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FOLK MAGIC IN TOWN

SIGNS OF MATERIAL ASPECTS OF MAGIC IN ARCHAEOLOGICAL EXCAVATIONS IN TURKU, FINLAND

Abstract: This study discusses possible signs of folk magic unearthed during urban archaeological excavations in Turku, Finland. The finds were selected using ethnological folk magic collections in the National Museum of Finland and Museum Centre Vapriikki as reference material. The study utilizes a modified form of the "archaeology of folk religion" methodology, where the subject matter is approached with the help of reference materials instead of utilizing several types of source material. The source material of this study comprises of 45 catalogue entries of archaeological objects that are housed at the Museum Centre of Turku and the Aboa Vetus & Ars Nova Museum. These objects may be connected to folk magic practices, however, this remains uncertain.

Keywords: folk religion, magic, materiality, Turku. **Asiasanat:** kansanusko, taikuus, aineellisuus, Turku

INTRODUCTION

In classical studies, it was easily assumed that folk magic rituals were practised mainly in remote rural areas where churches and medical professionals were only to be found long distances away.[1] Even recently, when discussing magic in towns and other centres the focus is often on phenomena such as learned occultism or esotericism.[2] Still, the complex phenomena we call magic has been relevant for people across society and the folk magic we find in rural areas has its practitioners in towns as well. In fact, the many contacts between townsfolk and rural people on one hand and international merchants and craftspeople on the other may have given the magic of a harbour town such as Turku, SW Finland, a unique blend (Fig. 1).

Prior to 1809 Turku was a coastal town in the eastern part of the Swedish Kingdom. In Finnish chronology, the medieval period begins around 1200 with the establishment of Swedish rule and the introduction of Christian institutions. After 1300, when the Cathedral and Bishop's see were moved there, Turku became the administrative and religious centre of the eastern part of the kingdom. The Dominican order played an important part in the religious scene of the town. Finland lacked Hanseatic towns, but Turku became part of the Hanseatic trade network through its community of German burghers.[3] The town was thus involved in international networks of trade and religion in its early phases of development.

The first university was established in Turku in 1640 and very soon, in 1644, the

Figure 1. Turku (marked with a red dot) on a map displaying the present-day borders. Map by S. Hukantaival.

Academy of Turku became the stage of accusations concerning the practice of forbidden arts.[4] The rumours centred around Professor Martin Stodius, who was repeatedly accused of owning forbidden books, teaching magic to his students at night, and causing mental illness to one of them. He was never convicted but was forced to resign in 1660 due to continuous suspicion. One of his students, Henricus Thomae Eolenius, was sentenced to death in 1661, but the penalty was later mitigated.[5] This shows that there was some interest in learned occultism or esotericism in the town,[6] but the magic of common, uneducated people still eludes us.

As part of the project "The Materiality of Magic in Finland in a Long-Term Perspective: Developing the Archaeology of Folk Religion" (2018–2021), this paper seeks to recognize material signs of folk magic in archaeological contexts in Turku with the help of ethnological[7] museum collections. This paper looks at artefacts from urban excavations curated at the Turku Museum Centre and the Aboa Vetus & Ars Nova Museum. The finds discussed here were selected using the ethnological folk magic collections at the National Museum of Finland and the Hämeen museo collection at Museum Centre Vapriikki as reference material.

The project is connected with a wider academic interest in the material aspects of magic practices.[8] Earlier publications connected to the project include an overview of the magic objects collection of the National Museum of Finland, a preliminary discussion on a few signs of folk magic in medieval Turku, and a discussion on the magic power or agency of objects as seen in 19th-century folk magic.[9] This paper seeks to identify types of objects recovered from urban excavations in Turku that are similar to those found in the reference collections and to interpret what these objects can tell us about folk magic practises in this particular town.

Some signs of folk magic in Turku have previously been discussed in connection with ritual building concealments.[10] This study adds important viewpoints to those works since the objects discussed here are not confined to contexts connected to building structures, but in a few cases there is some overlap.

FOLK MAGIC IN AN HISTORICAL CONTEXT

Before introducing the methodology and research material of this paper, some theoretical issues need attention. Most importantly, what is meant by *magic* and, more specifically, *folk magic* in this context? Magic is an elusive concept that has received a fair amount of justified critique.[11] There is no universal definition of magic that could be agreed on in every context, so academics have chosen different approaches to the problem. Some prefer scholarly generalizations, while others seek definitions used in the studied cultures. The latter offer different viewpoints depending on if magic is looked upon by disapproving non-practitioners or people whose lives are imbued with magic. In historical contexts, the perspective of practitioners is often difficult to reach, while the views on magic of non-practitioners have been studied quite extensively.[12]

The problem of magic as discussed by non-believers throughout history has been similar to the academic problem: how does magic differ from its close relatives, religion and science? The most common solution has been that magic is a false religion (superstition, sacrilege) and a mistaken science (dysfunctional). Thus, magic is seen as a negative. This dismissive attitude is one reason why the concept of magic has been criticized in academia.[13] Since this paper studies signs of magic in different periods and contemporary sources elucidating the views on magic are few, a more generalizing approach to the concept is applied. In this paper, magic is seen as a goal-oriented practice that assumes complex connections between seemingly separate things. Thus, magic is part of a worldview where causality is understood in a specific way. The concept is here used neutrally without any negative (or positive) subtexts.

Defined as above, magic can be a part of religion or completely secular. However, due to historical reasons, it is not usual to discuss magic as part of the Christian religion, apart from when criticizing it. Instead, magic is more comfortably placed within the so-called vernacular, popular, or folk religion concepts.[14] This refers to religious beliefs and practices as interpreted by laypeople. Folk religion includes ideas from official theology, but also older traditions and innovations. Accordingly, folk magic includes practices, such as healing, securing prosperity, protecting against harm, and cursing, that were part of the cultural tradition of ordinary, uneducated people.

Naturally, there is no sharp distinction between educated and uneducated people, so the description must be allowed to be flexible. Ideas and practices may have been exchanged in the interaction between different layers of society. It is also important to remember that the perceived border between science, religion, and magic has shifted and been renegotiated throughout history.[15] Thus, practices that later were defined and condemned as magic may have spread together with Christian doctrine and medicine. This adds a greater need for ambiguity to the concept of folk magic.

When analysed from an archaeological perspective, the concept of magic used in this paper (goal-oriented practice that assumes complex connections between seemingly separate things) presents some problems. How can we assess from archaeological remains if a practice was goal-oriented or what it assumed? It is clear that these aspects are implied (or transplanted) from other contexts, such as ethnographic or folklore analogies. This is the case in this paper. The situation is not ideal, but the fact is that much of archaeology includes such (explicit or implicit) analogies. Still, this issue should not be disregarded.

Since magic is here seen as practice, it is closely connected with ritual.[16] Most magic practices are rituals in the sense that they are emphasized through ritualizing means such as repetition, special use of language (e.g. incantations), formal movements, and symbolism.[17] Unfortunately, these ritualizing techniques very seldom leave traces in the archaeological record. Still, as **Ronald L. Grimes** states "although rituals consist of actions, it's almost impossible to discover, or even imagine, a ritual without its attendant material culture".[18] Thus, the material aspects of ritual, magic, and religion are the archaeologists' gateways to these human phenomena.[19]

As noted above, the materiality of magic has lately received academic interest.[20] This trend is part of a larger "material turn" in humanities and social sciences.[21] Questions of non-human agency, revised animism, and relational ontologies often surfacing in these discussions belong to a critical standpoint towards the authority of westernised modernity to dictate reality-building.[22] While this attitude certainly exists in the background of this paper, properly applying such theories on the material lies beyond its limited scope. Generally, there seem to be two different focal points in the materiality of magic studies: magic in classical antiquity and magic in post-medieval times (mainly the 19th and early 20th century). For some reason, the medieval period has received less attention in this respect.

The blurry borders between medieval religion, medicine, and magic may confuse the unprepared seeker. While the differences between magic, religion, and science may have been clear for some theologians,[23] it may not seem clear-cut for present-day scholars who classify these fields differently from the former. This blurriness did not end with the Renaissance or Reformation.[24] For example, in 1686, when the first Swedish pharmacopoeia, *Pharmacopæa Holmiensis Galæno-Chymica*, was published, many of the medical ingredients listed also appear in folk healers' selection of medicines: for example vipers, toads, moss from old human skulls and pulverized human skulls.[25]

If an idea of magic as a condemned practice was used in the analysis, this would cause problems, since the concept would always be shifting. On the other hand, using a fixed definition of magic may cause an illusion of something static called magic actual-

ly existing throughout time. This risk is here since we need to use some concepts to be able to communicate. However, it is stressed that magic should be seen as a finger pointing at the complex reality that does not fit exactly into the word's narrow limits.

IDENTIFYING FOLK MAGIC IN THE ARCHAEOLOGICAL RECORD

This paper utilizes a modified form of the "archaeology of folk religion" methodology. In its original form, this method relies on multiple source materials that are seen as equally important different viewpoints on a phenomenon.[26] While certainly fruitful, this method is extremely labour intensive, since it requires analysis of large sets of diverse data. In this paper, a moderated version of the method is applied; instead of multiple sources, multiple comparative materials are used as analogies when interpreting and analysing the source material. The main reference material is the ethnological folk magic collections in two museums, while secondary materials are folklore, historical records, and the results of studies made in neighbouring countries. The "archaeology of folk religion" method emphasizes the importance of the archaeological finds' contexts when unearthed. While this is an important part of recognizing signs of ritual practices, this study focuses on the types of objects collected on archaeological sites. The contexts are noted where possible, but they are not stressed here apart from when they are necessary for recognizing significant objects.

The source material of this study comprises of 45 catalogue entries of objects found during urban archaeological excavations in Turku (see Appendix 1 for the full list of material). The objects are mainly natural stones, fossils, or animal bones. Most of these objects were not identified or interpreted as belonging to the domain of folk religion or magic when found. Instead, they have been categorized by the field archaeologists as a part of the animal bone material on the site, as human-made artefacts, or as curiosities.

Thus, the re-interpretation of these objects has been made in connection with this study. This interpretation was aided by the study of ethnological folk magic collections housed in two Finnish museums: the National Museum in Helsinki (KM) and the Hämeen museo -collection at Museum Centre Vapriikki in Tampere (HM). These museum collections date mainly to the late 19th and early 20th century and were formed as part of the massive efforts to record folk culture at the time. Combined, these two museum collections house 451 main catalogue entries (many of which include subentries) of objects classified as belonging to the domain of folk magic. This classification was made already in the late 19th and early 20th century. While these collections are addressed in a few publications, they have not been extensively discussed.[27]

The usefulness of the ethnological collections as analogies for the study at hand is manifold. Even though they are temporally removed from the archaeological finds, they are "tight local analogies" (TLA), since they come from the same cultural area.[28] Moreover, these objects have been catalogued with information on how they were used as part of folk magic and medicine; so they include important contextual information. Moreover, as is revealed below, many of the types of objects found in these collections can be recognised in the archaeological record.

Naturally, there are limits to this method of interpreting the archaeological finds in question. The most notable question concerns the possibility of change in the traditions. Even though rituals are often seen as culturally static, as Grimes remarks, they in fact emerge, change, and die.[29] This is easily missed when older objects are interpreted in the light of newer ones since traditions that may have existed earlier are not visible in the later material. As such, the method reveals more about traditions that persisted than about those that did not. Grimes also warns against seeing unchanged ritual practices as evidence of unchanging values.[30] Consequently, even tight local analogies must be used with caution.

Other limitations have to do with the formation processes of the materials themselves.[31] This does not only mean the archaeological formation processes (including issues of preservation in the soil, excavation conventions, and principles of preserving unearthed objects) but also how the formation of the ethnological museum collections have affected them. As is true of museum collections in general, the folk magic collections are not objective representations of the phenomenon of folk magic and medicine. The formation of these collections belonged to the nation-building process where museums contributed by selecting, safekeeping, caring for, and displaying the national narrative. In this framework, the purpose of art and artefact collections was to highlight the "spirit of the nation" (the *Volkgeist*).[32]

While the whole picture of how this nationalist history has influenced the folk magic collections is unclear, there are signs the choices made when classifying objects as belonging to folk magic and ideas about "original" native culture (as opposed to international phenomena) may have had some impact. The first aspect visible is the surprisingly small amount of objects belonging to the institutional Christian religion (Lutheranism and Eastern Orthodoxy) in the folk magic collections. The vast folklore collections about such practices document the common use of religious objects in folk magic. Still, the only such case in the National Museum is a snuffbox containing some communion wafers that were meant to be used as medicine, to improve a weapon, and as the heart of a *para* (a kind of a familiar spirit).[33] The Hämeen museo collection houses two Eastern Orthodox crosses without further information on their use in folk magic except that one of them is wooden and labelled as a "tooth-god" (*hammasjumala*) that belonged to a cunning woman.[34] The other one is a bronze cross pendant.[35]

It appears that folk religion and the Christian religion have been separated in these collections. While this separation is highly artificial, it is understandable in the light of how folk religion was primarily seen as a relic of a native prehistoric religion in early scholarship.[36] The focus on this mythical ethnic religion may have influenced the folk magic collections in another way as well. Namely, the largest artefact category in the collections are natural objects, such as animal parts, stones, and wooden formations. In contrast, for example, the Nordiska museet in Stockholm, Sweden, houses copper amulets against cholera and small objects called *spiritus*, among other more or less commercially made objects.[37] The *spiritus* is usually a metallic beetle inside a small box believed to bring fortune to its owner.[38] The oldest known account of such an object is from the 17th century where the poet Georg Stjärnhelm[39] is said to have owned one when he was in Tartu (Esto-

nia).[40] There is folklore about this type of object in Finland as well (*piritys*). One account, for example, explains that one could buy this object in Turku.[41] However, if these types of commercial objects exist in the two museum collections studied, they have not been classified as belonging to folk magic.

As noted in connection with the *spiritus*, folklore offers an additional source of information about the materiality of magic. The folklore in question dates to the same late 19th to early 20th-century period as the ethnological collections. This material comprises of archived oral accounts about traditions and practices documented by interviewing collectors. The accounts describing magic and beliefs has been extensively studied by folklorists.[42] However, due to the focus of folkloristics, few studies have discussed the use of objects depicted in the narratives. The exceptions include, for example, an article concerning human figurines made of Alder and a short article about magic objects in general.[43]

Before moving on to discuss the archaeological evidence, it should also be noted that historical documents, especially witchcraft and superstition trial records, offer a glimpse into the materiality of magic practices older than the ethnological and folklore collections. Historians have studied witchcraft and superstition trial records extensively,[44] but, as in the case of folklore, few studies have focused on the materials mentioned in the records. One exception is an article by **Jari Eilola** and **Piia Einonen** that discusses the use of human body parts as mentioned in trial records mainly from 17th-century Stockholm.[45] While the trial records have their own specific formation processes, most magic materials mentioned in them can be recognized in later folklore and ethnological collections.

Studies on the materials associated with magic practices made in other European areas are also important when considering folk magic practices in Finland. They provide important information about international aspects of the traditions and may reveal practices that are not (for various reasons) depicted in the other sources. For example, it is apparent that some of the practices known in later folk magic have their roots in medieval European medicine.[46] So, it would not be surprising to find widely spread uses of certain *materia medica*.

For the focus of this paper, one key study is the PhD thesis by Estonian Archaeologist **Kristiina Johanson** titled *Missing Interpretations: Natural and residual finds in Estonian archaeological collections*.[47] The study focuses on natural objects (such as pebbles and fossils) and artefacts found in considerably later contexts than their manufacture that have been collated by field archaeologists but have mostly remained without interpretation. With the help of various analogies, including archived folklore, Johanson discusses possible interpretations for these curious objects. She also considers the field archaeologists' possible motivations to collect the natural objects since this motivation is usually missing from the field reports.

In contrast to Finland's geology where fossils are rare, well-preserved fossils are common in the Estonian limestone bedrock. In Estonia, numerous fossils have been catalogued from archaeological sites.[48] In Estonian folklore and ethnological sources, fossils of bryozoans and corals have been used as "ear stones"; earache was healed by leading air or smoke into the ailing ear with the help of the fossil.[49] Moreover, for example, ammonites have been considered valuable charms in Great Britain where they were called snakestones.[50] So, even though there

Figure 2. Two medieval bear canine pendants from Turku. On the left is the canine from the Suurtori Hjeltin talo site (1989) and on the right is the canine from the Åbo Akademi site (1999) (TMK 20764:1485 and 21816:LU100). Photo by S. Hukantaival.

are no fossils in the Finnish folk magic collections, fossils retained during archaeological excavations have been included in this study.

SIGNS OF MATERIAL FOLK MAGIC IN TURKU

The most common folk magic objects in the two ethnological museum collections (KM and HM) are the remains of bears, especially teeth (canines) and claws. Bear teeth and claws have been carried as protective amulets, used as medicine for pain and in childbirth, and they have been kept in the cradle to protect a child against night demons. They have also been attached to the collars of horses and cattle to protect them from wild beasts. There are three bear canines, perforated for carrying them or attaching them to something, in the urban archaeological material at the Museum Centre of Turku.[51]

Two of the canines are in excellent condition (Fig. 2), while the third has been exposed to fire. The two well-preserved canines date with high probability to the medieval period: The one found at the Åbo Akademi site (1999) belongs to the period 1300–1500 but the dating of the Suurtori Hjeltin talo (1989) find is uncertain.[52] The third bear tooth pendant (Katedraalikoulu 2014–15) was found in a fire-affected context under a brick layer that also included some coins from the late 17th century.[53] This pendant is likely to have ended up in this context sometime after that period. These teeth were recovered from different contexts all located in residential areas in the heart of Turku. Additionally, a bear claw was found during an archaeological excavation at the Aboa Vetus & Ars Nova site in 2005.[54] It was found under the cobblestone floor of a cellar and might have been deposited there intentionally. The context is considered to date to the 18th or 19th century.[55] This site is located on the bank of River Aurajoki, in a residential quarter next to the Great Market.

Pig tusks are also a common occurrence in the folk magic collections. There are both perforated and unworked tusks and they have been used as medicine, in some cases for domestic animals. Unfortunately, no details are given for how the healing was conducted. Since pig tusks are common in urban archaeological contexts, only perforated tusks or tusks found in contexts that suggest ritual use are discussed here. Eight pig tusks

Figure 3. Five perforated pig tusks from medieval soil layers at the Åbo Akademi site (1998–1999) (TMK 21816:LU29; LU30; LU135; LU150; LU153). Photo by S. Hukantaival.

recovered during excavations in Turku fulfil these criteria, of which seven are perforated.

Five of the perforated pig tusks are from the Åbo Akademi site (1998–1999) (Fig. 3).[56] All of these come from medieval soil layers. As noted, this site is in a residential district next to the Cathedral quarter, in the centre of town.[57] Two additional pig tusk pendants were found at the Aboa Vetus & Ars Nova site.[58] One of these was unearthed in 1901 and lacks further contextual information, the other one was found in the 1994–95 excavation. It was discovered under a wooden plank floor that was interpreted as medieval.[59] The eighth pig tusk is unworked, but it was found directly under the threshold of a 17th-century cellar at the Pinella site (2010), and it seems to be deliberately placed there.[60]

Other remains of animals such as skins and bones are also common in the folk magic collections. Animal bones are one of the largest categories of finds at urban archaeological excavations and this poses a challenge for the discussion at hand. However, some of the bones and antlers in the ethnological collections are perforated or have been inscribed with crosses. There is one piece of a cattle bone with inscriptions on it found during the Varhainen Turku excavation project in 2006.[61] It was found in the layer of a late 15th-century market place next to the Cathedral.[62] The inscriptions are of a cross inside a rectangle on one side of the bone and another inscription (possibly also a cross inside a rectangle but with lines continuing outside the shape) on the articular surface (Fig. 4).

Another large category of objects in the folk magic collections is various natural stones, especially small, smooth pebbles. The pebbles are most often called "snakes' court stones" (*käärmeenkäräjäkivi*) and according to folklore, vipers would pass these stones from mouth to mouth during their court gatherings in spring.[63] These stones were believed to be good to carry in the pocket as a luck-bringing amulet when attending court or travelling. They were also used in healing, for example, by pressing the stone to an ailing part of the body or a boil or other type of growth on the skin. Pebbles were also sometimes called "raven stones".[64] Many of these ethnological stones are Flint-stone pebbles, but other types of pebbles are also common (such as granite).

There are 23 stones in the archaeological material investigated for this paper.[65]

The majority of these are natural, small, smooth, round or oval pebbles. Five of them are catalogued as Flintstone pebbles. Two of these are from the Aboa Vetus 1994–95 excavations.[66] One was found when unearthing two adjacent cellars but lacks further contextual information. The other one was found next to a stone wall estimated to be from the 17th century or younger.[67] Two Flintstone pebbles were found in 1952–53 at Itäinen Rantakatu, but again these lack contextual information (Fig. 5a).[68] The remaining pebble was found in 1967 at Uudenmaankatu 11–14,[69] but, unfortunately, even this find lacks further information. Only one of the five Flintstone pebbles can be dated to any degree of accuracy.

Of the 15 natural pebbles (other than Flintstone) only eight can be given an estimated date. Seven of these are from dated medieval strata. For example, one small, ball-shaped stone, identified as possibly being granodiorite, was found during the 1998 Åbo Akademi excavation.[70] It was found in a soil layer under a wooden plank structure that was dated to the 15th century.[71] This stone seems to have a sooty surface covering on inspection. It resembles a firearm projectile, but its dating makes this interpretation less likely. Another small pebble of reddish colour (possibly sandstone) was also found under a medieval plank structure (Fig. 5c).[72] It was found in 2003 during the Kaupunginkirjasto excavation, and the plank structure was interpreted as a wooden floor, dated using dendrochronology to after 1341.[73] The pebble is catalogued as a possible gaming piece. The one stone that was found in a postmedieval soil layer is also a smooth, round ball,[74] possibly a firearm projectile but showing no use wear.

The folk magic collections also include several perforated stones. Due to the local geological conditions most of these are not naturally holed, but human-made artefacts usually dating from prehistoric times. When information on their usage is available in the museum catalogues, they have been used to prepare medicine by pouring a liquid through the hole. There is only one perforated stone in the Turku excavation material (millstones or spindle whorls were not included here). It is a small, irregularly-shaped Limestone pebble with a small hole

Figure 4. This piece of a cattle scapula with inscriptions was found in the soil of a late 15th-century market place next to the Cathedral (TMK 22367:LU1666:001). Photos by S. Hukantaival.

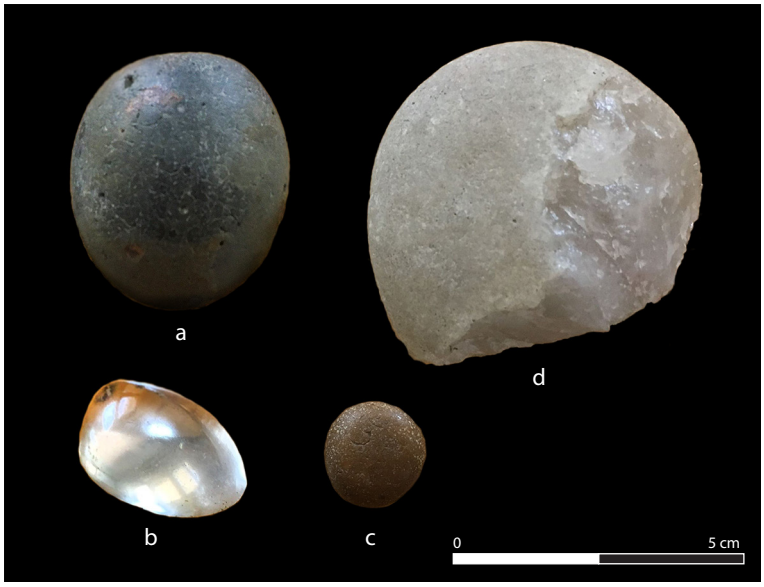

Figure 5. A selection of objects in the stone category: **a)** a flintsone pebble found in 1952–53 at Itäinen Rantakatu (TMK 14681:49); **b)** the polished piece of rock crystal (TMK 21816:KI45) from the Åbo Akademi site (1998); **c)** the reddish pebble from the Kaupunginkirjasto 2003 excavation (TMK 22237:KI078:001); **d)** the quartz pebble found at the Mätäjärvi site in 1989 (TMK 18831:1054). Photos by S. Hukantaival.

in the middle.[75] It was found in a postmedieval soil layer at the Rettiginrinne excavation in 2000.

One of the "stones" in the Museum Centre of Turku collection is a small, polished piece of rock crystal (Fig. 5b).[76] Since it is evidently worked, it is an artefact, but due to its material, it is here discussed together with other stones. There is one piece of quartz crystal in the ethnological collections as well.[77] It has been used to strike fire in rituals connected to ensuring good crops.[78] The polished crystal found in Turku comes from the Åbo Akademi site (1998) from a soil layer connected to a timber structure that dates to the early 15th century.[79] Moreover, one half of a quartz pebble found at the Mätäjärvi site in 1989 shows an impact surface possibly resulting from lighting a fire (Fig. 5d).[80] Rock crystals have been a part of European medicine as well.[81]

The types of objects discussed above are those that could be found both in the reference collections and the urban archaeological collections of Turku. The types discussed next are not present in the ethnological collections, but other reasons call attention to them. First, there are five fossils or likely fossils in the urban archaeological material. Three of them are from medieval soil layers unearthed during the Åbo Akademi 1998 excavations.[82] One likely fossil was found from the Rettiginrinne 2000 excavation from a soil layer belonging to the 16th century.[83] The most distinct fossil is a coral found at the Pinella 2010 excavation in a soil layer dated to the 14th century (Fig. 6).[84]

Another object with a possible connection to folk magic is a raven skull found together with another raven bone during the Katedraalikoulu 2014–15 excavations.[85] Even though there are no bones of ravens in the folk magic collections, there is evidence both there and in folklore that ravens were seen as magical creatures. As mentioned, pebbles could be called raven stones. One of the catalogue entries recounts the folklore that the raven would bring this pebble from the Jordan River to heal its young

if they were injured.[86] So, it was surmised that ravens possessed medical knowledge useful to humans. Moreover, one of the folk magic objects is a "witch stone" that according to the catalogue entry was powerful since it had been smeared with the blood of nine ravens.[87] The Katedraalikoulu raven bones were found in a quite intriguing context: within the deposits of a late medieval latrine.[88] One of the pebbles was found in this same context.[89] Could this have been an attempt to hide or destroy these objects or perhaps a way to curse the users of the latrine?

The last group of objects to be discussed here are the remains of hare's feet. Even though there are no hare's feet in the folk magic collections, they are known in folklore accounts as lucky objects protecting from harm.[90] There are four hare's feet in the urban archaeological material of Turku. Two of these come from the same context, a 17th century hearth structure on the Kaupunginkirjasto site.[91] A third comes from under the step of the same 17th-century cellar that also had a pig tusk under a threshold (and other signs of ritual concealment) at the Pinella (2010) site.[92] The fourth hare foot was found at the bottom of a late 18th or early 19th-century storage pit during the Tuomiokirkontori 2011 excavation (Fig. 7).[93]

Figure 6. The coral fossil found during the Pinella 2010 excavations is the most distinct of the fossils found in Turku (TMK 22600:KI239:003). Photo by S. Hukantaival.

DISCUSSION

One question that might arise when discussing the objects presented above is: Can we be certain that these objects have been used in magic practices? The answer to this question must be negative since there is no way to be sure about this. Other possible interpretations could be applicable, for example, as noted above, some pebbles might have been used as gaming pieces or firearm projectiles. Moreover, the usages and meanings of objects may have shifted during their use life-span.[94] However, the well-documented folk magic objects give reason to consider magic and medicine as relevant interpretations.

Not all of the types of objects present in the folk magic collections could be recognized in the urban archaeological material of Turku. For example, different wooden objects and natural formations, such as branches or roots that have grown to form a circle or gnarls from under the bark of trees, that are common in the folk magic collections, are missing from the archaeological contexts. This may be due to the search commands used when screening objects in

Figure 7. These bones belonging to a hare's foot were found at the Tuomiokirkontori site in 2011 (TMK 22814:LU2083:001). Photo by S. Hukantaival.

the finds databases, but it might also be that such natural-appearing wooden objects may not have been considered significant during excavation. One explanation could be that such objects are simply not present in the archaeological record in the urban areas excavated in Turku.

Many of the objects in the folk magic collections are materials that would only preserve in the soil under exceptional circumstances (for example in anaerobic or waterlogged conditions), such as heads and skins of vipers or pig's snouts. However, another challenge proved to be more prominent than the question of durability. As touched upon above, many of the objects in the folk magic collections are common, everyday objects that could be used in magic practices in addition to their more mundane usage. Examples of this are whetstones, knives, coins, spindle whorls, fire steels, finger rings, and brooches. When written information is lacking, the special significance of such objects must be inferred from their contextual locations at the archaeological site. In addition to ritual building concealments,[95] such contexts may be graves or pits. Several coins are found in ritual building concealments in the urban archaeological material of Turku.[96] The coins in the folk magic collections are used differently, where silver has been scraped off as an offering.

One common category of objects in the folk magic collections are so-called "thunderbolts".[97] These are most often Stone Age wedged tools, but whetstones, naturally wedged stones, and round stones are also associated with this phenomenon. The stones were believed to be bolts of lightning imbued with powerful properties.[98] There are no Stone Age tools in the urban archaeological material of Turku.[99] Whetstones, on the other hand, are common finds in urban archaeological contexts. With this in mind, only whetstones found in contexts that suggest deliberate placement may be considered. Nine cases of possibly significant whetstones have been discussed previously in connection with ritual building concealments, and are all from postmedieval buildings.[100]

One unanswered question is why there are no Stone Age tools (thunderbolts) in the medieval Turku material even though they appear in some towns of neighbouring regions such as Lund and Novgorod.[101] These were also a part of established medieval medicinal practices and their use was described in books about minerals.[102] One would then expect to find them in contexts where European medical knowledge was present. As prehistoric tools, these are also highly likely to be curated when found during an archaeological excavation as a more traditionally identified object of significance. However, their medical use often called for pulver-

izing them, which may cause them to become unrecognizable. As noted, this has not hindered them from being found in other towns, so this explanation alone is insufficient. It is hoped future urban excavations in Turku will shed more light on this.

The challenge of recognizing significant objects from more mundane (kitchen) refuse is also apparent when considering pig tusks.[103] The choice in this paper was to only include perforated tusk pendants and a deliberately concealed tusk. Since unworked tusks are present in the folk magic collections, this choice is not justified in light of them, but including all pig tusks found in Turku in this study would have been over-interpretation. Interestingly, as **Christopher J. Duffin** has discussed, boar tusks were part of the zoological component of *materiamedica* cabinets and collections from the early 18th century in Britain. The tusks were powdered and incorporated into prescriptions for diseases of the throat and the respiratory system. When trying to trace the history of their use, Duffin states: "It is as if the item appears with a fully formed medical folklore some time during the 16th century, and then becomes incorporated into the *materiamedica* as a rather minor ingredient with limited application".[104] The case with the pig tusks illustrates how it may be difficult to distinguish folk magic from the established medicine of the period.

A further question that comes to mind is the reason why archaeologists have collected and preserved natural pebbles during excavations.[105] This motivation is seldom stated in excavation reports or finds catalogues. In a few cases, the reason was that the pebble was interpreted as a possible gaming piece or firearm projectile. However, when the reason is not stated, it is impossible to know whether the pebble simply caught the eye of the archaeologists or if they had knowledge of the importance of pebbles in folk magic practices. In fact, the eye-catching property together with the smoothness of these pebbles are likely to be connected with their importance in folk magic.

The above-discussed objects are not the only signs of folk magic in Turku. For example, a goat skull deposited by an early 14th-century boundary mark, a hammer concealed in a hearth from the same period, and a Sámi shaman drum hammer and anthropomorphic wooden staff concealed under an early 15th-century floor have been discussed in a previous publication.[106] Another striking find is the late 17th-century frog inside an elaborate miniature coffin that was concealed in the Cathedral and found in the 1920s during restoration work. This find is part of a counter-witchcraft practice that is well-recorded in both folklore and artefactual evidence.[107] Slowly, the picture of folk magic in the town of Turku is being revealed. While it can be argued that these signs are quite sporadic and stretched out over a long period, they still reveal that folk magic did have its place in the lives of the townspeople. Many reasons connected with the preservation and recognition of folk magic objects obscure the picture, so having any signs at all to work with is significant.

Naturally, other towns in Finland have produced artifacts dated to the historical period possibly connected with folk magic as well. As is the case with the Turku finds, most of these are likely to be in the archaeological collections without an interpretation. While objects concealed in or under domestic buildings have been published from Tornio,[108] for example, publications concerning other types of folk magic objects are few and far between. The ones that do exist

seldom discuss objects found in the cultural layers of towns, but are mentioned in association with more eminent contexts such as in graves or churches.[109] Since the context of a possible magic object is revealing, it is understandable that such ritual contexts aid in the interpretation. Still, future studies focusing on comparing archaeological collections against the documented folk magic objects in other sources would make comparisons between Turku and other areas in Finland more fruitful. Hopefully, this paper encourages such inquiries.

At the beginning of this paper, it was suggested that the contact networks and diverse demographic of the coastal town were likely to influence magic practices alongside other cultural exploits. Due to its methodology, this study may not reveal these aspects properly. A wider perspective on both magic practices in neighbouring areas and on educated magic (occultism) would be needed. Still, some of the objects may indicate contacts with rural areas (bear teeth and claws) and neighbouring peoples (the fossils and the Sámi shaman drum hammer). The pig tusks and rock crystal may belong to European medical practices and pebbles connected with snakes and birds are known international phenomena.[110]

CONCLUSION

Some of the objects discussed in this study are more likely to have a connection with folk magic than others. The bear canines and bear claw are likely to have some connection with folk beliefs as do the objects that are found in ritual building concealment contexts. The pig tusks are more debatable, but still, the probability of them having some significance is high. The cattle bone marked with a cross also seems to be special, but there might be several types of situations where the marking took place (e.g. magic, play, or even boredom). As quite common natural objects, the pebbles are also problematic even though it is well-documented that pebbles had an important role in folk magic. Again, the interpretation is stronger when pebbles are found in contexts suggesting significance. The fossils are perhaps the most debatable group of objects discussed here. Still, they are not common objects in the local geology, which could hint at their special role. Hopefully, future excavations will shed more light on this question.

So, what can these objects reveal about folk magic in Turku? Since the signs are sporadic, no wider generalizations about the practices can be made. It seems likely that some of the types of magic objects known in the later ethnological material do have a presence in the medieval period. However, in the light of the current evidence, it is not possible to assess if their meaning has changed or remained fairly static. The most important result is that folk magic has had a cultural role in the town of Turku, despite it being the ecclesiastical centre of the area. In this light, a "theologically pure" Christian religion seems not to have filled all the needs of the townspeople.

Acknowledgements: The author wishes to thank Tanja Ratilainen and Maarit Hirvilammi from the Turku Museum Centre and Janna Jokela and Ilari Aalto from the Aboa Vetus & Ars Nova Museum. Auli Bläuer is thanked for identifying the cattle scapula. The language was proofread by D. Freer. This study is funded by the Academy of Finland (314622).

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ABBREVIATIONS

HM The Hämeen museo collection at Museum Centre Vapriikki, Tampere.

KM The National Museum of Finland (Kansallismuseo), Helsinki.

TMK The Museum Centre of Turku (Turun museokeskus), Turku.

NOTES

1 See e.g. Koski 2011: 28–39.

2 Mansikka 2016a; ibid 2016b.

3 E.g. Immonen 2007.

4 E.g. Mansikka 2016b: 237–39.

5 Laasonen 1997.

6 Cf. Herva et al. 2010.

7 The collections are called ethnological due to the local research tradition; however, ethnographical would be more correct.

8 E.g. Boschung & Bremmer 2015; Houlbrook & Armitage 2015; Parker & McKie 2018; Wilburn 2012.

9 Hukantaival 2018b; ibid 2018a; ibid 2020.

10 Hukantaival 2016; ibid 2018a.

11 E.g. Bailey 2006; ibid 2018; Buss, Wax &Wax 1965; Hammond 1970.

12 E.g. Bailey 2008; Cameron 2010; Edmonds 2019; Kieckhefer 1994.

13 E.g. Bailey 2018: 59–84; Pocock 2006.

14 E.g. Primiano 1995; Stark 2006; Yoder 1974.

15 E.g. Bailey 2008; Cameron 2010; Gosden 2020.

16 E.g. Grimes 2014.

17 Bell 1997: 138–69.

18 Grimes 2011: 77.

19 E.g. Jonuks et al. 2013; Keane 2008; Insoll 2009.

20 E.g. Boschung & Bremmer 2015; Fennel & Manning 2014; Houlbrook & Armitage 2015; Johanson & Jonuks 2018; Parker & McKie 2018; Wilburn 2012.

21 E.g. Knappet & Malafouris 2008; Miller 2005.

22 E.g. Herva & Ylimaunu 2009; Herva et al. 2010; Hukantaival 2020.

23 See Cameron 2010.

24 E.g. Josephson-Storm 2017; Scribner 1993.

25 Tillhagen 1962: 14–15.

26 Hukantaival 2016.

27 Hukantaival 2018b; Sirelius 1906; ibid 1921.

28 Cf. Hill 1994: 88–89.

29 Grimes 2020: 8; see also ibid 2014: 294–96, 312–13.

30 Grimes 2014: 313.

31 Cf. Schiffer 1987.

32 See e.g. Fewster 2006; Pettersson 2011.

33 KM F1825; about *para* see Holmberg 1928.

34 HM 188:6.

35 HM 130:10.

36 See e.g. Harva 1948.

37 DigitaltMuseum.se.

38 Holmberg 1928: 144–147; Östling 2001.

39 This is the spelling of the name given in the reference (Holmberg 1928), however, one of the anonymous referees of this paper kindly pointed out that the spelling Stiernhielm would be more correct.

40 Holmberg 1928: 146.

41 Holmberg 1928: 144.

42 E.g. Koski 2008; Stark 2006; ibid 2015.

43 Issakainen 2006; Piela 2011.

44 E.g. Nenonen 1993; Toivo 2016.

45 Eilola & Einonen 2009.

46 E.g. Duffin 2005; 2019.

47 Johanson 2018.

48 Johanson 2018: 90–108.

49 Johanson 2018: 65.

50 E.g. Duffin 2008; Pymm 2017; Skeat 1912.

51 TMK 20764:1485; 21816:LU100; 23146; sample 67.

52 Seppänen 2012: 774; Uotila 1990.

53 Saloranta 2015: 123.

54 KM 2005009:88.

55 Hukantaival 2016: 306; Sartes & Lehtonen 2008: 70; Uotila & Saari 2005: 20, 24.

56 TMK 21816:LU29; LU30; LU135; LU150; LU153.

57 See Seppänen 2012.

58 KM 3942:7; 95032:10929.

59 Sartes & Lehtonen 2008: 208.

60 TMK 22600: sample 274; Hukantaival 2016: 173–76, 310.

61 TMK 22367:LU1666:001.

62 Ainasoja et al. 2007: 17.

63 Lehikoinen 2009: 199–201.

64 Rantasalo 1956.

65 See Appendix 1.

66 KM 95032:10751; 10755.

67 Sartes & Lehtonen 2008: 462; see also Aalto 2013.

68 TMK 14681:49; 65.

69 TMK 16712:49.

70 TMK 21816:KI17.

71 Seppänen 2012: 368.

72 TMK 22237:KI078:001.

73 Tuovinen et al. 2004: 80, 82.

74 TMK 22882:KI038:002.

75 TMK 22196:KI102C:001.

76 TMK 21816:KI45.

77 KM 4153.

78 Hukantaival Manuscript.

79 Seppänen 2012: 385.

80 TMK 18831:1054.

81 Duffin 2020.

82 TMK 21816:KI10; KI16; KI38.

83 TMK 22196:UN308:001.

84 TMK 22600:KI239:003.

85 TMK 23146: sample 32; Bläuer 2020: 4.

86 KM 7928:59.

87 KM F1964; Hukantaival 2018b: 5.

88 Saloranta 2015: 58–63.

89 TMK 23146:KI051:002.

90 Hukantaival 2016: 175.

91 TMK 22237:LU711:001–002; Hukantaival 2007.

92 TMK 22600: sample 273; Hukantaival 2016: 173–76.

93 TMK 22814:LU2083:001; Hukantaival 2013: 106–7.

94 Cf. object biographies, e.g. Houlbrook 2013.

95 Hukantaival 2016.

96 Hukantaival 2016.

97 Hukantaival 2019.

98 E.g. Blinkenberg 1911; Carelli 1997; Johanson 2009.

99 However, one Stone Age axe was found in the foundation of a 19th-century house in 1966, see Hukantaival 2016: 300.

100 Hukantaival 2016.

101 Carelli 1997; Johanson 2018: 137.

102 Duffin 2005.

103 See also Hukantaival 2020.

104 Duffin 2017: 29.

105 See also Johanson 2018: 78–80.

106 Hukantaival 2018a.

107 Hukantaival 2015.

108 Herva & Ylimaunu 2009; Nurmi 2011: 146–147.

109 Luoto 2009: 16; Ruohonen 2011;

110 Duffin 2012; Pymm 2018; Skeat 1912.

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APPENDIX 1. THE FULL MATERIAL OF THE STUDY.

No.	Catalogue No.	Object	Excavation	
1	KM 95032:10929	Pig tusk pendant	Aboa Vetus (1994–95)	MEDIEVAL
2	TMK 21816:KI10	Fossil	Åbo Akademi (1998)	
3	TMK 21816:KI16	Fossil?	Åbo Akademi (1998)	
4	TMK 21816:KI17	Stone ball	Åbo Akademi (1998)	
5	TMK 21816:KI38	Fossil?	Åbo Akademi (1998)	
6	TMK 21816:KI45	Polished rock crystal	Åbo Akademi (1998)	
7	TMK 21816:LU100	Bear canine pendant	Åbo Akademi (1999)	
8	TMK 21816:LU135	Pig tusk pendant	Åbo Akademi (1998)	
9	TMK 21816:LU150	Pig tusk pendant	Åbo Akademi (1999)	
10	TMK 21816:LU153	Pig tusk pendant	Åbo Akademi (1999)	
11	TMK 21816:LU29	Pig tusk pendant	Åbo Akademi (1998–99)	
12	TMK 21816:LU30	Pig tusk pendant	Åbo Akademi (1998)	
13	TMK 22196:KI511:001	Pebble	Rettiginrinne (2001)	

No.	Catalogue No.	Object	Excavation	
14	TMK 22237:KI078:001	Pebble	Kaupunginkirjasto (2003)	MEDIEVAL
15	TMK 22367:LU1666:001	Animal bone with inscriptions	Tuomiokirkontori (2005–06)	
16	TMK 22600:KI201:001	Limestone pebble	Pinella (2010)	
17	TMK 22600:KI239:003	Fossil	Pinella (2010)	
18	TMK 22815:KI083:003	Pebble	Kirjastosilta (2011)	
19	TMK 23146: sample 32	Raven skull and bone	Katedraalikoulu (2014–15)	
20	TMK 23146:KI051:002	Pebble	Katedraalikoulu (2014)	
21	TMK 23146:KI536:001	Pebble	Katedraalikoulu (2014)	
22	TMK 20764:1485	Bear canine pendant	Suurtori Hjelt (1989)	
23	KM 2005009:88	Bear claw	Aboa Vetus (2005)	
24	KM 95032:10755	Flintstone pebble	Aboa Vetus (1994–95)	POSTMEDIEVAL
25	TMK 22196:KI102C:001	Perforated Limestone pebble	Rettiginrinne (2000)	
26	TMK 22237:LU711:001	Hare's foot	Kaupunginkirjasto (2004)	
27	TMK 22237:LU711:002	Hare's foot	Kaupunginkirjasto (2004)	
28	TMK 22600: sample 273	Hare's foot	Pinella (2010)	
29	TMK 22600: sample 274	Pig tusk	Pinella (2010)	
30	TMK 22814:LU2083:001	Hare's foot	Tuomiokirkontori (2011)	
31	TMK 22882:KI038:002	Stone ball	Itälaituri (2012)	
32	TMK 23146: sample 67	Bear canine pendant (burnt)	Katedraalikoulu (2014–15)	
33	TMK 22196:UN308:001	Fossil?	Rettiginrinne (2001)	
34	KM 3942:7	Pig tusk pendant	Aboa Vetus (1901)	UNDATED
35	KM 95032:10751	Flintstone pebble	Aboa Vetus (1994–95)	
36	TMK 14681:203	Pebble	Itäinen Rantakatu (1952–53)	
37	TMK 14681:241	Pebble	Itäinen Rantakatu (1952–53)	
38	TMK 14681:264	Granite pebble	Itäinen Rantakatu (1952–53)	
39	TMK 14681:49	Flintstone pebble	Itäinen Rantakatu (1952–53)	
40	TMK 14681:65	Flintstone pebble (half)	Itäinen Rantakatu (1952–53)	
41	TMK 16712:49	Flintstone pebble	Uudenmaankatu 11–14 (1967)	
42	TMK 18264:1428	Stone ball	Vähä-Hämeenkatu 13 (1975)	
43	TMK 18340:21	Large pebble	Tuomiokirkkokatu 6 (1977)	
44	TMK 18831:1054	Quartz pebble (half)	Vähä-Hämeenkatu 13 (1982)	
45	TMK 22600:KI144:002	Pebble	Pinella (2010)	