

RESEARCH ARTICLE – VÝZKUMNÝ ČLÁNEK

Mapping urban assemblages: Simulating material culture and social dynamics in a flea market context

Mapování městských souborů: Simulace materiální kultury a sociální dynamiky v kontextu blešího trhu

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Although urban archaeological research yields a wealth of information, interpreting material culture in a complex context complicates the estimation of the artefact-space-human relationship. Drawing on the archaeological research on active (still operating) sites, this study presents a simulation of those dynamics using as an example a vibrant flea market, which is considered a space with a condensed assemblage of relationships between people and objects in a confined area. This approach allows for a better understanding of the dynamics of archaeological sites and social relations. We assume that multiple human activities, like trade, have their material reflection in waste and can be archeologically investigated. We surveyed a flea market (Cieplice, SW Poland), mapping finds of discarded or lost items and assigning them to different functional categories. The results show a partial correlation between the stalls and finds, varying on the object kind. However, the finds, given that as contemporary humans we understand the 'total' context, allow unobvious interpretations, opening a new perspective also for medieval and post-medieval urban archaeology.

medieval market – flea market – contemporary archaeology – medieval archaeology – material culture – active site – survey

Archeologický výzkum ve městech přináší řadu informací, avšak interpretace hmotné kultury v komplexním kontextu komplikuje odhad vztahu artefakt – prostor – člověk. Na základě archeologického výzkumu aktivních (stále fungujících) lokalit předkládá tato studie simulaci této dynamiky na příkladu živého blešího trhu, který je považován za prostor se zhuštěným souborem vztahů mezi lidmi a předměty na omezeném prostoru. Tento přístup umožňuje lépe pochopit dynamiku archeologických lokalit a sociálních vztahů. Předpokládáme, že mnohočetné lidské činnosti, jako je obchod, mají svůj materiální odraz v odpadu a mohou být archeologicky zkoumány. Provedli jsme průzkum blešího trhu (Cieplice, JZ Polsko) a evidované vyřazené a ztracené předměty přiřadili k různým funkčním kategoriím. Výsledky ukazují částečnou korelaci mezi stánky a nálezy, která se liší v závislosti na druhu předmětu. Nálezy však vzhledem k tomu, že jako současní lidé chápeme „celkový“ kontext, umožňují ne-obvyklé interpretace, a otevírají tak novou perspektivu i pro středověkou a postmedievální městskou archeologii.

středověký trh – bleší trh – současná archeologie – středověká archeologie – hmotná kultura – aktivní lokalita – průzkum

Introduction

From the perspective of archaeological research, urban space presents a chaotic landscape. Frequently studied in small sections of the original plot, it is interspersed with numerous pits, walls, cesspits, with stratifications exceeding 5 metres in depth. This complexity makes interpretation challenging. Moreover, such studies present the researchers with huge quantities of artefacts, sometimes literally tonnes of them. Interpretation of this material

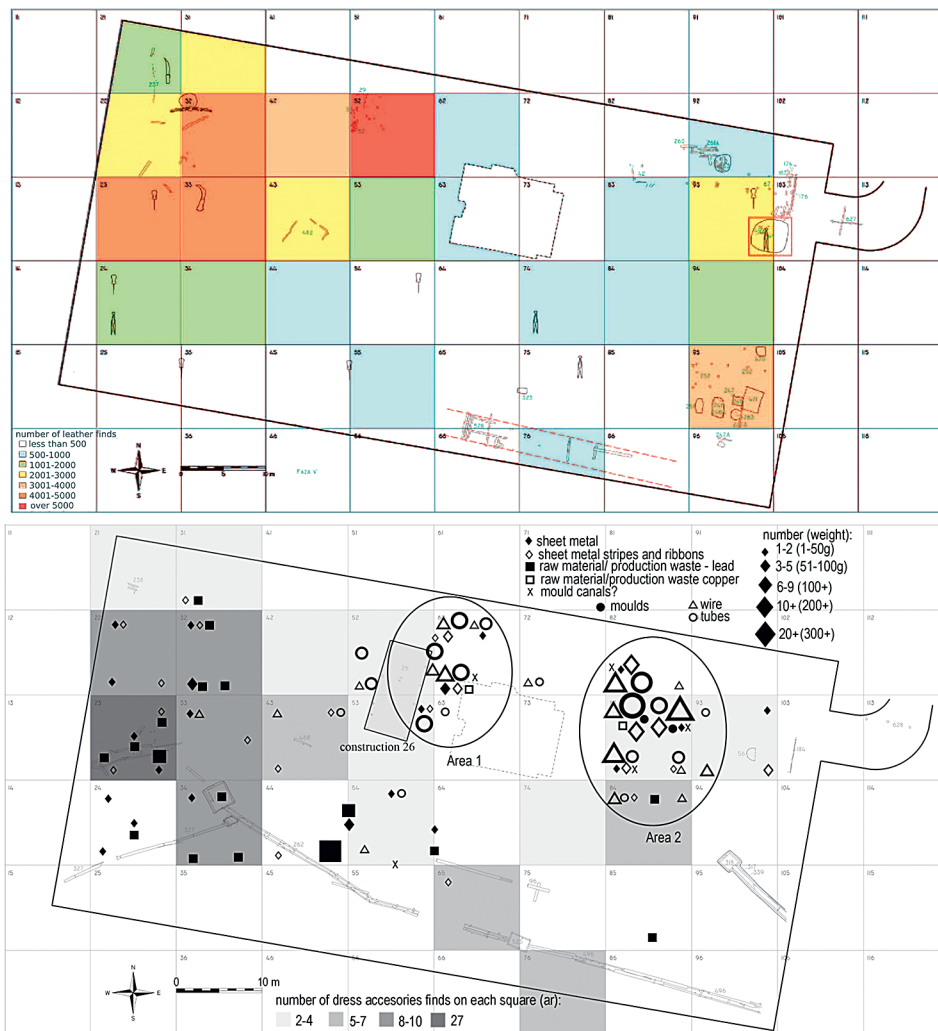


Fig. 1. The distribution of various finds on the medieval New Market Square in Wrocław (after *Konczewska 2018; Sawicki 2018*).

culture on a macro scale is also difficult, as it consists mostly of settlement waste, accidentally lost, discarded rubbish, and rarely intentional deposits.

Field research in urban squares and marketplaces is less common. These parts of the city, of course, differ significantly from one another depending on their purpose, the type of ground surface (paved or not), the number of visitors, the types of stalls, etc. Nevertheless, their archaeological study, especially from the perspective of artefacts, raises numerous questions (*Buško – Głowa 2017; Konczewska 2018; Piekalski – Wachowski 2018; Sawicki 2018; Tys 2020*). Can potential locations of trade and production be identified based solely on artefacts, as suggested by large concentrations of objects in certain areas? Did traders have specialisations, and are these reflected in the archaeological record?

Finally, a fundamental question for our discipline: what is the function of objects in relation to existing structures, such as buildings or stalls? Some observations on this topic have been made in studies conducted in Wrocław (*Konczewska 2018; Sawicki 2018*); however, these hypotheses have not yet been verified (*Fig. 1*).

Such open commercial marketplaces, similar in function and operational intensity, continue to exist today. Flea markets (French: *marché aux puces*, German: *Flohmarkt*, Polish: *pchli targ*, Czech: *bleší trh*) represent a global phenomenon, documented in a comparable form in medieval written sources, though their origins undoubtedly date back to much earlier periods. The flea market witnesses very intense entanglements (*Hodder 2012; 2016*) between people and things, taking place over a short period of time (usually one day) and often recurring in the same place. It overwhelms with the accumulation of different actors: people and objects in one limited space, drawing images of the multiple social relations that take place between them – from the arrangement of the stalls to the trade itself (*Fig. 2*).

The aim of this study, however, is not to deal with the history of flea markets, but to reflect on them as an interpretative model of the dynamics between space and human entanglements based on material evidence, to test whether there is a correlation between different types of waste and the arrangement of stands in a highly dynamic and cyclically used structure. The recently developing field of Contemporary Archaeology (*Graves-Brown et al. 2013*) and projects referring to Garbology (*Graves-Brown et al. 2013*) provide inspiration to simulate an archaeological site with access to the ‘total context’ along with the simultaneous study of the material culture itself.

In this text, the term ‘total context’ refers to the current archaeological record, which we, as modern consumers of culture, should be able to understand easily (*Graves-Brown et al. 2013*). However, as this study will later demonstrate, this understanding is quite complex. We build here on the behavioural archaeology ideas discussed by Michael B. *Shiffer (2010, p. 19)* and an understanding of ‘archaeological inferences’ – which can be summarised as steps to understand human behaviour and cultural process on the basis of the archaeological record. Our aim was to alter ethnoarchaeological approaches to contemporary and historical archaeology, as we analysed the formation process by the application of middle-range theory as presented by Lewis Binford. Taking into account early comments on this approach by Mark Raab and Albert C. Goodyear (*Raab – Goodyear 1984*), we aimed to study the historical ‘medieval marketplace’ through an understanding of the recently advocated ‘active’ archaeological site.

This term was recently popularised by Carolyn *White (2020)* in her book on the Archaeology of the Burning Man festival, which provided a theoretical foundation for this type of research. Various types of studies in the field of contemporary archaeology (*Nativ – Lucas 2020*) have also been conducted at other music festivals (*Åikäs et al. 2016*), film sets (*Weller 2014*) and college campuses.¹ All of these studies focus on understanding human interaction with space on the basis of archaeological methods, reaching beyond traditionally explored sites that have already ‘lapsed’.

Following the aforementioned approaches, the field research conducted in Cieplice was essentially an archaeological experiment in which the researcher-observer gains first-

¹ <https://www.facebook.com/kampusjakostanowisko>

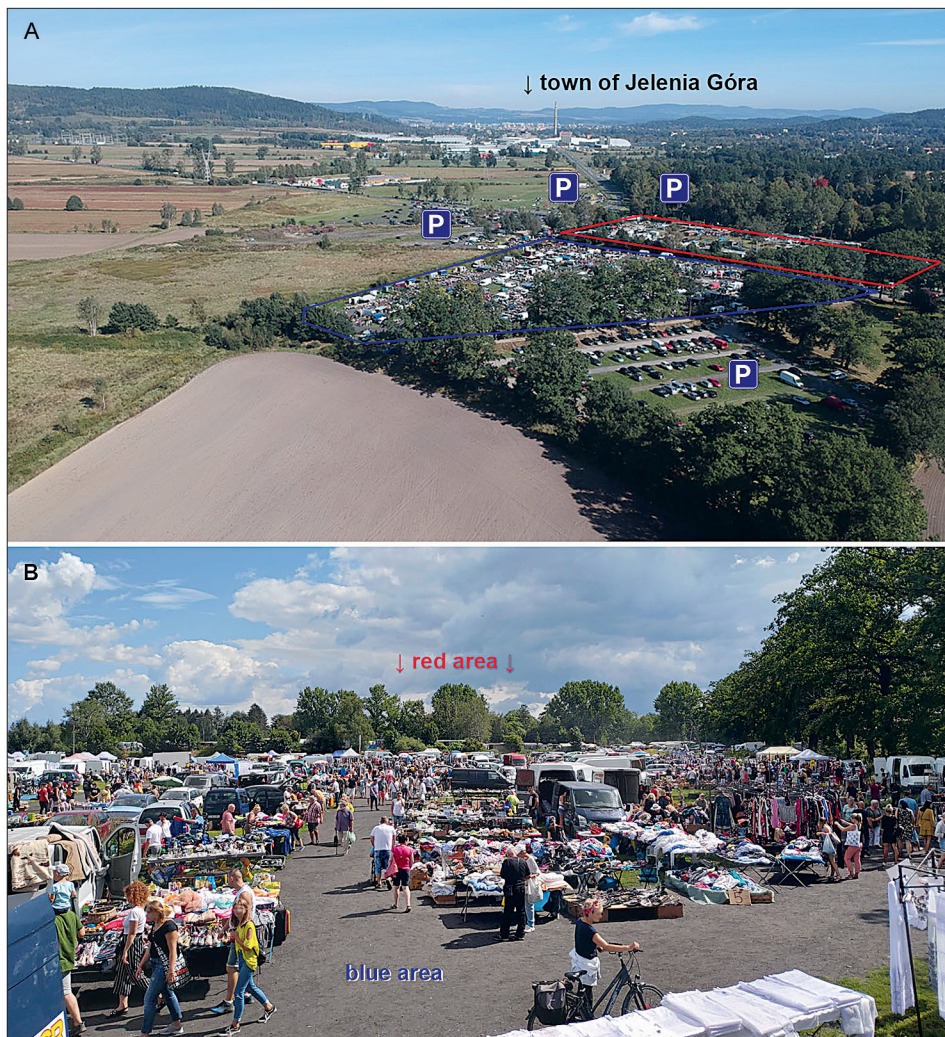


Fig. 2. General views of the active site of the flea market. A – aerial view of the blue and red areas with surrounding parking places from southwest (photo by J. Hasil); B – terrestrial view of the blue area from west (photo by J. Sawicki).

hand, empirical knowledge that enhances their ability to develop and refine interpretive models (for more on archaeological experiments, see *Neustupný 2009*, especially p. 3–6). The uniqueness of this experiment lies in the scale of the studied structure and the number of participants involved (thousands of people and billions of artefacts), which could never have been simulated by other means. Similarly, it is worth mentioning that the context of all the finds from the site is heterotopic, as all of them were brought specifically for the flea market, and as such they are discussed from a cultural perspective of *court durée*.

Contemporary flea markets have not yet been archaeologically studied, apart from one survey conducted in Tübingen (*Porr 1998*). Medieval flea markets, however, have been the

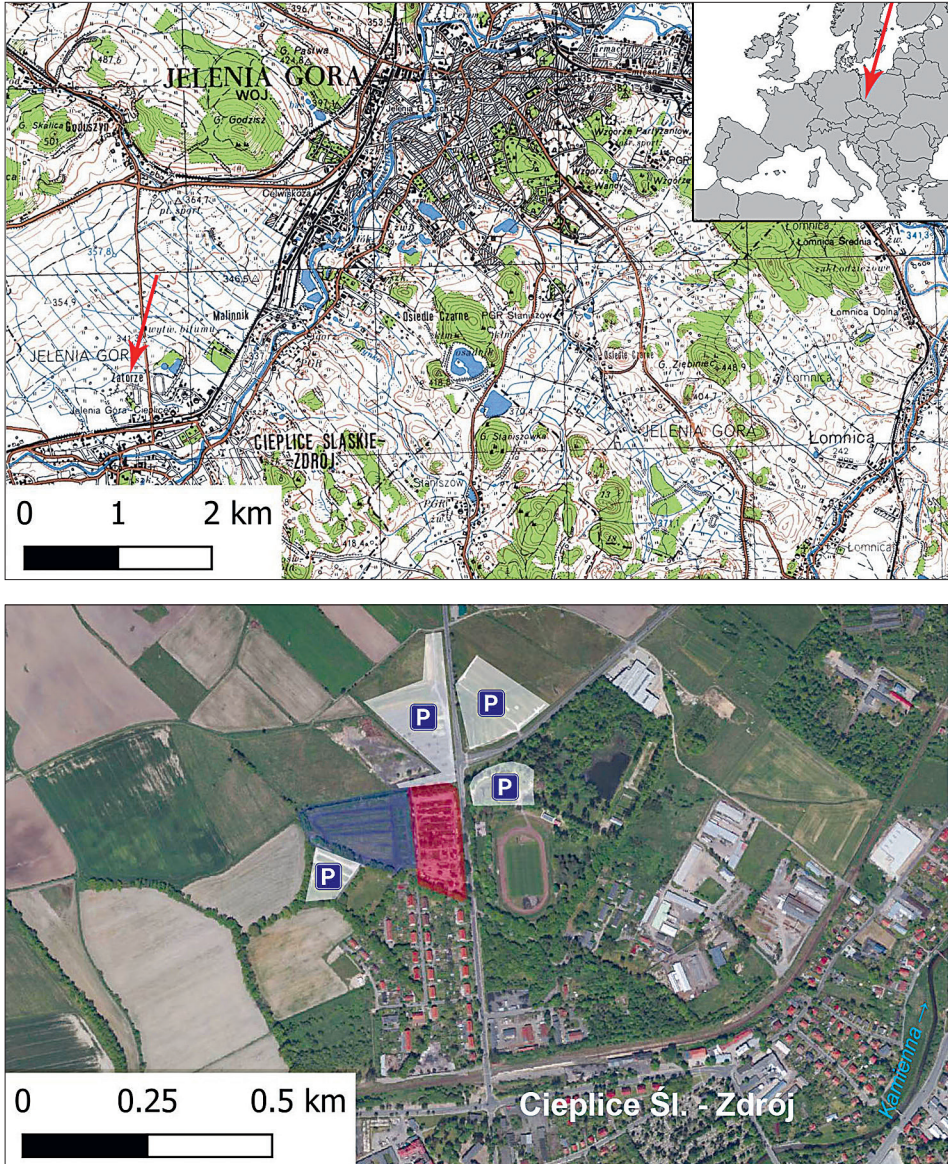


Fig. 3. Localisation of the site.

subject of scholarly debate (Piekalski – Wachowski 2018; Oksanen – Lewis 2020) concerning material culture, urban planning, micro and macro soil remains as well as commerce on a larger or smaller scale.

Their function and relationship with other actors are equally complex, creating an interpretative paradox: the archaeological situation is static, while the reconstructed reality is highly dynamic, changeable, and ambiguous.

Investigated site: Sunday flea market in Cieplice (SW Poland)

We carried out our research in Cieplice, Jelenia Góra District, Poland (*Fig. 3*), a town located close to the border with both the Czech Republic and Germany. The local flea market has been held on a weekly basis every Sunday since at least the turn of the century, but there is no official documentation of it. Trading takes place from early in the morning until around 2 p.m. The area in which the weekly market is located can be divided into several zones. The blue zone belongs to several private owners; the red zone, surrounded by a fence, is managed by the city hall. There are also multiple parking zones managed by individual entrepreneurs who determine the payment rates. The parking areas near both the blue and red zones also serve a minor commercial function, as they are occupied by local farmers selling their agricultural products.

For this experimental study, we chose to focus our survey on the largest blue zone, a decision influenced by several factors. This area served as the primary trade zone, featuring the highest number of traders from various specialisations and attracting the most customers. Additionally, its accessibility for fieldwork was a practical consideration.

The market area is unpaved (in contrast to the Tübingen case study, see *Porr 1998*), divided by dirt roads, and the stalls are set up on grass. The area is enclosed on two sides by a dike, and from north by a water channel. Trade is carried out in several ways: directly from the ground, from banana cartons serving as tables, portable tables, but also from the boots of cars. Some of the vendors are traders who make a living from this type of sale; however, a significant part are Sunday traders who set up with stalls as a ‘hobby’. They treat this activity as an opportunity for additional income, but above all as a social event. Among the stalls, there are food trucks serving coffee and food to visitors. When the market day ends, traders as well as customers leave the area, which is then hastily cleaned by the ground owners. In addition, there are large waste bins at the two main entrances.

The marketplace area is open and unprotected during the week and therefore allows the simulation of an ‘archaeological site’, which is cyclically subject to various transformations – both human (cleaning of the area or further littering unrelated to commercial activity) and non-human (rain, snowfall, animals dispersing waste). The mere juxtaposition of the intensity of the individual items in relation to the site of the trade fair already yields interesting and unobvious results. In addition, this is supported by the analyses of individual finds, especially as their (almost) entire context is known.

Methods

Documentation of the dynamic structure – space

Typical archaeological research produces evidence of static (*Neustupný 2009*) and usually strongly transformed (*Schiffer 1987*) structures. Only in the case of an archaeological experiment do archaeologists document a diachronic process (*Schiffer 1987*), which is, however, pre-planned and carried out in a controlled manner and after necessary simplification. The study of material remains of the complex dynamic structure of the flea market creates the demand for a new quality of archaeological field documentation (*Gould – Schiffer 1981*). We carried out this work at a similar time as *Magnani et al. (2021)*, independently developing similar field methods. However, we enriched the strictly archaeological documentation with observations with the active site questionnaire.



Fig. 4. Example of a deposit of intentionally discarded objects (photo by J. Hasil).

The surveyed blue area (*Fig. 3*) was divided into an irregular pattern of 45 sectors with an average area of 560 m², which was primarily oriented according to the structure of the internal roads. All the measurements were taken with dual GNSS instruments with real-time correction. These sectors were used to document ‘static archaeological’ relics as well as the living marketplace.

The day before the weekly market, non-invasive prospection was carried out in each sector, producing 45 individual finds assemblages considered to be mostly non-intentionally discarded artefacts, as 47 intentionally deposited artefacts or artefact assemblages were identified during the survey (*Fig. 4*). These finds were documented as partial documentation points. In the majority of cases, they were small-scale intentional deposits related to local consumption (e.g. container glass, disposable food packages and cutlery) or damaged goods (table glass and pottery). In other cases, objects were deliberately hidden for use at the next market day (mannequins for textile presentation), and in one case the purpose of the deposit could not be decided (a slightly damaged mirror hidden at the edge of the trade area). Across the market we also noted buried car tyres, which served as spatial structuring anchors distinguishing the stalls. Carpets had a similar function, but were localised only in one area, acting as the floor base of a stall. They were left on the surface, unprotected throughout the year. When older ones began deteriorating, they were covered with another, resulting in several layers of carpets. This also indicates the regular use of a certain stall by the same vendors.

Initial documentation of the finds was conducted on site. This was due to the repetitive presence of typed artefacts (e.g., packing glass), but also to the significant presence of low-durability finds (residues of fruits and vegetables) or finds posing a hygiene risk (disposable tableware, cigarette butts). The finds were therefore photographed on site (*Fig. 5*) and only a minority of the of finds were selected for laboratory processing and further evaluation.

Fig. 5. Example of unintentionally discarded objects from sector F4 (photo by J. Sawicki).



A questionnaire survey was chosen to record the live flea market. Groups of volunteers filled out a simple form with information on the construction of the stand, its general size, the goods sold and their estimated number. The location of the stalls in the existing sector structure was recorded (*Fig. 6*). Each stall was photographed (when owners gave their consent), and, independently, the entire market was documented by video recording. The outcomes were transferred to a GIS environment, providing data on the shape of the live market.

This method provided, for example, framework insight into the spatial distribution and typical combinations of goods sold, the intensity of the distribution of stalls in the market area, their relation to the communication axes, and the location of regular waste dumps. In effect, we created a ‘static image’ of the flea market. On the other hand, the chosen documentation procedure did not at all capture the processual dimension of the trading activity (assembly/disassembly of the stalls, cleaning of the area, removal of damaged goods, etc.), and as such only affects the results of the archaeological analysis of the surface-collected artefacts. Moreover, it shows that the sale of certain types of goods (e.g., car and bicycle parts, tools, taking orders for coal) does not appear at all at the level of non-intentionally or intentionally discarded items. The data obtained by both documentation processes can be compared with each other, but at the same time they can also be seen as complementary evidence.


Documentation of static structure – finds

During the study, a total of 2,251 artefacts were retrieved and assigned to four main categories, among which further groups and subgroups were distinguished according to their specific function/purpose in the marketplace (*Fig. 7*).

The first group consisted of consumables (367 specimens), i.e., food and drink leftovers such as coffee cups and lids, candy bar wrappers, bottles and cans of juices and sodas, including energy drinks. It is likely that these items were primarily consumed during the

Archaeology of Contemporary Flea Market Data: .10.2021
Jelńia G3ra – Cieplice, 2021 Name: *178*

Sector number: *G3/H3* Stall/shop number: *19*



GPS coordinates:
 Photo nr: *112043_1* *112.159*

<p>Stall size:</p> <p>small <input checked="" type="checkbox"/></p> <p>medium <input type="checkbox"/></p> <p>large <input type="checkbox"/></p>	<p>Stall type:</p> <p>construction <input type="checkbox"/></p> <p>tables <input checked="" type="checkbox"/></p> <p>floor <input type="checkbox"/></p> <p>cartoons <input type="checkbox"/></p> <p>other: <input type="checkbox"/></p>	<p>What is selling/assortment:</p> <p>vegetables and fruits <input type="checkbox"/></p> <p>furniture <input type="checkbox"/></p> <p>antiquities <input checked="" type="checkbox"/></p> <p>metal <input type="checkbox"/></p> <p>art <input type="checkbox"/></p> <p>car parts <input type="checkbox"/></p> <p>games <input type="checkbox"/></p> <p>video games <input type="checkbox"/></p> <p>pottery <input type="checkbox"/></p> <p>glass <input checked="" type="checkbox"/></p>	<p>perfumes <input type="checkbox"/></p> <p>cloths <input checked="" type="checkbox"/></p> <p>textiles <input type="checkbox"/></p> <p>chemistry (from Germany) <input type="checkbox"/></p> <p>shoes <input checked="" type="checkbox"/></p> <p>plants <input type="checkbox"/></p> <p>books <input type="checkbox"/></p> <p>cd's and vinyl's <input checked="" type="checkbox"/></p> <p>toys <input type="checkbox"/></p> <p>collectibles <input checked="" type="checkbox"/></p> <p>other: <i>ELECTRONICS</i> <i>KITCHEN WARES</i></p>
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Notes:
 estimated number of goods:

Fig. 6. An example of the stall form developed for a description of the active site (design by N. Sawicka).

market day rather than acting as commodities, and if so, they were consumed immediately after purchase (see *Kopytoff 2013*).

A separate category of consumption leftovers was stimulants (88 items). These included alcohol bottles as well as cigarette packages. These items are also traces of consumption rather than trade. There was no (official) trade of stimulants in the entire market area.

As a specific type of stimulants, we distinguished used medicine packs (14 cases). A significant share of these are individual tablets scissor-cut from whole blisters. Most of them were hypertension drugs.

The second main group is commodities (745 examples), items that were traded at the market, or most often their fragments that were broken, lost, or discarded. Among them are toys (Lego blocks, doll parts, game pieces, etc.), ceramic and glass vessels, etc. This is the most diverse category of finds, as the range of products traded in the marketplace is almost limitless (*Fig. 7*), which is highlighted by the find of an Elvis Presley vinyl record. Unlike sites from earlier periods, pottery (or even glass) is not the dominant material. Only 204 table pottery fragments were counted, and 269 table glass fragments (*Hasil et al. 2020*,



Fig. 7. Different categories of trash (photo by I. Hrušková).

here also on pottery documentation); however, they do not entail evidence of a settlement discard as in most other archaeological contexts.

The third category included trade utensils. This substantial category (233 items) contained various utility tools, like clothes hangers (mostly fragments), tags, bubble wrap, string bags, business cards as well as simple information cards with prices written on them. Rubber gloves were also included here, as were banana cartons used for storing and displaying goods.

The fourth category was rubbish. Although technically all the above-mentioned items could be categorised here, this group, however, identifies unspecified items that are difficult to classify in the other basic groups. These are mostly deformed pieces of plastic, unspecified scraps of paper, etc. (tissues and newspapers were separated). A further division was based on their raw material – paper, plastic, and metal.

Each item was further described with its function and, where possible, the brand and/or country of origin. This more detailed subdivision included 133 types of specific objects. However, the biographies of things can be complicated, and we cannot always clarify whether an item functioned as a commodity at a particular time and place, or, for example, was a trade utensil.

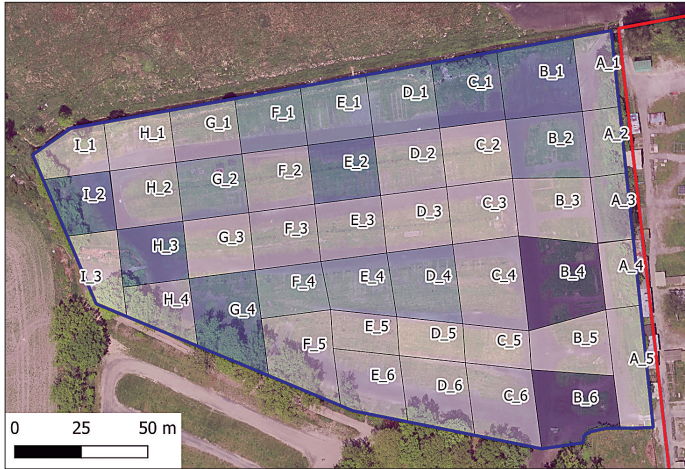


Fig. 8. Total number of finds, expressed in 5 Jenks intervals.

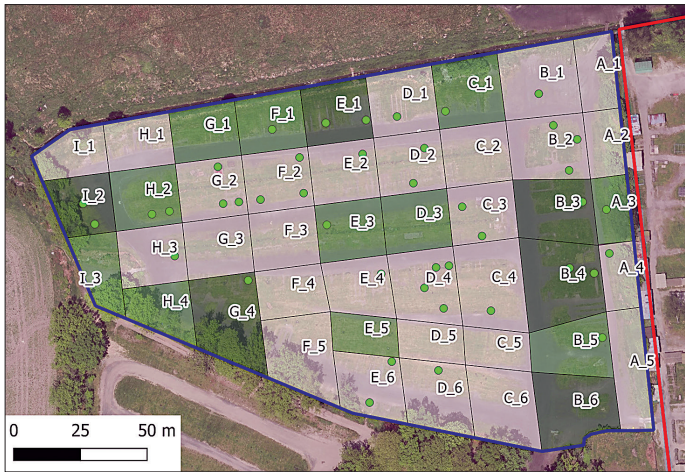


Fig. 9. Finds of toys (expressed in quintiles) and stalls providing toys.

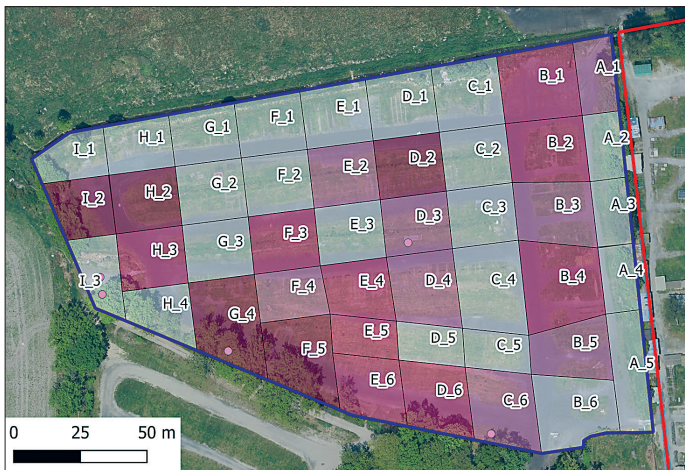


Fig. 10. Finds of coffee accessories (expressed in quintiles) and stalls providing coffee.

Dynamic vs static

The main part of the study tested the correlation of specific object types from sectors and deposit points against the localisation of certain stalls.

The first comparison we made was to check the overall intensity of the objects in the study area (*Fig. 8*). This is the most general picture, but it reveals some patterns necessary for further, more in-depth analyses.

The highest concentration was in sectors B6, B4, C1 and B1. The entrances to the area are in sectors B1, B6 and B4 (A4); the alley in row B is the main traffic axis. These two areas are the most crowded. In addition, rubbish bins were located at the entrances (B1 and B6). The high volume of finds is also not surprisingly in the vicinity of sector I2, and across alley 1 (A1–G1). These sectors are next to the ridge of the marketplace, next to tall bushes and a boundary ditch. The general intensity of all items therefore appears to be primarily related to the deposition and discarding habits of items. We believe that this spread of objects primarily evidences accessibility to the rubbish bins (the entrance to the market) or places where one can safely discard rubbish unseen by other customers. Places at the boundary of the market (bushes, ditch) are also where the cleaners of the market (private owners, not the cleaning service) are reluctant to go, as this space is not visible to market customers at first sight.

As a specific, precise group, we chose toys. Their sale was noted at 37 stalls spread out in different areas of the market, with the highest concentration around sector C4 and in alley 2 (sectors D2–I2, *Fig. 9*). Although the intensity of lost/destroyed/discarded toys is evident near the sectors where the stalls were located (especially in sector E1, where many toys occurred at the stall), the accumulation coincides with that general intensity of finds (cf. *Figs. 8 and 9*). Again, the key here seems to be the location of available rubbish containers as well as unethical but convenient (ditch, bushes behind a hill) places of disposal. This group, however, shows the connection between the stalls with the goods in question and the finds themselves. It is not a very high correlation apart from the very distinctive point of the stalls in sector E1. The distribution of items seems to be of greater importance due to paths and the availability of rubbish bins.

A very interesting result was obtained by juxtaposing consumable waste associated with coffee (spoons, cups, lids) with the localisation of coffee selling points in sectors G4, C6 and D3 (*Fig. 10*). A certain regularity can be seen here. The ‘materiality of coffee drinking’ is not discovered directly next to the stalls themselves, but at a distance of a few dozen metres from them (offset by a sector or two). This seems to indicate that people walk around with the coffee they have bought and, if they do not find bins, they often deliberately discard them or lose some of their elements (lids, spoons, bags of sugar). Coffee is also consumed by traders who leave their cups at the stalls in deposits or bushes. Furthermore, coffee cups, are quite rare finds in the sectors with rubbish containers, especially in the usually intense sector B6. We believe that this is, paradoxically, due to the clean-up of the site. Large coffee containers (cups, lids, etc.) easily clog up the bins by filling the rubbish bags, while smaller rubbish is discarded at the market square.

The selected examples show several regularities as well as the difficulty of interpreting this material, even in the case of a (theoretically) well-understood context and the laws that occur in the marketplace, as observed during the trading day. This argues for remaining cautious during material culture analyses of such dynamic sites, and suggests, in addition to the spatial analysis, looking for the context of finds (rubbish) in isolation from the stalls, and searching for their broader social-cultural interpretation.

Biographies of things in the total context

The study of a contemporary site theoretically offers the ‘total context’ – complete understanding of cultural and social entanglements of all the finds. After all, it concerns us directly, the people living at the same time as the material from the study. However, it is not always explicitly possible to interpret the dynamic structure and the specificity of these finds. Here, we will present selected observations that complement the spatial analysis of the site. These observations focus more on the cultural and social context by analysing objects from the perspective of their biographies (*Kopytoff 2013*).

‘Monkeys’ and ‘Cows’

According to the statistical office, the most consumed alcohol in Poland is beer – an average of 97 litres per person per year (for statistical purposes including infants). These numbers are reflected in the quantities of cans and beer bottles found at the market, which by far dominate the spirits category.

While the second most frequently consumed alcohol is vodka, there are certain specific consumer behaviours. In Poland, this refers mainly to so-called ‘monkeys’ (Polish: małpki, sg. małpka) – bottles of vodka or sweet liquor with a volume of 100 or 200 ml. Statistical data shows a decline in the consumption of this type of alcohol in 2022, but as it was estimated three years earlier that three million people were reaching for them every day! In an interview with Andrzej Nyk, the founder of Addiction Treatment Clinic ‘Monar’ in Warsaw (*Mazurek 2019*), we read that there are three sales waves: in the morning, afternoon and evening. They are bought on the way to work, from work and in the evening, by all social groups, men and women. Among other things, their popularity is based on their low price. After all, their small amount of alcohol gives a false sense of control. We were expecting them at the marketplace (for more regarding cultural drinking behaviour and garbology, see: *Sosna – Brunclíková 2019*).

Vodka bottles were present at the market, but predominantly those with a volume of 0.5 and 0.7 litres; later popularly known as ‘cows’ (Polish: krówki, sg. krówka). Fourteen pieces of these were found (including one with a label written in Cyrillic, possibly illegally traded), while only four ‘monkeys’ were found, quite clearly indicative of recent fads. We believe that this is the evidence of ‘stall consumption’, most likely carried out by traders rather than visitors. When trade lasts all day, there is no need to stock up on ‘monkeys’ when one can bring a ‘cow’. A significant share of the bottles (50% of the ‘monkeys’ and 16% of the larger bottles) come from deposits rather than from the market area, i.e. from local mini dumps.

Cigarettes

Analyses of the social and economic situation of the market visitors can also be based on cigarette brands (*Volk et al. 1996; Brink et al. 2018*). Price seems to be of decisive importance, but there are also other cultural factors. Certain brands are preferred because of the message they carry, e.g. they are considered exclusive or allude to values associated with adventure or a sense of freedom. In Poland, but also in countries behind the Iron Curtain before and just after the 1989 transformation, the type of cigarette one smoked was an important indicator of position and social status. This was reflected in pop culture. On a somewhat mocking album released in 1984, *King Bruce Lee Karate Mistrz*, Franek

Kimono (actor Piotr Fronczewski) in the song ‘Disc Jockey’ (Polish: Dysk Dżokej) observes: ‘When the speakers get the jitters/ And on the dance floor madness and frenzy/ She’s not dancing, she’s on the loose/ She’s smoking “Pewex” and is showing off’. Pewex (the name comes from the only type of shop where it was legal to buy foreign goods in communist Poland) meant imported, foreign cigarettes. This motif was also present in the cinema, where characters who were supposed to be modern, fashionable and cosmopolitan (regardless of their good or bad intentions) smoked foreign cigarettes in addition to wearing imported clothes (e.g. *Hydrozagadka*, 1970, by A. Kondratiuk and *Psy*, 1991, by W. Pasikowski). Despite the widespread access to most cigarette brands, the cultural context of cigarettes should not be underestimated even in most contemporary contexts (*Galiniki – Akrivopoulou* 2020).

A total of 24 cigarette packs were found at the market, including one pack of cigarette warmers (Heets). The most popular brands appear to be from the lower and medium price group (Camel, LM, Winston). Only one pack could be considered more exclusive (Davidoff). The almost complete absence of one of the most recognisable, but also more expensive brands (Marlboro, one pack) is notable. This seems to indicate a preference among consumers for more affordable cigarettes. In addition, no pack smuggled from Ukraine (label in Cyrillic) were found (they are significantly cheaper than goods from domestic distribution). Similarly, there are no packs from the Czech Republic or Germany (both priced higher than in Poland). Electric cigarettes and cigarette warmers, on the other hand, do not appear to be as popular as seen in urban areas and among younger people.

Covid-19 masks

The small number (5 specimens) of Covid masks is noteworthy (*Angelo et al.* 2021; *Magnani et al.* 2022) and can be linked to several different factors. First, the field survey was conducted at the end of the main wave of the pandemic (autumn 2021) and, at that time, regulations in Poland did not mandate the wearing of masks in open spaces, even during ‘mass events’. In fact, in this period, the wearing of masks even in enclosed places was no longer respected in Poland. Hence, they were only worn by people who felt threatened. In addition, discarded masks are clearly visible in the landscape (light blue against green grass or black road), so they are easy to sort by cleaners. Moreover, masks, if worn, are usually not taken off until their wearers return to home, so we can expect them to be discarded mostly in the private space.

Coins

Another visible regularity is the complete lack of coins across the market square. In Poland, the currency is the zloty. The basic coin denomination is 1 ‘zloty’ (c. 0.22 euros), and there are also 2- and 5-zloty coins. The 1 ‘zloty’ is made up of 100 ‘grosze’, existing in denominations of 1, 2, 5, 10, 20 and 50. All of them currently have a very low value. It is noteworthy that almost all trade at the market is conducted in cash, with only the food trucks using payment terminals. This may indirectly indicate a kind of crisis, since even the smallest denominations were collected from the ground on a regular basis. On the other hand, the site was not examined with the use of metal detectors. Apart from the roads, the rest of the site has a grassy surface, which makes it difficult to spot lost coins. In addition, there is also a popular folk custom of collecting coins from the ground ‘for luck’ as an apotropaic activity, which may also impact the number of finds.

Discussion

The research at the marketplace did not yield clear-cut results, but provided many valuable observations about the artefacts, the spatial relationships between the finds and the stalls as well as about consumption patterns. A general socio-cultural interpretation of the finds seems to provide more interesting results than the spatial analysis. We have demonstrated the immense possibility of reading a wider context based on pop culture as well as on available statistical data of different types of finds. A full understanding of the cultural and social context obviously facilitates interpretations, but also allows for nonobvious observations about local communities. Interpreting contemporary material culture (e.g. based on biographies of things) as an ‘archaeology of the everyday’ or an ‘archaeology of us’ provides an often-unobvious point of view on the present, but also on applying similar methods to other archaeological sites from the past.

The spatial analysis shows some regularities. The correlation between stalls and finds is not always obvious. The most relevant factor seems to be the distribution of the skips and their availability. The ‘natural’ rubbish bins (ditch, bushes behind a hill, car tyre deposits) and the location of the main paths are also important factors, as most finds seem to come from the most crowded areas. However, ‘the material culture of coffee’ example shows that other factors should also be considered, such as the fact that people may walk around with the items purchased at the market and discard them elsewhere after finishing their consumption.

The intensity of specific item types is confirmed by the clear correlation between the stall and the toy finds (example of sector E1), but in other cases it is not so obvious. The attempt at a macro-scale study as presented here also has its shortcomings. A further analysis of the material especially focused on a more in-depth study of individual finds, their specific juxtapositions and, considering their biographies, might yield better results in terms of correlation and spatial organisation, but is nevertheless difficult to carry out. Our research should also be repeated under similar conditions elsewhere, to test the results both on a macro scale – interpretative correlation – and on a micro scale – the biographies of selected objects or groups of objects.

These observations have direct implications for understanding analogous findings from medieval marketplaces (see *Sawicki 2018*). The significant clustering of objects appears to be primarily associated with areas frequented by larger numbers of people on a cyclical basis. Consequently, if the objects are not deliberate deposits, their abundance merely reflects the heightened mobility of individuals, leading to a greater accumulation of tangible items. While this conclusion may seem obvious, it warrants restatement.

This clustering pattern suggests that certain areas within medieval marketplaces were particularly dynamic, attracting more visitors and consequently more objects. The correlation between object density and human activity provides valuable insights into the social and economic dynamics of these historical sites. By recognising that the presence of numerous artefacts in specific zones is likely due to the repeated and intensive use of these spaces by large groups of people, we can better interpret the archaeological record. For instance, this can possibly make it possible to trace paths and roads taken by customers at the markets even if they are not visible through other archaeological records.

Moreover, this understanding highlights the importance of considering the broader context of object deposition. It reminds us that not all concentrations of artefacts indicate

intentional deposits; instead, they may simply result from the natural byproduct of daily activities and human movement. Reiterating this point helps prevent the misinterpretation of archaeological evidence and underscores the need for a careful analysis of artefact distribution in relation to historical patterns of human behaviour.

Moreover, understanding socio-cultural dynamics and spatial distributions in contemporary settings can provide analogies for interpreting archaeological sites from the past. The approach of integrating artefact biographies and broader cultural interpretations can offer nuanced insights into the daily lives and social structures of medieval urban communities, enhancing our understanding of the past through the lens of modern analogues. These studies demonstrate the complexity of the relationships between humans, things, and space within the active site of the flea market, and only signal further research challenges, arguing for a need to often look for less obvious interpretations.

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