupa et al. 2015a, 16-17.

²¹ Exploring relics of a country church in Płonkowo, Rojewo commune, the archaeologists excavated three- and four – layer burials. In western part of the church, and the chancel, the floor of burial pits reached a depth of 1.5 m, while in the nave and northern aisle it was 1.2 m; Grupa et al. 2015b, 38. Depth difference results from stratigraphy of layers of very hard clay in the site, not dug through by the object’s users.

¹¹ Fitych 2016, 14.

¹² Naked Tour Guide 2014.

¹³ Cemetery Church of All Saints with the Ossuary 2017, 1-2.

¹⁴ Brno Ossuary 2001.

¹⁵ Legacey 2017.

¹⁶ Pudło 2017, 11.

¹⁷ During restoration works of a baroque altar in the chapel and strengthening its base, the floor had to be removed. The treatment



Fig. 1. Gniew. General crypt view before exploration. Photo D. Grupa.



Fig. 2. Gniew. General view of the crypt interior after exploration of five coffins. Photo D. Grupa.

sometimes they provide the only material sign. It delivers data contributing to our knowledge of the biology of historical communities, general ecology, and culture.

Remains found in ossuaries excavated inside and outside St. Nicholas' Church in Gniew – mainly in the crypt under St. Anne's chapel illustrate these points. The crypt contained the remains belonging to at least several dozen individuals of both sexes, adult and children, represented generally by skulls (Fig. 3) which may be identified, and fragments, and limb long bones, with a preponderance of femurs (shafts) – Table 1. The situation is similar to the state observed in material from Gdańsk ossuaries, excavated in Dominican Square.

Careful and individual analysis of the preserved and identified selected bones and their fragments (total of over 1000!) helped to conclude that the crypt ossuary material contained more male remains than female, and more adults than children (Table 2). We can also suggest cautiously that the prestigious location inside the Gniew church was reserved for select members of that community, priests of course (male) and eminent officials, noble family members, wealthy merchants, and so on.

As was to be expected, osteological material reveals a predominance of men who died in older age, compared to women, and children who died in their first years of life (0-5 years old), and babies who died in infancy.



Fig. 3. Gniew. Skulls from the crypt ossuary under St. Anne's chapel. Photo T. Kozłowski.

Thanks to measurements of femurs, the best preserved and the most numerous bones in the crypt material (Table 3), we managed to obtain some information concerning the build of members of the historical Gniew population, which of course is not representative for the city as a whole. Until then, we had no data concerning the subject.

To estimate the sex of the deceased these femurs belong to (there was no possibility to order particular preserved skulls and pelvis bones to complete individual skeletons), we used approximate measures of vertical sections of femur heads. It is assumed that the average for male is about 48 mm, and female about 42 mm.²² Bones above the first value were identified as male, and the ones below – female. Bones between were difficult to classify basing on this feature. In these cases, we tried to calculate body height and mass (Table 3), based on formulae indicative of males or females.²³ The results served for calculating values of BMI index and all the averages separately for both ‘sexes’ (Table 4). It showed the picture of rather tall individuals, with even examples of men and women particularly tall. BMI index demonstrates accurate body mass, even with tendency towards overweight. It can be concluded that the food supply was at least sufficient and even big (of course we have probably representatives of Gniew elites in this case).

²² Milner and Boldsen 2011.

²³ Ruff et al. 2012.

BONE AND/OR FRAGMENTS	NUMBER OF EVIDENCE			% OF ALL
	Left	Right	Total	
Occipital bone	55	55	110	10.9
Temporal bone	40	50	90	8.9
Frontal bone	48	51	99	9.8
Mandible	45	45	90	8.9
Humerus (proximal)	22	24	46	4.6
Humerus (diaphysis)	44	44	88	8.7
Humerus (distal)	23	24	47	4.7
Hip bone	36	36	72	7.1
Femur (proximal)	25	26	51	5.1
Femur (diaphysis)	53	51	104	10.3
Femur (distal)	26	25	51	5.1
Tibia (proximal)	16	25	41	4.1
Tibia (diaphysis)	36	43	79	7.8
Tibia (distal)	16	24	40	4.0
Total	485	523	1008	100

Table 1. Quantitative statement of selected bones and their fragments excavated in the crypt.

SEX	AGE (IN YEARS)	SKULL	PELVIS
MALE	18-20	0	1
	20-30	0	1
	30-40	4	2
	40-50	10	2
	>50	8	4
	?	1	1
Total		23	11
FEMALE	18-20	0	0
	20-30	1	3
	30-40	4	4
	40-50	3	4
	>50	1	2
	?	0	1
Total		9	14
SUBADULT (MANDIBLES)	0-1	5	13
	1-5	4	
	5-10	2	
	10-15	1	
	15-20	0	
	?	0	
Total		12	13
General total		44	38

Table 2. Age and sex structure of persons, whose remains were excavated in the crypt estimated on the base of skulls and their fragments and pelvis bones and their fragments.

FEMUR LENGTH [MM]	HEAD DIAMETER [MM]	SEX	BODY HEIGHT [CM]	BODY MASS [KG]	BMI
430	45	M/F	159.8/159.2	59.3/62.3	23.1/24.2
487	48	M	175.3	67.7	22.2
427	46	M/F	160/158.4	62.1/64.5	24.2/25.6
448	48	M	164.7	67.7	25.0
435	44	M/F	161.2/160.6	56.5/68.8	21.6/26.6
427	42	F	158.4	55.8	22.4
443	46	M	163.3	62.1	23.3
482	52	M	173.9	78.9	26.1
499	55	M	178.6	87.3	27.2
454	51	M	166.3	76.1	27.6
481	50	M	173.7	73.3	24.1
439	45	M/F	162.3/161.6	59.3/62.3	22.5/23.6
495	53	M	177.5	81.7	25.9
415	42	F	155.2	55.8	23.3
432	47	M/F	160.4/159.8	64.9/66.6	25.4/26.2
417	42	F	155.7	55.8	23.0
460	42	F	167.3	55.8	20.1
-	51	M	-	76.1	-
450	44	M/F	165.3/164.6	56.5/60.1	20.9/22.0
467	44	M/F	169.9/169.2	56.5/60.1	19.7/21.0
-	47	M/F	-	64,9/66,7	-
427	41	F	158.4	53.6	21.6

Table 3. Individual measurements of femurs (assumed that average for female “F” is about 42 mm and male “M”– 48 mm (Milner and Boldsen 2011).

SEX	BODY HEIGHT [CM]		BODY MASS [KG]		BMI	
	Average	Min.-max.	Average	Min.-max.	Average	Min.-max.
MALE + MALE?	167.5	160.0-178.6	67.7	55.8-87.3	23.9	19.7-27.6
FEMALE + FEMALE?	160.7	155.2-169.2	60.6	53.6-68.8	23.3	20.1-26.6

Table 4. Arithmetic means of body height, body mass and BMI index for both sexes (based on data from Table 3).

Exceptionally interesting lesions observed on bones from Gniez osuaries and skeletons destroyed during the elimination of church burials should be noted here. There were signs of numerous diseases readable in palaeopathological studies, like joint degenerative lesions, signs of healed traumas (Fig. 4), signs of inflammation, including nonspecific – septic ones, specific infections, e.g. syphilis (Fig. 5), including cases of probably congenital syphilis in children as hypoplastic and mulberry-like molars of an isolated infant mandible (Fig. 6), metabolic disorders as rickets (Fig. 7). Development disorders were also observed. The finds provided interesting and rare examples of single bones of what was undoubtedly a dwarf skeleton (Fig. 8). It should be emphasized that ossuary

studies can contribute to more precise reconstruction of disease panorama, characteristic for historical populations, qualitatively, if not quantitatively, as is shown by the palaeopathological study of Gdańsk ossuaries.²⁴

Archaeological second hand

Exploring the southern crypt, apart from human remains, researchers registered numerous fragments of decomposed coffins (Fig. 9), silk textiles (Fig. 10:a-c), devotional objects (Figs. 11 and 12:a-b),²⁵ artificial

²⁴ Kozłowski et al. 2017.

²⁵ Niedźwiadek et al. 2015, 98-104; Grupa and Warecka 2018, 31-42; Michalik, forthcoming.



Fig. 4. Sign of head trauma – healed depressed fracture of the left parietal bone of the skull. Photo T. Kozłowski.



Fig. 5. Caries sicca of an adult male skull – signs of tertiary syphilis. Photo T. Kozłowski.



Fig. 6. Infant mandible with hypoplastic and mulberry-like deciduous and first permanent molars – probably congenital syphilis. Photo T. Kozłowski.



Fig. 7. Infant tibias with signs of metabolic disorders – active rickets. Photo T. Kozłowski.



Fig. 8. Very short and deformed humerus and femur of a dwarf skeleton. Photo T. Kozłowski.



Fig. 9. Turned wooden legs of a child's coffin from an ossuary layer. Photo D. Grupa.

flowers (Fig. 13),²⁶ grave wreaths (Fig. 14:a-b) and remains of footwear; this was an astonishingly large quantity of historical objects, especially textiles to be found during ossuary exploration (Fig. 15:a-b). It can be supposed that a majority of the remains may have been transported into another location with complete equipment, at least the bottom part of a coffin, or personal grave goods were carefully collected and deposited

²⁶ Grupa 2015, 51.

with the body, what would have been rather exceptional practice. Another conclusion is that clearance and removal of burials from under the floor were performed in a relatively short time after the moment of burial, within 40-70 years from the deposition act into a grave pit. This fact would not speak for so called genealogical memory, reaching some generations into the past, particularly in case of the gentry. The collection of textile artefacts excavated from the ossuary in the crypt is the largest of all known in Polish archaeological research.²⁷

The rescue team consisted of archaeologists, specialists in conserving archaeological objects, and skills worked out in laboratory treatments and field works let them protect carefully all organic materials, including textiles (their quantity was impossible to estimate in the site). Preliminary analysis of excavated material was performed in the Laboratory of the Archaeological Institute of the Nicolaus Copernicus University of Toruń, and the work was divided into three stages. Textiles were strongly disintegrated, but their types were identified and packed separately (distinguishing haberdashery products and grave clothes fabrics). There were over 1200 textile fragments explored, classified in 467 inventory numbers, including haberdashery²⁸ (348 inventory numbers), where we were able to identify: bands, bobbin

²⁷ Dubno site, crypt B, which in its lowest parts served as an ossuary revealed over 100 devotional objects and textile fragments; Niedźwiadek et al. 2015, 74. In Toruń's Church of the Assumption, trench 2 from 1982, located between the chancel and the nave delivered skeletons and dried bones, disordered in many cases. From the depth of 1.7 m anatomical skeleton order was readable. The depth of 2.2 m revealed 2 brick quarters with individual skeletons and very poor equipment. We spotted a very interesting situation above 1.7 m. Preliminary grave goods analysis from particular trenches (there were three), including analyses of coffin plaques, cartouches and clothes indicated numerous disturbances in deposition of particular skeletons in trenches 2 and 3. Three coffins had names and dates indicating that the bodies were buried inside the church when it belonged to the Protestants. It was astonishing, that the burial of Tobias Schilling (royal starosta) from 1666 was situated under the burial of Anna Majermanówna from 1619. It was a result of clearing works in the church in 1724, when the building was returned to the Catholics. Preparing place for a brick crypt earlier burials were removed and the coffin of Schilling was found under the coffins of small Majerman girls (died in 1619 and 1623). The builders hastily arranged the interior of the ossuary in eastern part of the nave, where the graves had already been deposited. Human remains and grave goods scattered around coffins demonstrate carelessness concerning the situation under the floor; Grupa 2005, 18-20, 54, 102-104.

²⁸ It is usually the biggest textile group among funeral artefacts, but when there are 10 or over 40, the collection is regarded as large; Grupa and Grupa 2013, 46-51; Grupa et al. 2014; Dudziński et al. 2015; Drązkowska 2016b, 373-375; Dudziński et al. 2017; Grupa 2018, 35-39; Nowosad et al. 2018, 65-78.



Fig. 10. Woman's silk bonnet: a – *in situ*; b – after conservation; c – a fragment of damask pattern. Photo D. Grupa.

lace fragments, galloons, cords, belts and tassels.²⁹ The variety and richness of Gniew ossuary material enabled to reconstruct as many as 24 headwear items, including bonnets, fur caps (*kolpak*) and headscarves (Fig. 16:a-b), as well as four grave gowns and 6 elements of liturgical vestments.³⁰ 15 textile scapulars are absolute unique finds (Fig. 12:a-b); they must have belonged to representatives of higher local class from the city and the area. This large collection of scapulars was an occasion to elaborate individual names for its particular elements. Thanks to tedious conservation work, we succeeded in not only separating silk elements, but also remnants of woollen textiles, which in scapular regulations are

the base of a proper scapular.³¹ Before bone remains were analyzed, we had the first clues we were excavating burials of young people and children, when we found remnants of grave wreaths. These are regarded as obligatory elements of rich burial symbolizing virginity, purity and youth. Wreaths are found in graves of spinsters, bachelors, children,³² and nuns sometimes, and they are exceptionally sophisticated constructions, very carefully made. Exploring ossuaries, researchers had no possibility to associate any wreath remains with any particular bone remains, nor speculate where the wreaths had originally been placed the moment of deposition a body to

²⁹ Grupa et al. 2015a, 49.

³⁰ Grupa et al. 2015a, 97-112.

³¹ Grupa et al. 2015a, 125-140.

³² Drązkowska 2006, 209-217; Drązkowska 2007, 493-495; Grupa 2014, 17-20; Grupa et al. 2015a, 117-122; Drązkowska 2016a, 367-369; Grupa and Nowak 2017, 159-169.



Fig. 11. Relics of a rosary on a silk string – glass beads and a brass cross – before conservation. Photo D. Grupa.

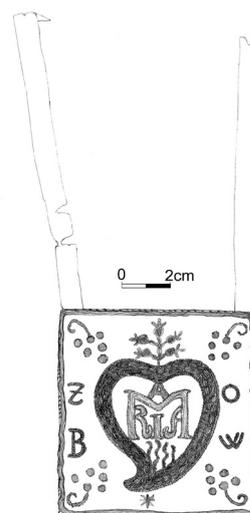


Fig. 13. Metal-textile element of an artificial flower. Photo M. Nowak.

the ground. Further research under the church floor brought more discoveries, which led to conclusions that the wreaths had been placed as a rule on bonnets covering the heads of the deceased.³³ We can always expect exceptions, though, and the northern crypt delivered a child burial (10-14 years old), deposited in coffin no. 5 (preserved in fragments). Metal ornaments imitating bunches of twigs were arranged on a bonnet forming a wreath, and the same elements were fixed the length of the robe in two parallel rows.³⁴

³³ Grupa and Nowak 2017, 160-165.

³⁴ Coffin relics were generally filled with a number of bands and galloons fragments, with decorations fixed to them made of metal strip with substantial admixture of copper (all was covered



a



b

Fig. 12. Silk scapular with Marian sign: a – graphic reconstruction of embroidery elements; b – a scapular sheet after conservation. Photo M. Nowak.

Reviewing the ossuary material we notice that comparing large textile material with other artefacts, remains of leather footwear were in the minority, including only two pairs of brass clasps.³⁵ The archaeologists registered two interesting pieces of leather joined together using wooden pegs, ellipse in section belonging to a shoe heel. Shoes of the period were equipped with separated heels. This example has its edges painted red. Subject literature describes boots with red soles and/or red heels worn by the most eminent representatives of social elite, kings

with green corrosion). Archaeometrical analyses showed that the band made of the alloy was originally covered with silver on both sides; Grupa and Łukaszewicz, forthcoming.

³⁵ Grupa et al. 2015a, 143-147.

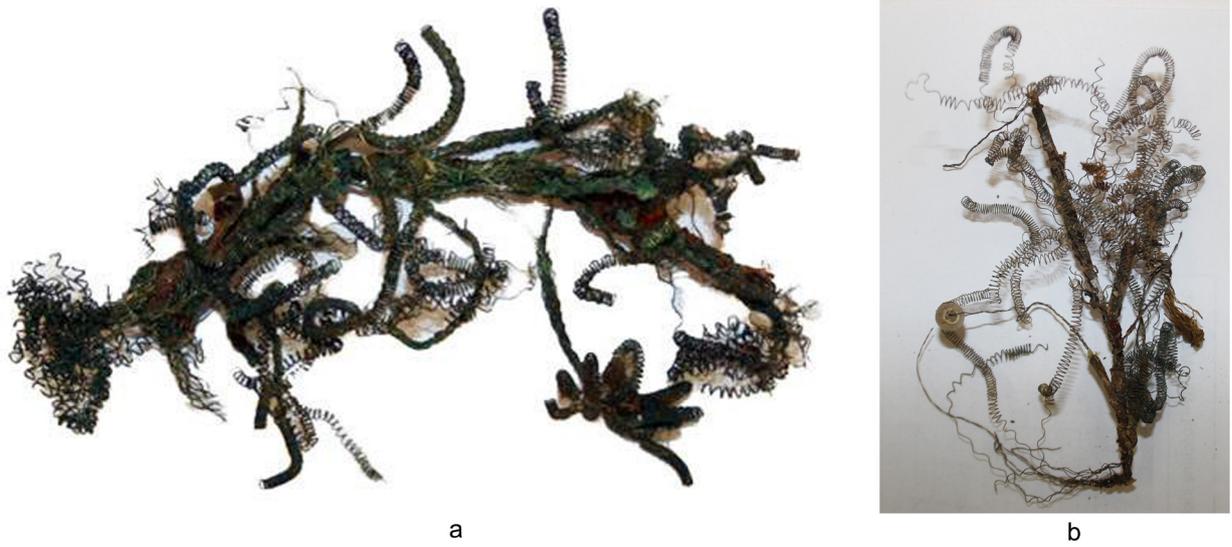


Fig. 14. Metal-glass elements of a grave wreath. Photo M. Nowak.

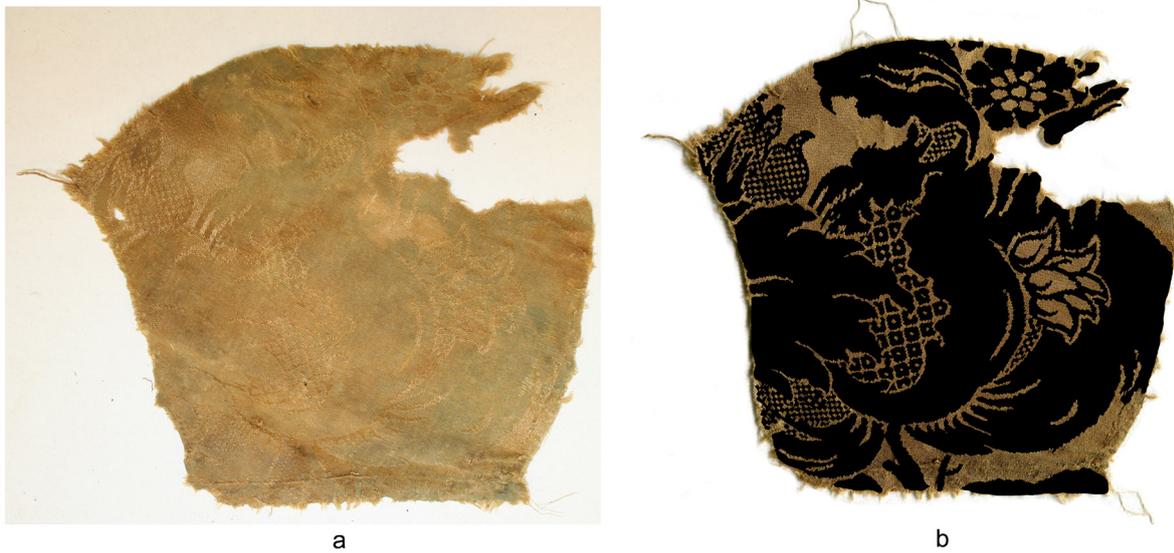


Fig. 15. Fragment of a silk bonnet: a – side part after conservation; b – attempted reconstruction of textile pattern.
Photo D. Grupa, drawn by M. Grupa.



Fig. 16. Silk headscarf: a – before conservation; b – after conservation. Photo M. Majorek.



Fig. 17. Bricked up chancel entrance from the North.
Photo D. Grupa.



Fig. 19. Gniew. Trench 4/2010, first ossuary level.
Photo D. Grupa.



Fig. 18. Gniew. Trench 3/2010, skeleton 1, bone remains seen in northern trench wall beneath. Photo D. Grupa.



Fig. 20. Gniew. Trench 4/2010, ahead – southern wall with ossuary remains, on the left – eastern wall with remains of the same ossuary. Photo D. Grupa.



Fig. 21. Gniew. Trench 4/2010, remains of another ossuary in northern wall. Photo D. Grupa.

in particular.³⁶ Gniew was a royal city,³⁷ so the starosta's (lord lieutenant's) court was close to the royal court and if somebody could afford such a luxury, he could use it. This information is further evidence that some of the people buried in the Gniew church were related to the starosta who sat in the city court.

The remaining Gniew ossuaries resembled objects known from other sites³⁸ and contained only bone relics, deprived of any additional objects. They were located here in various places of the churchyard, with the biggest one from the North, at the old entrance to the chancel, which is bricked up today (Fig. 17). It

³⁶ Gutkowska-Rychlewska 1968, 459; Semmelhack 2015, 22.

³⁷ Mross 1997, 17.

³⁸ Grupa 2015, 41.



Fig. 22. Gniew. Trench 4/2010, outlines of individual burial pits in the soil. Photo D. Grupa.

was registered in two trenches from 2010: near and in the wall N, in trench 3 (Fig. 18), and in S-E corner of trench 4 (Figs. 19 and 20). The exploration uncovered the remains of about 400 individuals. Deposition in the space between the trenches is estimated for another 100 skeletons. To our surprise, the area at the northern wall of trench 4 revealed another ossuary, calculated for up to 300 remains (Fig. 21). Among the ossuaries there were also single burials with skeletons in anatomical order, deposited in layers up to the depth of 2.8 m, with most readable pits situated on the ground bed (Fig. 22). The large quantity of individuals concentrated in the graveyard may result from clearing works around and inside the church.

Smaller ossuaries were situated from the southern church side. First of them was excavated near the present location of a statue of the Blessed Virgin Mary, which historically was the site of the first brick construction with foundations reaching a depth of over 3 m, erected probably before the chancel building, which was completed in the middle of the 14th century. The existence of that structure was known from a 1655 plan

of Gniew, made by Master Dahlberg, and described as a tomb-chapel. However, its size and solid stone foundations indicate another original function. This could have been the first brick chapel or church built within the boundaries of Gniew (no written sources confirm this fact, but the huge foundations are evidence of first church's existence). When a new church, existing till today, was erected, the function of the old one could be changed. The fact that it was used as a cemetery chapel and next as an ossuary is confirmed in written sources: *in the cemetery corner, on the eastern side, there is a brick chapel, roofed with tiles, with a vault, filled with bones. It is said to have been erected earlier than the church and served for holy services. Now it houses unconsecrated objects (1687).*³⁹ The cemetery chapel disappeared from the town landscape in the 19th century, when a decision was made to pull it down, and use the material for repairing the church roof and walls. A problem arose as to what to do with the collected human bones, so the best solution was to dig pits nearby and place the remains there. The work turned out to be difficult due to solid foundations, so two locations were prepared (Figs. 23 and 24). We do not know, if these pits housed all the remains from the chapel, because the ossuaries have not been explored totally. Some bones remained in the trench profiles and it is difficult to estimate their number. The ones exposed were estimated at about 400–450 individuals. It is not obvious, whether the chapel was cleared only once or more times.

To estimate the depth of the chancel foundations, a new trench no. 2 was made in 2015 from the eastern side, in a central place between the buttresses. A brick wall was reported at a distance of 1.22 m from the church wall. Exploration of earthen and brick rubble layers finished at a depth of about 0.6 m, when a concentration of bones deposited to a depth of 1.8 m was registered (about 1.2 m thick). At its widest point the concentration amounted to about 1 m. The additional wall could have been built to create a room closed with walls for the deposition of bones. Apart from bones, the interior contained 13 coins, with the oldest from 1763, and the most recent from 1866. The volume of that new ossuary was probably not sufficient for such a large number of bones – behind the new wall towards the East the trench was enlarged (trench 2a/15), exposing the next bone concentration about 0.89 m wide, and nearly 2.1 m long.

New small ossuaries were scattered around the graveyard between burials in S-W corner of the cemetery, among the roots of a large linden tree (Fig. 25), and another one was located during the digging trenches for

³⁹ Mross 1997, 71-72.



Fig. 23. Gniew. Trench 4/2012, inside the first brick church. Photo D. Grupa.



Fig. 24. Gniew. Trench 4/2012, ossuary in the building corner after dismantling the foundations, and outside, from the North, upper figure part – remains of an ossuary in western trench profile. Photo D. Grupa.

electrical installations (Fig. 26), but unfortunately this was destroyed without any archaeological supervision to identify its condition.

This short text does not present in detail the study problem and informational value of ossuaries. We have tried only to draw attention to the question of secondary concentrations of human bones, and artefacts found there accidentally, as precious sources of

knowledge concerning historical populations and their functioning. These objects should always be studied carefully and the excavated material analyzed in detail. It refers particularly to the archaeology of late mediaeval and modern cities, with attention focusing on places of worship. Every archaeologist and anthropologist cooperating with the research team must be interested in subjects enabling us to estimate local historical populations belonging to the researched sites over the centuries.



Fig. 25. Gniew. Trench 5/2012, ossuary in south-western cemetery corner, entangled by linden tree roots. Photo D. Grupa.



Fig. 26. Gniew. Trench 4/2011, a small ossuary situated between buttresses in the northern aisle. The situation after installing lights around the church. Photo D. Grupa.

Ossuaries offer opportunities to do this, providing data concerning not only human remains, but also the preferences of people buried there, and their social status or interregional contacts. There are various possible interpretations of these data, clearly discernible from the examples of the sites discussed here.

Detailed analysis of bones coming from ossuaries makes it possible to estimate the minimum number of

persons, these remains belonged to, their sex and age at moment of death – that is basic information serving for outlining the general demographic characteristics of the studied population. Skeletal elements represented in the finds (usually skulls and limb bones) are helpful to some extent for obtaining data on morphology reconstruction body size and composition. Revealed diseases and trauma signs show a variety

of illnesses, including rare ones. Artefacts, including garment fragments, demonstrate sometimes a rich picture of culture and eschatology. Materials coming from ossuaries cannot be treated as 'second-class' evidence, as used to be the case. They are first of all of another character, different from ones obtained in classical cemetery sites and require different and more flexible methodical approaches from archaeologists and anthropologists, which can guarantee not so detailed, but significant knowledge on the biology, ecology, behaviour and customs of historical populations. Artefacts of material culture – if any are found – tell us about the preferences of the buried people, their

belonging to particular social groups and interregional contacts. The southern crypt of Gnień Church is a unique site, because no other ossuaries excavated so far have delivered so much data concerning the history of material culture. This research is an important contribution to expanding our knowledge, for example, of the history of silk in Poland, and sheds new light on the royal town of Gnień, which has been regarded as a provincial town for the last two centuries. There is no doubt that interpretative possibilities are varied, although too precious to be ignored while studying both urban and rural populations.

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Streszczenie

Wartości poznawcze ossuariów z cmentarza i kościoła pw. św. Mikołaja w Gniewie

Badając kościoły i cmentarze natrafiamy na szczątki ludzkie zsypane do jednej jamy. Czasami odnotowujemy ten fakt w pamięci, ale w czasie opracowywania materiałów ze stanowiska wspominamy tylko, że odnaleziono ossuaria, nie zastanawiając się nad ich wartością poznawczą.

Głównymi zadaniami indywidualnych, jak i grupowych (zbiorowych) ossuariów było przede wszystkim zmniejszenie objętości zajmowanej przestrzeni przez szczątki zmarłego (aspekt utylitarny), jak również ich ochrona przed zniszczeniem, profanacją lub nawet kradzieżą. Czasami tworzone ossuaria, których celem była też szeroka ekspozycja kości (aspekt eschatologiczny).

Przykładami takich skupisk ludzkich szczątków kostnych, które zostały odkryte na cmentarzach i w świątyniach są ossuaria, m.in. w kościele w Płonkowie, obok kaplicy św. Barbary przy bazylice w klasztorze norbertanek w Strzelnie, jak również w Toruniu przy kościele św. Jakuba. Należy też wspomnieć o innych miastach, w których odkryto podobne ossuaria i zbiorowe groby, np. w Lublinie przy kościele św. Ducha czy na Placu Dominikańskim w Gdańsku (w sumie ponad 100 tysięcy ludzkich kości).

Podczas badań prowadzonych w kościele pw. Św. Mikołaja w Gniewie w latach 2009-2016 odnotowano różnej wielkości ossuaria, znajdujące się wewnątrz kościoła i dookoła niego. Z ossuarium usytuowanego w krypcie południowej w kaplicy św. Anny oprócz szczątków kostnych odnotowano bardzo liczną kolekcję tkanin jedwabnych. Niezbyt często zdarza się możliwość ustalenia czasu powstania ossuarium (pomocne są znalezione pośród kości elementy stroju czy jak w Gniewie – monety). Bardzo istotną wartość dla poznania lokalnej historii, opisanie warunków życia, zmian chorobowych czy liczebności społeczności mają badania osteologiczne. Kluczowa jest zatem w przypadku badań ossuariów współpraca archeologii i antropologii.

