THE BRYGGEN PAPERS

Main Series No 7

CHILDREN IN MEDIEVAL BERGEN
AN ARCHAEOLOGICAL ANALYSIS OF CHILD-RELATED ARTEFACTS

Sigrid Samset Mygland

FAGBOKFORLAGET

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FOREWORD

The subject of this volume of the Bryggen Papers is children and how child-related objects from archaeological contexts can illuminate children's presence and everyday life in medieval Bergen – altogether a comprehensive material of more than 2,500 objects, primarily toys and shoes. By analysing these physical remains, the author has been able to provide new information and shed new light on the everyday life of children in an urban medieval community, and thereby indirectly also on its demographic and social organisation. The study also relates to the wider discussion of how childhood was perceived in the Middle Ages and how children at different stages of childhood were treated. It demonstrates that the archaeological material clearly has a potential to throw light on such questions, not least since the contemporary written evidence is sparse.

The present publication started out as a master thesis in archaeology, submitted in 2003 at the University of Bergen, and has been partly revised and updated for publication in this seventh volume of the Main Series. The publication has been financed by grants from Skolebestyrer B. E. Bendixen's legate and the Faculty of Humanities, University of Bergen.

Bergen, October 2007

Ingvild Øye
Chief Editor

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1 INTRODUCTION

"Our sources considered, the Norwegian history of childhood is condemned to increasing incompleteness prior to 1850, and relies beyond the seventeenth century on pathetic fragments and shards of broken pots alone."
(Dyrvik 1980: 8. Author's translation)

The subject of this study is children and child-related archaeological objects found in Bergen, situated on the western coast of Norway (fig. 1.1). Here, altogether 2,513 objects or parts of objects from archaeological contexts can be related to children – primarily toys and shoes, dating to the first half of the twelfth century until about 1700. The main focus, however, will be on the medieval period. Based on these physical remains reflecting children's games, behaviour and clothing, I aim to shed light on the life of children, as well as on their presence in an urban community in the Middle Ages. Hopefully, this will provide new information on the everyday life of children in a time perspective, and indirectly on the demographic and social organization of an early urban society. To what extent childhood was regarded as a separate phase in life and an integrated part of society will also be considered, thus participating in the discussion concerning whether or not a different attitude towards children and childhood prevailed in the Middle Ages than was the case in the following centuries.

The concept of the "child" is not only related to biological age, but may also be understood as a social construct, based on chronological, biological and social age. How childhood is perceived is in other words determined by culture, and consequently varies with time and space. With regard to chronological age, medieval written sources generally divide childhood into different stages, its last stage beginning at the age of about 12–14, at least in Western Europe (Shahar 1990: 22). At what age children left this stage and were considered adults, is not so clear. The age of majority in Norway in the early Middle Ages (c. 1050–1150) was about 14–16, but according to the Norwegian Landlaw of 1274 it was raised to 20 years with respect to competence as a witness and legal status (*KLNM* XII: 35–36). In 1280, the age of majority was, however, reduced to 15 (*ibid*). Criminal liability, on the other hand, was originally independent of age, although it appears that the perpetrator's age generally was taken into account. Prior to the age of 15, children in most Norse societies were exempt from liability (*ibid*). In the two provincial lawcodes, Gulathing's law of western Norway and Frostathing's law of Trøndelag, children were exempt from liability until the ages of eight or twelve, and thereafter designated *halfréttismaðr* (ON) – a person who pays and receives half fines – until the age of 15 (*KLNM* XII: 36). In the Middle Ages, the age between 14 and 16 thus seems to represent a transition phase with a change in legal status. As a work definition, the age of 14 is therefore considered the upper age limit when defining children in this study. Yet – as it is impossible to decide this accurately based on archaeological evidence – this age cannot be understood as a definite limit, and the age of 11–12 will in practice constitute the approximate upper age limit for identifying traces of children in the archaeological record.

Children up to 14 years comprise individuals at very different developmental stages, physically and mentally. As to chronological age, life was divided into several phases or stages in medieval literature and thinking. Childhood was regarded as a process of development, and often subdivided into *infantia*, covering infants and children up to about seven years old, *pueritia*, the age from seven to 12 for girls and seven to 14 for boys, and finally *adolescentia,* normally ending in the twenties (Shahar 1990: 22–31). Subdividing of childhood is also relevant in modern developmental psychology, where particularly Jean Piaget's division of childhood into four stages has set the tone (Piaget 1973). Here, *the sensorimotor stage* covers the first two years of life, in which children's movements are based on reflexes and are more or less without control (Imsen 2001: 96). Body control gradually improves, and eventually the child is able to stand up and move around. Thought processes and memory are largely based on motor activities and concrete experiences at this stage. In *the preoperational stage*, between the ages of two and seven, children develop other basic movements (*ibid*: 97–99). Their ability to conceptualize develops

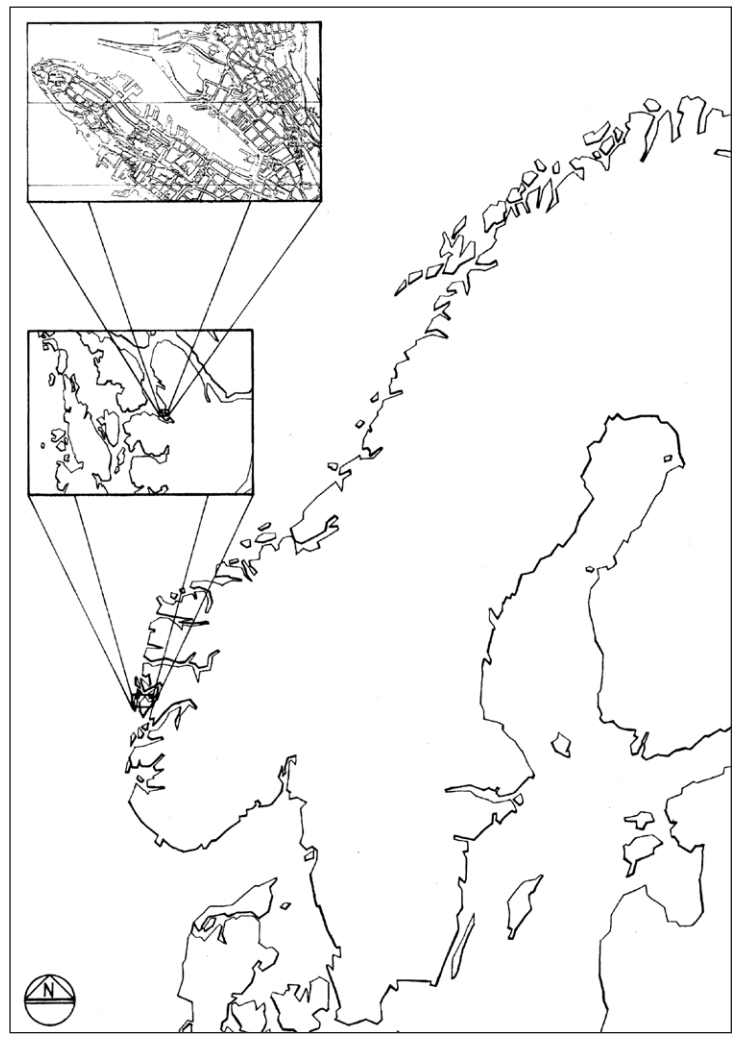

Figure 1.1 *Bergen, situated on the western coast of Norway. After Hansen 1998.*

further, and so does their memory and reference base. Experiences from actions and movements are important. At this stage the child also learns to talk. In *the concrete-operational stage*, approximately from seven to eleven years of age, the basic motor skills are fully developed, and the child starts thinking independently of motor actions and visual impressions (*ibid*: 99–100). Finally, *the formal-operational stage*, from the age of eleven, sees the development of abstract reasoning (*ibid*: 100–101). The general developmental characteristics listed above are important suppositions when interpreting the archaeological material in relation to age, and the analysis is therefore based on these age groups. The transition stage leading to adulthood is found to be more difficult to study by means of archaeological material.

In medieval society, most people in Norway lived, worked and made their living in rural areas, and a separate farm was the most common unit of habitation and production (Helle 1982: 117). At the end of the high Middle Ages (c. 1150–1350), the proportion of people living in towns or small urban communities was roughly four to five per cent (Helle 2006: 110), rising to only 23 per cent as late as in 1875 (Hodne 1984: 24). The towns, which only emerged in Norway from the eleventh century onwards, were first and foremost trading centres and administrative foci, often with a history as seasonal trading centres and marketplaces (Helle 1982: 117). They were thus largely dominated by merchants, craftsmen and small traders, in addition to workmen and servants. Little is known about

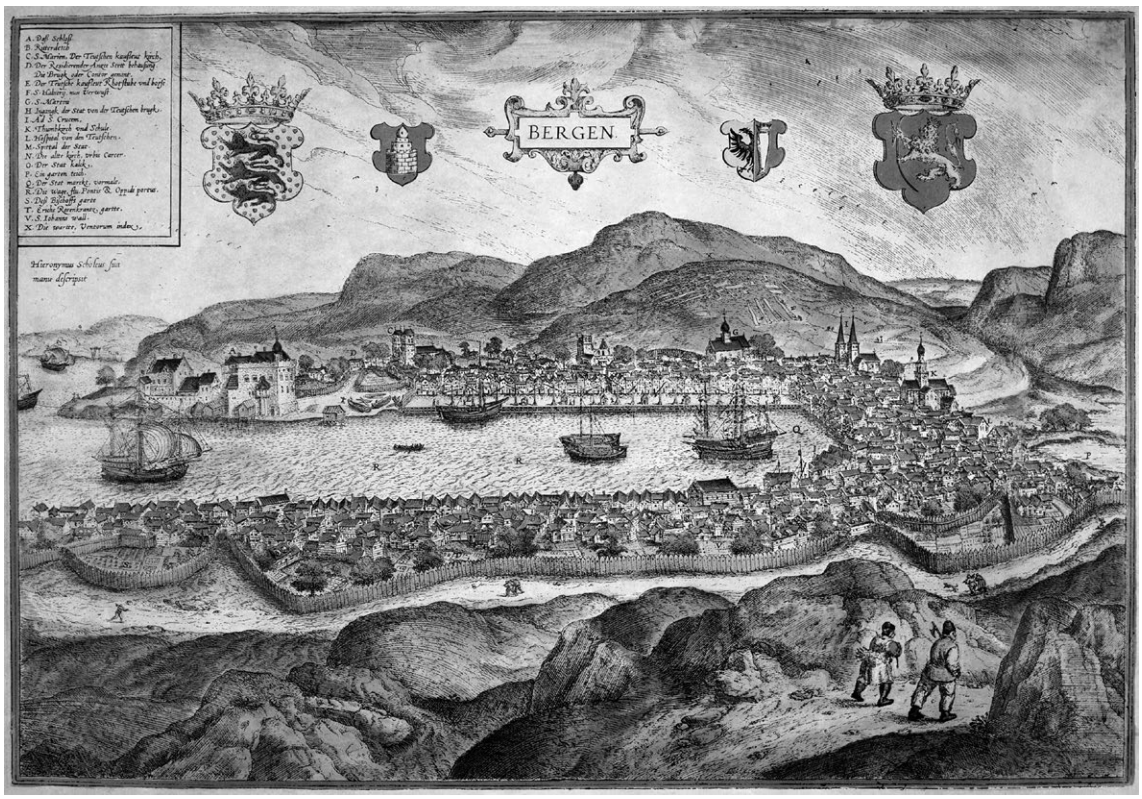

Figure 1.2 *Bergen illustrated by Hieronimus Scholeus, c.1580. This is the oldest prospectus we know of a Norwegian town.*

the composition of the early urban populations – to what extent they comprised resident families with women and children – and how they developed over time. In the course of the high Middle Ages, Bergen developed into the largest and most important town in Norway, and became an international trading centre – with an increasing proportion of foreigners, particularly German merchants (Helle 1982: 160–170, 472–487) (fig. 1.2). In the middle of the fourteenth century the Germans established The German Kontor, followed by a gradual taking over of all the tenements at Bryggen (i.e. the wharf), by which they came to constitute a separate male colony with their own jurisdiction. This closed male society, which forbade marriage to Norwegian women, must therefore have displaced any women and children from this part of the town.

Whether this happened during a short period of time or as a more gradual process, and what elements of women and children the area previously contained, is still unclear. The conditions were probably different in other parts of the town, but there may have been a disproportionately large number of single men. Generally, it is likely that the composition of the population was different in the towns than in the countryside, and also characterized by greater mobility. In the seventeenth and eighteenth centuries – when the source material is richer – people frequently moved to the towns long after their childhood, and did not end their days there (Øye 2005: 57). My examination of objects related to children will hopefully shed light on the question of children's presence and their role in the medieval town of Bergen.

Approaches

Objects related to children comprise a comparatively small part of the archaeological record from the excavations at Bryggen and in medieval Bergen in general. Still, the objects more than suggest that there were children in all these areas, and by examining them in a temporal and spatial context, new information on children and their lives in Bergen in the Middle Ages and

early Modern Period will hopefully emerge. The Norwegian historian Knut Helle has in his study of medieval Bergen divided the town in five socio-topographical areas, each with a character of its own, and inhabited by different social groups: the royal seat and ecclesiastical centre at Holmen, the trading district of Bryggen, the trading and craftsmen's areas Stretet and Vågsbotn, and finally the settlements at Strandsiden, including two monasteries from the twelfth century (Helle 1982: 228–259). An examination of how archaeological remains and traces of children are distributed within this socio-topographical pattern poses several questions: Can traces of children be located in all parts of Bergen, and in the whole period of examination, c. 1100–1700? Are all age groups represented, or is it primarily older children, children able to work, who can be traced? The former would presuppose an ordinary family pattern that includes men, women and children. Finally, is it possible to discern any patterns in time and space concerning the presence of children, and if so, how can they be explained?

At the centre of the child's world is playing, and thereby also toys. How did children in the Middle Ages play, and what do their games tell us about their everyday life in a medieval town? A universal type of game is according to Mary Ellen Goodman imitation, particularly of adult activities (Goodman 1974: 158). The Norwegian archaeologist Grethe Lillehammer claims that the child's play functions as a mediator between the child's world and the adult world, by children imitating the adults (Lillehammer 1989: 95). In this way the game becomes a form of learning and socialization process, which also reflects the adult world. Whether or not this was the case in the Middle Ages, and how it was expressed, is a central question in this study. Is it possible, based on remains of toys, to get information on the relationship between work and playtime? Is the general attitude of society towards children reflected in toys and child's play?

Not only children's toys, but also their outfit may reflect their presence, as well as attitudes towards children. Here, this has to be confined to shoe material, as shoes are the only preserved objects except toys that positively can be linked to children. Particularly the soles, based on shoe sizes, may illuminate such questions. To what extent were children given shoes, and what kind of shoes did they wear? Did children wear the same type of shoes as adults? The answers may reflect norms and standards for the equipment of children, and indirectly also attitudes towards children and children of different ages.

The find context of the objects – their relations to cultural layers and structures like buildings, passages, streets and other outdoor areas – is also examined in time and space in order to shed light on housing and living conditions in the town, including children.

The source material and area of research

The archaeological record comprises a heterogeneous group of 2,513 separate objects from 27 archaeological recorded sites in medieval Bergen (fig. 1.3). The material interpreted as toys consists of 425 objects or parts of objects. Among them there are several categories of toys that are still being used by children: boats, weapons, dolls, rattles, skates (made of bone), balls, humming tops, animal figures and small tools. In addition, more uncommon toys are represented, like bone buzzers (i.e. small bones used in a string game). Yet, we do not positively know if all of them can be related to children, as some activities that are considered typically childish today, were the province of adults in the Middle Ages. Playing with balls and particularly board games are examples of this, and the latter are therefore not included in this study. In addition, some of the around 600 sticks with runic inscriptions found in archaeological contexts in Bergen may have been made by children, learning how to write (Hagland and Trøite Lorentzen 1995). However, they are not easily identified and are therefore not subject to this study. Runic inscriptions on other identified children's objects are another matter.

With regard to children's clothes and equipment, there are no preserved complete medieval costumes recorded in Bergen, only fragments that are still not published (Schjølberg in prep). As a result, they are difficult to identify as garments, and therefore excluded here. A far more important source material is shoes, *in casu* shoe soles. All in all 2,088 soles identified as children's soles

Artefacts related to children															
Artefacts primarily related to play															*Clothing*
Musical objects or noisemakers			Toys reflecting role-playing games							Toys related to board games and sports/physical activities					Shoe soles
Rattles	Bone buzzers	Ocarinas	Dolls	Human figures	Tools	Miniature pots	Weapons	Boats/part of boats	Animal figures	Skates	Balls	Humming tops/tops	Yo-yos	Marbles	

Figure 1.3 *Survey of child-related artefacts from Bergen.*

Bryggen	**Øvregaten/Stretet**	**Vågsbotn**	**Strandsiden**
BRM 0 The Bryggen excavations	BRM 11 Øvregaten 9	BRM 20 Rådstuplass 2-3, Vestlandsbanken	BRM 7 Nordnesparken by Bergen Aquarium
BRM 3 Sandbrugaten 5	BRM 94 Øvregaten 39	BRM 25 Kong Oscars gt 54/ St Jørgens Hospital	
BRM 4 Dreggsallmenningen 20		BRM 106 Heggebakken	
BRM 41 Sandbrugaten		BRM 200 Korskirkegården by Kong Oscars gate	
BRM 48 Slottsgaten 3/Sildesalslaget		BRM 245 Domkirkegaten 6	
BRM 76 Rosenkranzgaten 4		BRM 274 Østre Skostredet 4-6	
BRM 83 Dreggsallm by the SAS hotel		BRM 333 Nygaten 2	
BRM 90 Svensgården		BRM 346 Bankgaten 4/ Skostredet 10	
BRM 104 Finnegården		BRM 462 Halfdan Kjerulfsgate	
BRM 110 Finnegårdsgaten 3a		BRM 544 Nordre Vågsallmenningen	
BRM 237 Dreggsallmenningen 14-16/ Øvre Dreggsallmenningen 2-4			
BRM 342 Vetrlidsallmenningen			
BRM 223 Kroken 5			
BRM 344 Kroken			

Figure 1.4 *Survey of excavations in Bergen with child-related artefacts.*

have been found in Bergen, and together they make up the largest group of finds in this study.

The osteological material from Bergen is another find category which is not included in this study. Here, Katharina Lorvik's master thesis on skeletal remains of 78 individuals from St. Mary's churchyard so far represents the only systematic examination and analysis of a larger collection of medieval osteological material (Lorvik 2007). Interestingly enough, a lower number of children than one would expect were identified in this part of the cemetery – no children under the age of seven, and only five under the age of 12 (*ibid*: 35–41, 60–64). In addition, a female bias was documented (*ibid*).

Archaeological traces linked to children in the urban settlement are the core subject of this study (fig. 1.4 and 1.5). As already mentioned, I base my spatial analysis on Helle's socio-economic areas – Holmen, Bryggen, Stretet, Vågsbotn and Strand-

siden – and the archaeological source material originates from 27 archaeological sites in four of these five areas in the medieval town. Most of the objects come from the extensive excavations at Bryggen (1955–1968), whereas no children's objects have been documented in the Holmen area.

Fourteen of the 27 sites are located at *Bryggen*, situated from Holmen in northwest to the common Autaallmenningen (today Vetrlidsallmenningen), bordering on the area at the bottom of the bay Vågsbotn. Bryggen was the economic centre of the town, dominated by trade and commerce, and activities related to import and export. A distinct feature of this area was (and still is) the long tenements stretching from the sea and up to the medieval main street *Stretet*, shielded from the bay by wharfs, and divided by passages, eaves-drop gaps and common fares (i.e. squares/wide streets between the tenements). The 31 tenements that are documented here in the high Middle Ages were not solely used for the purpose of trade and storage, but also for dwelling and residence (Helle 1982: 213).

In contrast to the international trading area Bryggen, retail trade and craft characterized Stretet. This street followed more or less the same path as Øvregaten does today, behind Bryggen, from St. Mary's church to the common fare *Autaallmenningen* and further into the bottom of the bay Vågen at *Vågsbotn* (Helle 1982: 191; Økland 1998: 23). In the Middle Ages, the majority of inhabitants here were small-scale traders and craftsmen. The area was also dominated by churches – in the high Middle Ages we know of six: St. Mary's (Mariakirken), St. Peter's (Peterskirken), St. Nicholas' (Nikolaikirken), St. Columba's (Steinkirken/Columbakirken), St. Martin's (Martinskirken) and St. Hallvard's (Hal-

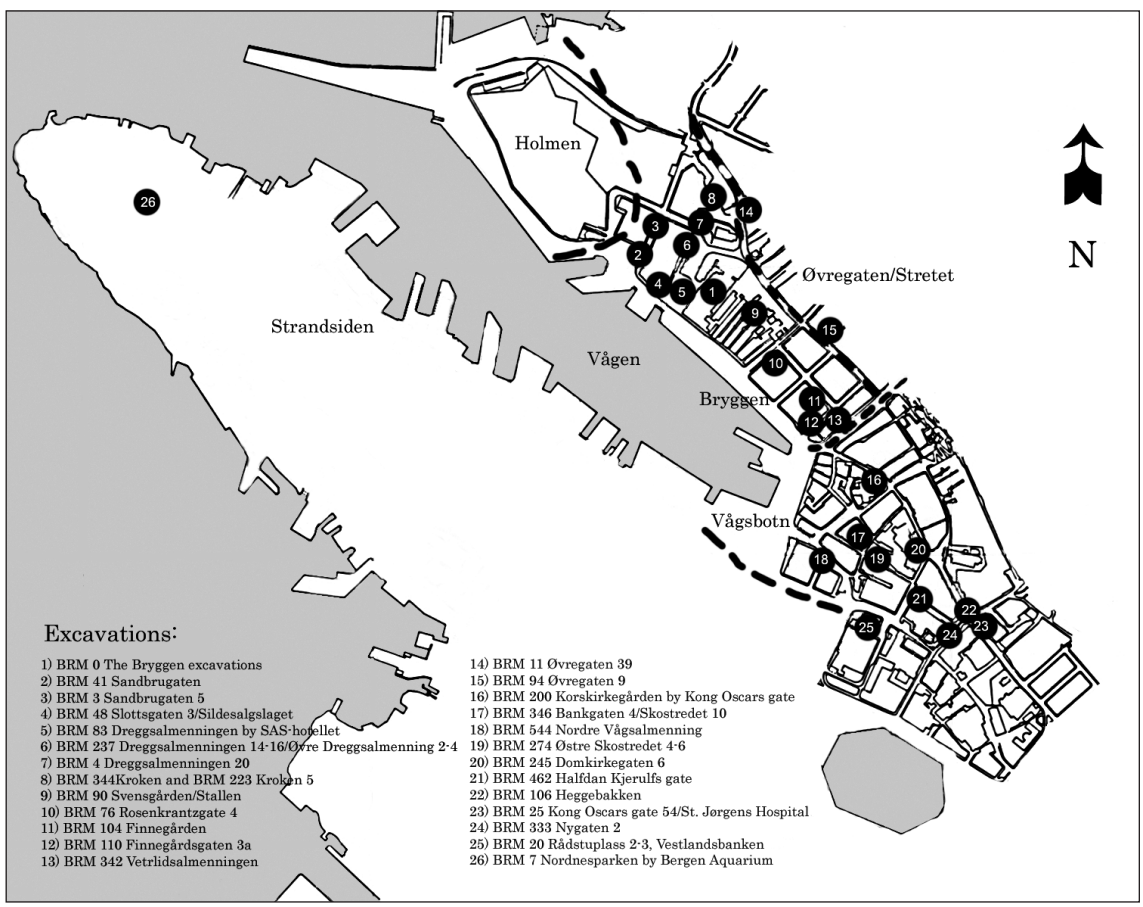

Figure 1.5 *The location of excavations in Bergen with child-related artefacts. With socio-topographical zones. Based on NIKU's map of Bergen.*

vardskirken). Few archaeological excavations have been carried out here, and only five objects related to children have been documented.

Vågsbotn, which stretched from the bottom of the bay to the Church of All Saints (Allehelgenskirken), was also for the most part inhabited by small-scale traders and craftsmen, and was by the end of the Middle Ages dominated by shoemakers and tanners (Helle 1982: 716–718). Yet, it seems that the social composition here was more culturally diverse than that of Stretet, and made up of mixed ethnic groups, Germans and Englishmen. The tithe registry (Norw. tiendepengeskattemanntallet) from 1521 also mentions 150 unmarried "poor women" – mainly prostitutes and concubines – who lived in these two areas, trading in small scale and selling food and drink, like also several married women did (*ibid*: 714). As a whole, Stretet and Vågsbotn had a socially more diverse population than Bryggen. Vågsbotn is represented by ten minor excavations in this study.

The settlement at *Strandsiden*, at the west side of Vågen from the Church of All Saints, differed from the rest of the town. The monastery Munkeliv, along with other religious institutions, dominated this area in the early and high Middle Ages to c. 1300. In addition, an initially rather scattered secular settlement grew gradually from the end of the thirteenth century (Helle 1982: 252–258). Not until the fourteenth and fifteenth centuries did the settlement expand here – about the same time as The German Kontor was established at Bryggen. Nobility, clergy and other prominent citizens moved their economic activities here in this period (*ibid*: 455). The population included not only Norwegians; among others common German traders bought houses here (*ibid*: 728). Still, little is known about the distribution with regard to gender and age in the early phases. The material from this area comes from a single excavation.

State of research

The archaeological study of children is still a minor field of research, even three decades after the first serious attempts at focusing on gender and gender relations, including children. Children and their living conditions – to the extent that this has been studied – have primarily been studied by historians. The understanding of childhood in the Middle Ages was for a long time dominated by French historian Philippe Ariès and his famous book *L'enfant et la vie familiale sous l'ancient regime* (1960) (English edition 1962). Ariès claims that the concepts of childhood and youth did not exist as distinctive social categories in the Middle Ages but came into being only during the Renaissance and the Enlightenment. Earlier, children were integrated in the everyday life of the adults, as well as in their work and community as soon as they could manage without their mothers or wet nurses. With the high child mortality rates in mind, Ariès did not think that children were considered as complete humans until they had survived the first critical periods of life. The high child mortality was supposed to have prevented parents from bonding closely with their children, which again contributed to poor treatment of the children. Ariès primarily based his theories on childhood and parental indifference towards the youngest children on the demographic conditions of that time, dominated by a high mortality rate for infants and young children. According to Ariès, not until the transition between the sixteenth and the seventeenth centuries did a crucial change of attitude toward children take place, as a result of an improvement of the living prospects of infants and young children. As a result, children were shown more care than previously. Ariès was followed by Lloyd de Mause, who painted a rather gloomy picture of children's living conditions in prehistory: "The history of childhood is a nightmare from which we have only recently begun to awaken. The further back in history one goes, the lower the level of child care, and the more likely children are to be killed, abandoned, beaten, terrorized and sexually abused" (de Mause 1974: 1). In addition, Edward Shorter's *The making of the Modern Family* (1975) and Lawrence Stone's *The Family, Sex and Marriage in England 1500–1800* (1977) received a great deal of attention in the 1970s.

During the 1980s and 1990s several historians expressed the need to moderate this rather negative view of childhood. They regarded the development in children's existence as a long process, in which a combination of different factors led to a different understanding of the child (Cunningham 1996: 13). Linda Pollock (1983) was the one

who once and for all rejected the theory of the seventeenth century "discovery" of childhood. Also Shulamith Shahar and British medieval historian Barbara A. Hanawalt have in their books *Childhood in the Middle Ages* (Shahar 1990) and *Growing up in Medieval London, The experience of Childhood in history* (Hanawalt 1993) given important empirical contributions to the history of childhood. Based on records of coroner's inquest and cases of wardship of orphans in London, Hanawalt examines the course of life from child to adult, as well as adult perceptions of children, and the effect this had on socialization. Shahar, on the other hand, treats childhood in the Middle Ages more generally. Central to both studies is the idea that stages of life corresponding to childhood and youth did in fact exist. In contrast to Ariès they claim that parents without restraint invested material as well as emotional resources in their children. They agree on the fact that medieval children were closely integrated in adult society, but question a supposed non-existent conception of childhood and the notion that childhood was not considered a separate stage in life. Hanawalt's sources show that not only work, but also games and leisure were important elements in the everyday life of children in this period.

The history of childhood has primarily been an American and generally European issue – to a lesser degree it has been taken up by Norwegian historians (Stokkeland 2000: 10). Still, several contributions on this theme have been published, and a growing interest seems to have developed (Korsvold 1998: 11). The Norwegian historian Sølvi Sogner has through several studies shed light on children and the history of childhood in the early Modern Period in Norway (Hodne and Sogner (eds.) 1984; Sogner 1990, 1994, 1997). In addition, several master and doctorate theses on the topic have been published (e.g. Knudtsen 1997; Schrumpf 1997; Stokkeland 2000; Svanø 2003; Andersen 2005; Hammer 2006). In the Scandinavian countries in general, demography and the history of the family are central to recent research (Korsvold 1998: 11; Stokkeland 2000: 11).

Today, there is general consensus among historians that children also in early history did have a childhood, a stage of life separate from that of adulthood. Ariès' and de Mause's rather negative opinion of children's conditions in early history is overall rejected for the benefit of studies in which children and childhood to a greater extent are seen in relation to historical environment in time and space. Here, children and childhood are considered a result of culture-specific circumstances rather than a permanent quantity with a fixed content (e.g. Heywood 2001; Orme 2001), which consequently contributes to a more complex picture of children's lives and living conditions throughout history.

Only lately have archaeologists started focusing on children as a specific topic. In an article published in 1986, Grethe Lillehammer presented a survey on the earlier Nordic archaeological research dealing with children (Lillehammer 1986). She points out that prior to 1970, archaeologists first and foremost considered children in relation to graves and toys, if at all (e.g. Shetelig 1918; Gjessing 1920; Brøgger 1921; Grieg 1933a; Petersen 1951; Hagen 1953). In the 1970s these sporadic references to children were replaced by a more active search, focusing directly on the child itself. Here Anne-Sofie Gräslund's publication *Barn i Birka* (1973) introduced a new generation of archaeological studies, and the article has in the following decades been succeeded by several minor contributions on children in prehistory (Lillehammer 1986: 6). However, only few have been published so far – possibly because of the problems of identifying children's activities opposed to those of adults, trying to make the child visible in the archaeological material (Sofaer-Derevenski 1997: 13). Symptomatically, the archaeological studies related to childhood still concentrate on the identification of children's artefacts, particularly toys. However, more complex studies of prehistoric children have also been published (e.g. Baxter 2005; Wileman 2005).

Birthe Weber has in a study of medieval and prehistoric toys from Gamlebyen in Oslo set terms for identifying objects as children's toys (Weber 1981). Her approaches and identification of children's objects have been useful for my own assessments. Another useful study for com-

parison with the Bergen material is a survey of toys and games from Lübeck, from the Middle Ages to the present (Gläser 1995). This booklet is also one of few publications that illuminates the discussed items, and has been useful for the identification of individual objects and groups of objects. The same applies to several other minor publications and exhibition catalogues, e.g. from Lödöse in Sweden (Ekberg *et al.* 2001) and Nykøbing in Denmark (Wille Jørgensen 1993). Concerning the identification of toy boats, and especially of parts of toy boats, Arne Emil Christensen's study on boat finds from Bryggen has also been a useful source and reference (Christensen 1985).

Another valuable base for identification and comparison is Lena Fahre's master thesis on children's toys from medieval Trondheim, Mid-Norway, c. 970–1500 (Fahre 1998). So far, this has been the most extensive archaeological study on children in urban medieval societies. Fahre's aim was to study the socialization of medieval children, and their play culture. As children imitate the adult world through playing, Fahre thinks that children can more easily be identified when we know the adult culture. Fahre thus focuses on the relationship between the adult world and the children's world, where playing works as a mediator. This approach is also central in my study.

Runes and runic inscriptions have been important themes of research, but with little awareness of children (fig. 1.6). However, in a contribution at a symposium in Stockholm in 1995 Jan Ragnar Hagland and Rutt Trøite Lorentzen (1997) tried to relate some types of runic inscriptions to children and children's training in writing. Lena Fahre (1998) also considers runes in relation to children in her study on children in Trondheim.

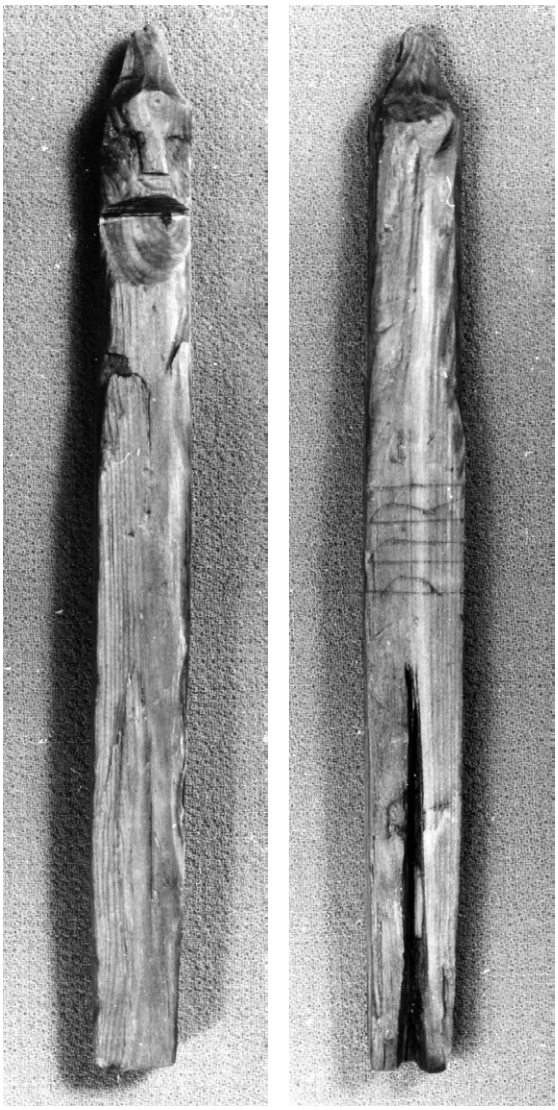

Figure 1.6 *Wooden figure, 18 cm long, with the inscription "thure" written on its back (0/31710). Photo: Bergen Museum*

Obvious indicators of the presence of children are children's shoes, but up to the present this group of source material has hardly been used to illuminate aspects of children and childhood in a wider social and demographic perspective. One of the first studies of the shoe material in Norway was done by archaeologist Sigurd Grieg in the early thirties, but this source category was not examined exhaustively before the more extensive urban archaeological excavations were carried out in the latter part of the twentieth century (Larsen 1970, 1992; Schia 1975, 1977; Marstein 1989; Lind 1991). In his study of the shoe material from Bryggen in Bergen, Arne J. Larsen (1992) has worked out a shoe typology for one of the sites, the Gullskoen area within the main site of the Bryggen excavations (1955–1968). Typologies have also been established for the shoe material from Mindets tomt in Oslo and Folkebibliotekstomta (the site of the present public library) in Trondheim (Schia 1975, 1977; Marstein 1989). Both Arne J. Larsen and Odd-

laug Marstein classified shoes based on the soles and separated children's shoes from adult shoes, but without discussing them in relation to questions on childhood or children's lives and ways of living. These studies form an important basis for comparison for the present analysis – in particular this is the case with Larsen's studies from Bryggen.

Osteological material constitutes an important source group in relation to children's living conditions. Particularly in Sweden several studies with focus on the health of children and youths based on this kind of material have been carried out (e.g. Iregren 1992a, 1992b; Bratt *et al*. 1997; Isaksson *et al*. 1998). There are also some Norwegian contributions (e.g. Sellevold 1997), but osteological material has to a lesser extent been used here than elsewhere in Scandinavia. Recently, a master thesis on skeletal remains of 78 individuals from St. Mary's churchyard was submitted by Katharina Lorvik (2007), which also included children. Lorvik's sample reveals a somehow unusual demographic composition, demonstrating a female bias and a low number of infants and young children, probably reflecting the spatial organization of the cemetery (*ibid*: 35–41, 60–64). Only five children under the age of 12 were identified – and none under the age of seven. Although the sample is limited, this may, however, also reflect an urban society with primarily young, unmarried inhabitants. I will return to this question in the following chapters. All in all, Lorvik concludes that stress-related diseases were more common among children than adults, although it seems that the general medieval population in Bergen to a lesser degree than expected was affected by its crowded and unhygienic environment.

Much has been written about the medieval town of Bergen, and both historians as well as archaeologists have contributed to understanding the conditions in and the development of Bergen in this period. Based on archaeological and written sources, Knut Helle in 1982 presented an extensive survey on the history of Bergen from its early beginning to 1536. Written sources, however, reveal little information about children.

The archaeologists, on the other hand, have concentrated mainly on the earliest history of Bergen, on its beginnings and development throughout the high Middle Ages, focusing on physical topography and buildings (Herteig 1990, 1991; Hansen 2005). In the last decades, however, several doctorate and master theses based on the medieval archaeological material from the main Bryggen excavation (1955–1968) and other excavations in Bergen have been written and partly also published, covering boat finds (Christensen 1985), textile equipment (Øye 1988), shoes (Larsen 1992), jewelry and clothing equipment (Molaug 1998), fishing tackle (O. M. Olsen [1998] 2004), waste and waste treatment (Økland 1998), habitation, buildings and tenements (Moldung 2000; J. Olsen 2002), weapons (Nøttveit 2000), soapstone vessels (Vangstad 2003), children and child-related objects (Mygland 2003), drinking glasses (Høie 2005), keys and locks (Reinsnos 2006) and osteological material (Lorvik 2007). Many of these contributions represent new ways of approaching the archaeological material, their method based on spatial analyses where all parts of the medieval town are included, and where the material to a greater extent is considered in a broader cultural historical perspective. Several of these theses are used as reference and basis for comparison.

2 THEORETICAL AND METHODOLOGICAL APPROACHES

What is a child, and what makes a childhood? All adults have experienced childhood, and our concepts of what it means to be a child and what characterizes childhood are highly individual. As a result, there may be as many opinions about children and childhood as there are people, which makes it difficult to define and give these concepts a more or less universal content. This way childhood may best be understood as "… a state of passage which is then left to memories." (Lillehammer 2000: 23).

Children and childhood in time and space – the child as a social construct

Most people share a more or less common notion of essential features of children and childhood, but their understanding of the content of the concepts is not necessarily exactly the same. In the introduction a possible definition of the concept of childhood was presented, presupposing that "child" partly is a social construct, and thus can vary in time and space. In other words, the concept of childhood may deviate from our present-day concept of this stage in life. Large families, high infant and child mortality, the basis for existence and the need for labour are factors that affect children's living conditions and social status, and were some of Ariès' justifications for his theory of the existence of a different and more distant approach to children in the Middle Ages than there is at the present. Now, there are more or less different attitudes toward childhood in different societies and cultures, and not that long ago, the notion of children was considerably different in Norway than it is today – particularly concerning the demands towards them. It is likely then, that also in the Middle Ages the idea of childhood differed from that of the present. In other words, our present day Western concepts of children and childhood are particular to our part of the world and to the age in which we live.

Still, there is a common base concerning childhood as a separate stage, which in particular is connected to biological development. Biologically, childhood is a stage in life – a stage, or rather several stages prior to puberty – characterized by continuous development and growth, physically as well as mentally (Imsen 2001: 88–108). At this stage the body develops and matures in what may be called a process of independence, aiming for more or less total self-sufficience. This biologically defined childhood is generally found in all societies, present or prehistoric. The process of development, however, is not identical for everyone, but takes place at different times – though within a certain time frame – and reveals itself differently in each individual (*ibid*: 95–96). Gender norms also play a part here. This way childhood may be characterized as a universal biological process, expressed individually. Biologically childhood cannot therefore be framed by exact age limits.

The biological childhood can be used as a base for ways of understanding children and childhood. The conception of childhood as a continuous process of development often involves a focus on childhood as a process of learning and socialization. The child is supposed to acquire several motor and social skills to be socialized into the adult world. In this process playing (but also work) has an essential role. Especially in the course of the last centuries Western countries have come to focus on the playing child (Cunningham 1996: 159). Today, playing is widely recognized as a vital feature of childhood and children's way of being and expressing themselves in the process of socialization. In this way, children's games also reflect the adult world and adult behaviour, as well as its norms.

Adults "play" as well, but playing constitutes a larger part of children's existence and behaviour. In addition, playing has another meaning for the child. Children relate to and approach their environment to a high degree through playing, and playing thus functions as a mediator between the child's world and the adult world, including learning and having fun (Lillehammer 1989: 95–96). Playing is in other words an important characteristic of children and childhood, closely connected to the adult world. The play-related activities and games that can be traced through the archaeological record may thus give information about the society as such, not only about children. In this way the study has a double aim.

To summarize: Despite the fact that children and childhood are rather diffuse concepts, there is an underlying acceptance of childhood as a distinct stage in life, different from other stages. Childhood is in one respect universal, but at the same time expressed in culture-specific ways, characterized by the notion of children and children's roles at different times and in different places. Studying children therefore also reflects the relationship between children and adults, and the adult's concept of children. Consequently, it is important to be aware of "the otherness" in the Middle Ages when interpreting the remains of their material culture in a changing urban society.

Methodological approaches

There are different ways of approaching the research questions posed in the introduction. In the following the criteria and methodological approaches on which this study is based will be clarified.

Identification

An important supposition to this type of work is among others that objects can be identified as related to children (fig. 2.1). The majority of the artefacts have been uncovered during the extensive archaeological excavation at Bryggen, which was initiated after a devastating fire of the northern part of the Bryggen area in 1955. These excavations lasted until 1968, and more sporadically during the next decade. Objects that may be related to children comprise a rather limited part of the total finds, which is also the case with the other archaeological sites from medieval Bergen. An important starting point for this study is therefore to identify and classify the different categories of artefacts.

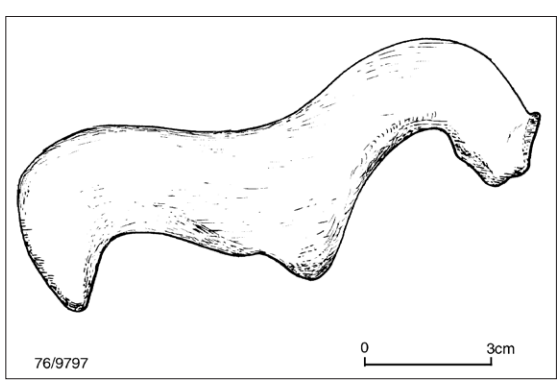

Figure 2.1 *Toy horse from Bergen (76/9797). Drawn by Ellinor Hoff, Bergen Museum.*

Identification is mainly based on two interrelated principles: comparison to (1) finds that indicate the presence of children, from a clear archaeological context, and (2) archaeological and ethnological material for which the use is already proved, i.e. analogy (Øye 1988: 20–21). In addition, iconographic sources – contemporary paintings – may shed light on different categories of children's objects. Written sources may also hold some information on children.

Toys have primarily been identified through earlier identifications of medieval toys from urban archaeological contexts, and through comparisons to ethnological material (e.g. Weber 1981; Fahre 1998). In addition, both toys and shoes can be seen in paintings and other graphical representations from the Middle Ages and later. For the identification of some of the toys, Pieter Bruegel's painting "Kinderspiele" from c. 1560 has been an important source. Besides, there is normally also some kind of continuity in a society over time, thus making it possible to draw more or less solid conclusions about some of the medieval toys, based on later finds and modern material. As for oral playing traditions and playing with objects from nature, written sources and tradition may give information, but one can hardly say anything about this based on archaeological material alone.

Not all objects that may reflect children can be attributed to them without further evidence. As an example, small versions of adult objects or objects that are related to adult activities may indicate that children have used them as toys. Such an interpretation is based on the assumption that since children are smaller than grown ups, they also use small objects (Sofaer Derevenski 2000: 7) (fig. 2.2). However, this is not always the case, and other interpretations are possible. They may for instance have symbolic functions and represent larger forms. Other functions than toys are thus not ruled out, and such miniatures must therefore be examined carefully. Birthe Weber has suggested that they have been used as toys when practical functions for adults can be excluded (Weber 1981: 91). She also finds that ob-

Figure 2.2 *The problem of identification: Toys, or weights shaped like horses, and miniatures pots used for storage (c. 6 cm tall)? Photo: Bergen Museum.*

jects should be interpreted as toys when they are imitations of tools or weapons, made in a non-functional material (*ibid*). Considering children's imitations of adult activities in their playing, this seems likely.

Artefacts from nature – various kinds of unworked objects of pine cones and bones – may also have been used as toys, but are not easy to identify with any certainty as they show few or usually no signs of processing. In cases where archaeological material has no such signs or does not stem from contexts indicating that it has been used by humans, it can hardly be distinguished from general waste. Information about this kind of toys must therefore be gleaned from context or through other source material than the archaeological record.

In this study, children's shoes are identified based on size – i.e. the length of the sole from heel to toe. However, shoe sizes related to present day children cannot automatically be applied to children in the Middle Ages. The medieval average height was noticeably lower than the present, and due to a relatively constant relationship between parts of the body, one can conclude that medieval man had smaller feet. We may thus also assume that people generally wore smaller shoes, yet consider individual differences concerning height and relationship between parts of the body.

Based on the length of the femur, the Danish archaeologists Pia Bennike and Anna-Elisabeth Brade suggest an average height in the Middle Ages of about 173 cm for men and 160 cm for women in Denmark, today's equivalent being 180 cm and 168 cm respectively (Bennike and Brade 1999: 15–16). Studies from Sigtuna (Kjellström 2005) and Lund (Arcini 1999) in Sweden, and Hamar (Sellevold 2001) in Norway indicate more or less the same statures. Based on skeletal remains of 78 individuals from St. Mary's churchyard in Bergen, an average height of 159.7 cm for women and 171 cm for men has been estimated here (Lorvik 2007: 43–44). Although the male estimate is within the lower ranges for Scandinavian medieval material, this corresponds more or less with Bennike and Brade's results (*ibid*). Anyway, based on the Danish average height in the Middle Ages, the male average height was 3.9 per cent lower than in the present and the female 4.8 per cent lower – on the average 4.35 per cent. In other words, the Scandinavian medieval population probably had feet that on the average were 4.35 per cent shorter than today.

Because the smallest adult's soles and the biggest children's soles probably overlap around the age of 11–12 (Grew and deNeergaard 1988: 105), this age is considered as a usable limit between children and adults when shoes are considered. In *Design Standards for Children's Environment*

(Cain Ruth 2000) a series of anthropometrical measurements of children between the ages of 0 to 18 from the USA and Great Britain are presented – among others the length of feet. Here, an average foot length of about 23 cm for a twelve year old is indicated, which approximately corresponds to shoe size 34–35, found by multiplying the length of the sole by 1.5 (Groenman-van Waateringe 1978: 185). If 4.35 per cent is subtracted from this measurement, a medieval twelve year old must have worn shoes with an average foot length of approximately 22 cm, i.e. size 33. Soles measuring 22 cm or less from heel to toe are therefore characterized as children's soles. The overlapping of adult's shoes is also assumed to be as little as possible by this limit. However, a definite limit between children's soles and adult's soles can hardly be said to exist, as there have always been great individual physical differences within different age groups and not least with regard to sex. Like the concept of child, the definition of children's soles must be considered as a work definition.

Classification

Most of the identified objects have been possible to classify into groups, basically on their shape, thus a formal classification, or on function, i.e. so-called functional classification (Dark 1995: 78–81). The starting point for this study is sorting the material into different functional groups, like toys and clothing, which based on shape are subdivided further. This *may* reflect different usage or development over time. However, uncertainties connected to the identification of the toys make it necessary to evaluate them in terms of *confirmed*, *probable* or *possible* objects belonging to children. This way as many artefacts as possible can be included.

The approximately 2,500 artefacts are in part different, depending on number, type and variety, and may be divided into two main categories based on their function: objects primarily connected to playing, and clothing, represented by shoe soles. As previously mentioned, learning, and thereby socialization, is also a part of playing, particularly with regard to role-playing.

One of the main groups thus contains objects connected to playing. Traditionally, toys have been the main category when studying children, often separated into two groups: (1) musical objects or noise-makers, and (2) objects reflecting role-playing games, i.e. games that to a larger or lesser extent relate to and reflect adult activities both in and outside the home (particularly games that imitate the adult world) (Lillehammer 1979: 7). This functional division may shed light on several aspects of the everyday life of medieval children – e.g. how they played, and their relationship to work and play, possibly also in which work processes children took part – and indirectly on the phenomenon of childhood as such. Gender roles are also important in this connection. In addition, there is another group of toys, related to board games and sports/physical activities. The three groups are further divided into subgroups, based on both shape and function, and the artefacts finally evaluated in terms of confirmed, probable and possible relation to children.

Contrary to the toys, which are classified based on their functions, the soles of the shoes, another important functional group, are classified solely according to size and shape. The variations in form may signify different uses and may change over time. Fashion and fashion trends were not unfamiliar phenomena in the Middle Ages, and shoe fashions changed throughout the entire period. The classified shoe material may thus take in not only shoe fashions, but also questions concerning representation in time, and conditions related to age and gender. In addition, the classification of the soles may give information on the notion of children – whether or not they wore the same types of shoes as adults, and, if that is the case, what sizes this concerned (fig. 2.3). All in all, this may contribute to illuminating the relationship between children and adults – and thereby the conception of children, either as a distinct category with specific kinds of clothing and shoes, or as a scaled-down reflection of adults.

The present classification of the shoe material is based on established classifications within shoe analysis (Larsen 1992). However, only a selection of the soles will be evaluated here. A complete analysis of all the shoe material from Bergen, comparing adult's shoes to children's shoes, is far beyond the scope of this study. The comparison therefore had to be limited to a selected area

Figure 2.3 *Decorated upper from a child's sandal, c. 8 cm (48/395). Photo: Sigrid Samset Mygland.*

– that of the so-called Gullskoen area on the northernmost part of the Bryggen site (2,500 sq metres) – based on Larsen's study of the shoe material in its entirety (*ibid*). This area also covers the entire period of examination from c. 1120 to about 1700 (*ibid*: 11). The other soles, originating from archaeological sites from the rest of the town, have been evaluated solely based on size.

Dating of the artefacts

Examining the distribution of artefacts related to children in time and space is one of the main goals of this study. The medieval archaeological record from Bergen originates from a variety of excavations that have taken place over the last 150 years, using different methods of dating. Most of the artefacts originate from the extensive Bryggen excavation, primarily dated based on a so-called fire layer chronology (fig. 2.4). From Bergen's early beginnings and onwards the town has regularly been more or less devastated by fires. New buildings were raised on the remains of the old ones, resulting in several fire layers under the present buildings. Written sources record several fires by year, and together they make up the basis for a fire layer chronology (Helle 1998). In 1990 and 1991, Åsbjørn E. Herteig, leader of the Bryggen excavations published his analyses concerning the stratigraphy and the absolute dating of the material from Bryggen. In this chronology, the time span and the accumulation of layers between two fires represent one period, starting with material deposition and the accumulation of layers following one fire and ending with the next one. The fires were originally numbered I–VII, the latest fire in 1702 being number I, and the oldest known fire in 1170/71 number VII (Herteig 1990; 1991). Based on dendrochronology, an older, unidentified fire (fire VIII) has later been dated to the 1120s (Hansen 1998). The nine periods that make up this chronology are numbered in an opposite sequence to the fires, e.g. period 8 is framed by fires I and II, period 7 by fires II and III, and so on. Some of these periods are further separated into phases, based on buildings and other constructions. A more accurate dating than to periods, however, seems unlikely in this case, as it due to redeposition is difficult to relate the artefacts to building phases.

The fire layers do not cover the excavated areas continuously and completely, which sometimes makes it difficult to link the different sites to the same chronological frame. There are also problems regarding continuity, as the layers vary in thickness and coherence. In other words, not all

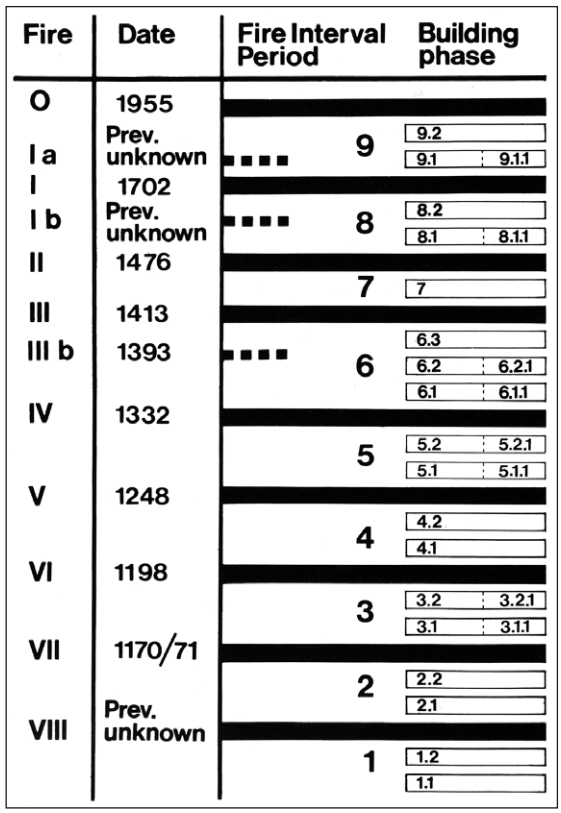

Figure 2.4 *The Bryggen fire layer chronology. After Herteig 1990.*

fire layers at the different sites in Bergen may represent fires recorded in written sources (Hansen 1998: 85–87).

My dating is thus primarily based on Herteig's corrected chronology[1], while artefacts originating from other sites in Bergen are dated according to separate chronologies established for these sites. No child-related artefacts from Bergen's earliest phases from period 1 (after 1069–the 1120s) have been found, whereas few excavations have covered the last period (1702–1955). Whether or not artefacts from this latter period have been included has been more or less accidental.

After the establishment of the excavation office of the Director General of Historic Monuments (Norw. Riksantikvarens utgravningskontor) in Bergen in 1980, the chronological framework was to a higher degree related to stratigraphically related layers and constructions that have been deposited and/or used in a particular period of time. These excavations are dated by means of analyses of layers where archaeological material (also) is considered, and seconded by written information and natural scientific dating (Dunlop 1998a; Hansen 1998).

Finally, the material includes a small number of artefacts found prior to the Bryggen excavations. Artefacts from these excavations prior to 1955 have so-called B (Bergen Museum) and MA (Middle Ages) numbers as an ID – including both single finds and finds from earlier excavations. As they lack the archaeological context necessary to map their temporal and spatial distribution, they are not included in this part of the study.

Spatial analysis

A socio-topographical survey mapping where the artefacts were found in relation to time and space is needed to shed light on many of the research questions. Particularly this concerns the spatial distribution into the socio-topographical zones in the medieval town of Bergen. In addition, the context of the artefacts from Bryggen in particular will be focused on, where it is possible to trace them inside and outside of structures like remains of buildings, passages, streets and waterfronts.

Representativity

There are both qualitative and quantitative considerations connected to archaeological artefacts in general, but not least to those that may be linked to children. All artefacts represent fragments of distant, past societies – deposited in layers in the underground, and later in museums as a result of several factors. In particular this applies to the conditions of preservation in different kinds of cultural layers. Children's objects are usually small and are made of organic material, which makes them decompose more easily. However, the conditions for preservation of organic material are good in the filled-up wharf areas at the Bryggen waterfront and in other areas representing man-made fills, and are not considered a problem. In addition, the preservation conditions for organic material are better the further down in the cultural layers one comes. At the inland side of Bryggen, however, the preservation

1 With one exception, datings of the artefacts from period 2 have been worked out by Gitte Hansen (2005).

conditions are better for metal artefacts than for artefacts made of wood and leather.

Another question concerns the likelihood of the artefacts having been used where they were found, or close to where they were found. The find context of an artefact is primary or secondary in relation to the chronological layers in an excavated area. In this connection an artefact's primary context is understood as being in situ in the fire layer itself or just above the fire layer. Where Bryggen is concerned, it is said that only finds from the fire layers (and to a certain extent finds from just under or above fire layers) may reflect concrete activity here. Only a small number of the evaluated artefacts have been found in such contexts. In addition, the majority of the children's objects from Bryggen originate from man-made fills and cannot easily be linked to buildings and other structures. Yet, some are found in-situ in fire layers (0–5 cm above fire layer. Cf. chapter 5).

Broadly, other find contexts are considered secondary, and the artefacts may just as well have come here in other ways: they may be waste from other parts of the town used as filling in the front of the wharf, they may be trading objects lost during loading or unloading, or perhaps lost by people who did not live there (Øye 1988: 117). In his thesis about waste disposal in Bergen in the Middle Ages, Bård Gram Økland (1998) finds that organized disposal of waste at Bryggen did not take place until the fifteenth century. Prior to this, waste was probably not moved far away, which may indicate that the artefacts have been used close to where they are found. Gitte Hansen's analysis of find conditions for the remains of the so-called "Big ship" at Bryggen, dendrochronologically dated to 1187/88 (Englert 2001: 44), also points in this direction (Hansen 2001). Concerning artefacts found outdoors close to the tenements at Bryggen, Hanne Merete Rosseid Moldung conciders it likely that finds from the eaves-drops between the tenements stem from the closest building, within the borders of the lot (Moldung 2000: 92–93). Besides, fillings outside the wharf involve problems concerning dating, as artefacts in such contexts may be older than the stratigraphical layer in which they were found (fig. 2.5). This material can therefore only be dated ante quem.

It is also necessary to take into consideration the different degree of excavation activities and the way in which the sites have been examined. Only a few excavations have for example taken place in Øvregaten/Stretet and at Strandsiden, which is also reflected in the number of artefacts connected to children. In addition, the area of Holmen is represented by few recent excavations. The older excavations that have taken place in this area have mainly focused on buildings and constructions, and archaeological artefacts were hardly documented (Hommedal 1990).

The shoe material represented by soles involves several considerations concerning representativity. Only a selection of the 2,088 children's soles has been classified according to similarities/dissimilarities in shape. When examining the children's shoes in relation to the adult shoe material, I draw on Larsen's analysis and classification, worked out for shoes from the area connected to the Gullskoen area within the Bryggen site (Larsen 1992). His classification, however, is based on drawing of the soles, which has mainly been done to the leather material from this area, including 422 children's soles. As classifying the remaining 1,666 children's soles would be beyond the scope of this study, the focus will only be on the children's soles from the Gullskoen area in that part of the analysis, representing about one fifth of the total number of children's soles from Bergen. Even though they originate from a rather small part of the town, the material is considered as representative for the rest of the study material. The majority of the shoe material, as well, originates from the area of Bryggen.

Representativity does not only concern the number of objects, but also their quality and condition – and thus their size. Leather is not a stable material, but expands when wet and shrinks when drying (Schia 1977: 123; Grew and de Neergaard 1988: 102). Other factors, like conservation methods and preservation conditions, also affect the size and condition of leather, and make it difficult to determine the original length of soles – which may have consequences for the identification of the children's soles. Schia has pointed out that soles, depending on their length, on the average shrink 2.5–3 cm when using freeze drying conservation (Schia 1975: 32). This corresponds with my own evaluation of the

Figure 2.5 *Caissons in the area of Gullskoen and the tenement Søstergården. From the Bryggen excavation 1955–1968. Photo: Bergen Museum.*

material from Bergen. Larsen's measurements of children's soles from the area of Gullskoen from 1992 often were up to two cm longer than my own, measured about ten years later. However, this may just as well result from the use of Lederweicher, a chemical used to soften leather. Lederweicher makes the leather swell and regain some of its original size (i.e. its size prior to conservation), followed by shrinkage when drying. In other words, Lederweicher affects the length of the soles, resulting in different measurements depending on whether or not this chemical has been used. To allow for the mutual differences, 5.65 per cent[2] of the length of the 50 soles that were treated with Lederweicher has been subtracted.

The ratio between the original size of the soles and the size prior to conservation is also somewhat uncertain. Schia suggests that the original size of the soles may be somewhere between the size prior to and after conservation, but at present we cannot draw any firm conclusions about this issue (Schia 1977: 123). First and foremost it is important that at least the relative measurements correspond. The uncertainties related to the original length of the soles will have to be considered when discussing the presence of different age groups in the town at different times.

A total of 143 previously documented children's soles from the Gullskoen site were not found during the examination, and for these soles the study is based on Larsen's documentation. Because of potential later physical changes in the material, his measurements of all children's soles are used when classifying the material from the Gullskoen area. In this way the relative measurements will correspond. However, the discussion of all the soles from medieval Bergen is based on my own measurements, adding also corrected measurements for the 143 soles that I was not able to measure myself.[3] More specific methodical questions are discussed in the analysis.

2 5.65 per cent is the average difference between measurements of the soles made during and after the treatment with Lederweicher (wet and dry conditions respectively).

3 On the average, the difference between Larsen's measurements and my own is 3.74 per cent, based on measurements of 283 soles.

3 TOYS – IDENTIFICATION AND DATING

In this chapter, archaeological artefacts related to children are presented and classified in order to evaluate to what degree and in what ways children's games and toys reflect children's activities and social standing in a medieval town. Are the toys from medieval Bergen related to learning and socialization – and if so, in what ways? An examination of the toys in relation to gender and age is also a part of this.

To distinguish between different types of play-related activities, the 425 objects identified as toys are divided into three categories: (1) musical objects or noisemakers, i.e. toys that apparently have no other functions than making sound, (2) toys reflecting role-playing games, and (3) toys related to board games and/or sports/physical activities (fig. 3.1). These categories are further split into smaller groups based on the functions of the artefacts, and again based on possible differences concerning the shape of the artefacts and/or the material from which they were made. Depending on the degree of certainty in their identification, they are also classified in terms of confirmed, probable and possible toys.

Musical objects or noisemakers

Bone buzzers

Bone buzzers – denoted "snorlebein" in Western Norway (Sevåg 1973: 20–21) – are made of bone (usually metacarpals or metatarsals from pigs) and have one or two holes in the middle. A string was pulled through the holes in a figure-of-eight loop, before it was twisted around itself, thus making a sound when drawn from both ends. In the Shetland Islands, bone buzzers did not have holes; instead the thread was tied around the bone (Weber 1981: 86). Because of the Shetlandic name of bone buzzers – "snorie bane" – Birthe Weber finds it likely that this was the original type (*ibid*; Fenton 1978: 504). Bone buzzers from e.g. Lübeck are, however, primarily perforated (Gläser 1995: 48). Here, the focus is on bone buzzers with holes, as bone buzzers without holes have not been identified among the archaeological artefacts from Bergen, and would demand an exhaustive examination of the whole osteological material.

Altogether 11 small, perforated bones (probably pig's or sheep's bone) have been found in Bergen, of which one, unlike the others, has two holes (fig. 3.2) (Øye 1988: 56). Generally, the bone buzzers measure about 6 cm. One specimen, however, is 12.5 cm long, and may thus be interpreted as a small skate. The lack of wear marks, combined with the two holes in the middle, however, makes the interpretation as a bone buzzer more likely.

Earlier interpretations of these bones have been as bobbins or quills in weaving (Wild 1970: 34). However, Ingvild Øye, who has studied the textile equipment from Bryggen, concludes that they are more likely to be children's toys (Øye 1988: 56). Also in Oslo, such bones are interpreted as toys (e.g. Wiberg 1977: 21; Weber 1981: 89). Fahre, who has examined bone buzzers in her work on toys from Trondheim, also interprets them as toys, based on wear marks around the holes resulting from the string (Fahre 1998: 42–43). Such wear marks were not found on the bones from Bergen. As we cannot completely exclude their use as bobbins, this type of bones is characterized as probable toys.

Toys														
Musical objects or noisemakers			Toys reflecting role-playing games							Toys related to board games and sports/ physical activities				
Rattles	Bone buzzers	Ocarinas	Dolls	Human figures	Tools and domestic utensils	Miniature pots	Weapons	Boats	Animal figures	Skates	Balls	Humming tops	Yo-yos	Marbles and the like

Figure 3.1 *Types of toys in Bergen.*

Figure 3.2 *Bone buzzers found at Bryggen (0/9801, 0/11587, 0/20897, 0/23253, 0/25692 and 0/30122). Photo: Svein Skare, Bergen Museum.*

Playing with bone buzzers requires some degree of dexterity. The smaller children did therefore probably not use such toys. It is more likely that children in the two oldest age groups, i.e. 2–7 and 7–12 years, have played with them, particularly the oldest in the first group and the youngest in the second. There are few indications of a particular gender relation in the function of the bone buzzers.

Ocarinas

Among medieval musical instruments there are ocarinas, i.e. small water pipes usually shaped as birds (Gläser 1995: 47). Only two ocarinas have been found in Bergen. Unfortunately one of them bears no find number, and lacks information about its find context. This bird-shaped ocarina is about 6.5 cm tall and is seemingly well suited to a child's hand. The other seems to represent a fox or a dog, and is c. 9 cm long (fig. 3.3). Both ocarinas are interpreted as possible toys, as not only children may have used them. Like bone buzzers, ocarinas are assumed to be toys for children in the oldest age groups, as these objects could break easily, and only older children would be able to use them properly. Pieter Bruegel's painting "Kinderspiele" from about 1560 depicts both boys and girls with ocarinas. Thus, children of both sexes probably played with ocarinas.

Rattles

Rattles were – and still are – used as amusements and distractions for the youngest. They have also been used as a ward against evil (*KLNM* X: 487). From Oslo a silver rattle is known, but in medieval Scandinavian towns objects that fit the definition of a typical rattle are in the minority. Instead, archaeologists have pointed to a series of small, often clumsy ceramic pots that may also have had such a function (Grieg 1933: 189–196b; Herteig 1969: 56; Gläser 1995: 35–38). Yet, there is a high degree of uncertainty related to this interpretation.

The nine specimens from Bergen have the shape of small ceramic pots – about 4 cm tall – and are glazed in black, brown or green (fig. 3.4). All except one have a rounded base, a little ball inside and a tight neck, so that the ball does not fall out. One rattle stands out, looking like a sphere with two holes and a little head. An alternative interpretation of the rattles is pots for storage of salves; the balls may thus have helped keep their contents liquid. Such small ceramic pots are also found without balls inside. Both types are ordinary finds from medieval excavations and are generally asymmetric/irregular and crooked – some cannot even stand on their own. Despite their probable original use as storage for medicine, spices and the like, these pots may also have functioned as rattles, the way many have in-

Figure 3.3 *Ocarina shaped like a fox or a dog, 9 cm long (0/95079). Photo: Bergen Museum.*

Figure 3.4 *Possible rattle from Bergen, c. 4 cm tall (no number). Photo: Bergen Museum.*

terpreted them (Grieg 1933b: 189–196; Herteig 1969: 56; Gläser 1995: 35–38).

The size of the pots and the material they are made of, in addition to their frailness, are factors that contradict the interpretation of them as rattles used by very young children, who normally play with this type of toys. The function as toys cannot, however, be excluded, as at least *adults* may have distracted young children with these miniature pots. They are, however, characterized as uncertain, and naturally classified as possible toys only. Where age is concerned, rattles are primarily meant for very young children, under the age of one year. Like the other toys in this category, rattles were not related to any particular gender.

Neither the musical objects nor the noisemakers from Bergen can with certainty be interpreted as toys; the most probable toys in this category being the bone buzzers. Generally, the musical objects or noisemakers are simple, made of a readily available material and may even have been made by children themselves. This group of toys does not seem to be related to one particular gender. Besides, except the possible rattles, used to amuse babies, neither is related to children at a particular age, but mainly to children from the age of six or seven.

Toys reflecting role-playing games

The largest group of toys from medieval Bergen is made up of objects that relate to and reflect adult activities and leisure pursuits both in and outside the home – i.e. dolls and other human figures, different tools and domestic utensils, weapons, boats and animal figures.

Dolls

There are nine figures from medieval Bergen that based on their human-like features are interpreted as dolls. They are 5–15 cm tall, the majority, however, between 10 and 15 cm. The dolls generally have a simple shape, and are primarily made of wood – only one is made of bone (fig. 3.5). The only indicators of an artefact being a doll are in some cases its shape and/or its head. In contrast, a single doll (3/497) stands out, having an intricately carved dress and jacket, and crossed arms. In general, the dolls normally have faces with more or less clear details, like eyes, nose, mouth and beard. Yet, some bear no such features. The bone doll (0/21968) has carved feet, and two others (0/25967 and 0/4438) wear caps. At the same time, these two dolls lack arms, which is also the case with one of the dolls from Trondheim (Fahre 1998: 26). Doll 0/25967 also displays a distinct contrast between its realistic head with facial details, and its rather edged body, the legs shaped like some kind of clamps. Perhaps

they were supposed to be attached to something? Finally, the dolls represent both men and women, but the majority are not sexed.

Six of the figures are interpreted as confirmed dolls, the remaining three as possible. One of the latter (7/86) is broken, and can hardly be interpreted as a doll with some certainty. However, similarities between this doll and another confirmed doll – i.e. a flat, dress-shaped body – support the interpretation as a doll. A rectangular wooden figure without arms and legs (0/22605) is also interpreted as a possible doll. It bears no facial details, but its shape suggests a doll's head. In addition, the shape of the back of the head may be understood as a long braid or hair hanging down the back. Its rectangular shaped end, though, may indicate a game piece. However, the figure does not have a flat base, and cannot stand on its own. The third possible doll (0/12305) seems to represent a monk or a priest (fig. 3.6). In general, interpreting dolls as toys – and this figure in particular – is somehow uncertain, as they may had other functions in the Middle Ages, e.g. as religious or mythic expressions. They may also have been used to visualize stories, fairy tales or religious traditions, or were parts of different kinds of role-plays (Fahre 1998: 26–27, 36–37).

Both written and iconographic sources primarily depict girls playing with dolls (Gläser 1995: 31). Pieter Bruegel's "Kinderspiele" thus illustrates two girls playing with dolls. It is also considered likely that dolls were a part of children's – and especially girls' – lives throughout most of their childhood, perhaps from the age of three or four.

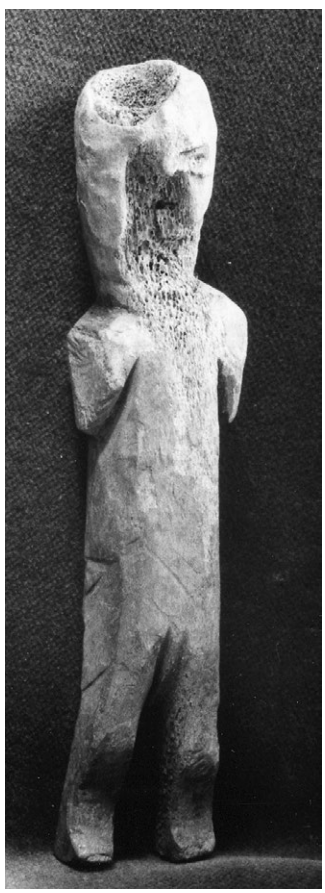

Figure 3.5 *Doll made of bone, c. 11 cm (0/21968). Photo: Bergen Museum.*

Figure 3.6 *Possible doll, 17.5 cm tall, perhaps representing a monk or a priest (0/12305). Photo: Bergen Museum.*

To summarize: Six of the figures are interpreted as confirmed and three as possible dolls. In general, the dolls are simple, but there are a few examples of well-carved ones. Playing with dolls was apparently a common and important part of the socialization process, but these toys may also have had other functions. Dolls are here related to girls, approximately between the ages of three and twelve.

Other human figures

In addition to the nine dolls, there are 21 figures in the shape of flat or round wooden sticks with a face in one or both ends – in other words they do not have a proper body. These figures are between 6–7 and 22 cm long and have different shapes. Some were perhaps meant to be attached to something, others are able to stand on their own. A few figures have a sharpened end, but for a majority this cannot be identified, as the ends have been burned, broken or worn down. One of the figures stands out having a head in *both* ends, both wearing caps (fig. 3.7). The facial expressions are different, but it is not possible to identify different moods. Generally, the heads of the figures have faces, and if missing, this seems to be a result of wear. Some of the figures have clear facial details and engraved patterns on their head, neck or "body". On one of the figures – 17.8 cm long, and with a head with mouth, nose and a helmet or a cap – there are runes engraved on the back: "thure". Perhaps is it the male name Tore? Few of the figures can be sexed. However, some seem to represent males.

The majority of these figures are interpreted as probable toys. Yet, one is rather uncertain, almost shaped like a small triangular bat, about 12 cm long, and with a hole through the sharpened end. The figure is burnt, but has possible facial details, as well as carvings that may be interpreted as hair. In addition, there are two round small figures that may be interpreted as game pieces. However, they cannot stand on their own. A third figure seems too tall for a game piece – 12 cm long. The four figures are thus interpreted as possible toys.

In general, the interpretation of these wooden sticks with human faces is considered more uncertain than that of the dolls. Their human features contribute to the interpretation as toys, but other, perhaps magical functions cannot be ruled out. Similar figures found in e.g. Trondheim have been related to visualization of stories or to religious rituals, in addition to playing (Christophersen 1987: 94; Fahre 1998: 36–38). Another possible interpretation is as yardsticks, which requires a length of about 50 cm. However, it is not likely that any of the ones from Bergen originally were this long. Although their original function is uncertain, figures like these were probably also used as a kind of dolls.

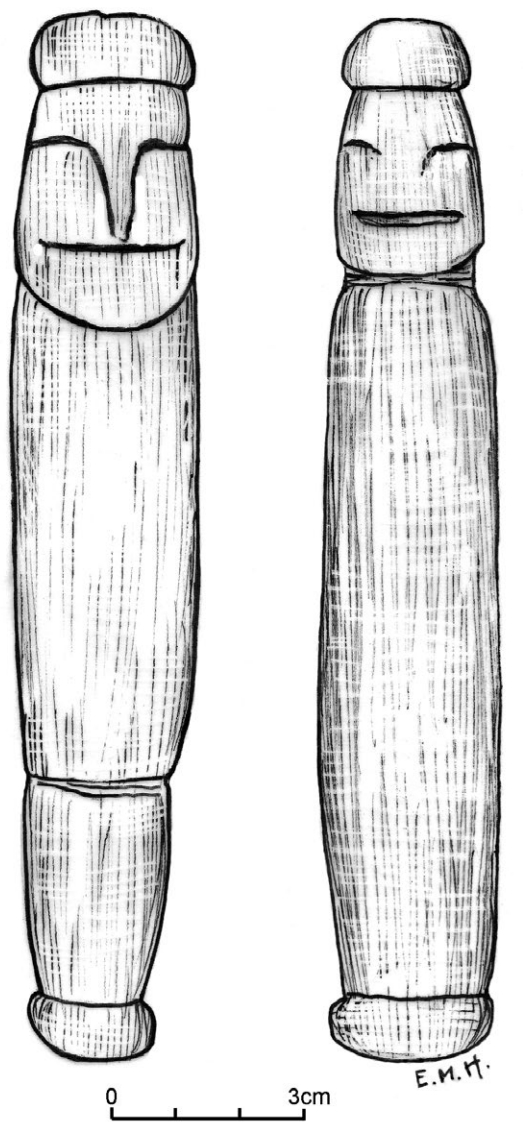

Figure 3.7 *Human figure with faces at both ends (0/12917). Drawn by Ellinor Hoff, Bergen Museum.*

Figure 3.8 *Ceramic figure, 6 cm tall (76/8139). Photo: Tore Samset Mygland.*

Also two small ceramic figures, glazed in black, are included in the group of human figures. They are about 6 cm tall, and one of them has details like eyes and a big nose, in addition to beard and a pointed cap (fig 3.8). The other is less elaborate, with a single arm and an unnaturally shaped head. Their original function is unknown, and based on shape they are interpreted as possible toys.

As previously mentioned, dolls are considered primarily as girl's toys, played with by children of different ages. The objects in this group are basically understood the same way, but the interpretation is more uncertain. As many of the figures seem to represent males, we *may* relate them to boys rather than girls. Several are also made in such a way that they may easily be broken by young children. In addition, wooden figures as parts of visualization of stories presuppose a certain intellectual level by their users. All in all, these objects are considered as toys used by children – perhaps boys – in the two oldest age groups – preferably from the age of five or six.

To summarize: Altogether 17 of the 21 wooden figures shaped like sticks are interpreted as probable toys, the remaining four as possible. The ceramic figures are also considered as possible toys. These 23 figures, however, are more uncertain toys than the dolls, both concerning their function as well as the age and sex of the children who played with them. It is likely that this kind of toys were used by children at a certain intellectual level, perhaps from the ages of five or six. If related to a specific sex, this would preferably be to boys.

Tools and domestic utensils

Medieval toys also consist of objects related to domestic activities, here represented by different tools made of wood or soapstone, in addition to a number of miniature pots.

Tools

Toy versions of many adult objects have traditionally been used in role-playing – particularly objects representing different tools, like domestic utensils, service, and the like. This is also the case in the Middle Ages. From Lübeck and Trondheim, for instance, miniature versions of different domestic utensils adjusted to children have been found (Gläser 1995: 35, Fahre 1998: 45).

In Bergen, seven miniature tools probably used by children have been identified: a miniature soapstone vessel, rolling pins, planes, a miniature dipper and a small "hammer-like" club. With the exception of the 5 cm long miniature dipper and the vessel, made of soapstone, all the objects are made of wood. The two rolling pins measure 17 and 13 cm respectively, their grips between 1.5 and 2.5 cm. There are also two planes – one 18 cm long and 5 cm tall, the other only about 6 cm long and 6 cm tall. On the latter (0/12498) there is a runic inscription – "sath? á?", i.e. "sath? owns" – in other words an owner's inscription (fig. 3.9). The name of the owner cannot be identified, however. Finally, there is an 11 cm long wooden club.

Small versions of objects representing adult activities may rarely with certainty be related to children. The objects discussed above, however, are considered as probable toys, as their grips are too small for an adult hand. The exception is the planes, which may have been used by adults for particularly detailed work. These miniatures are interpreted as possible toys. All objects in this group more or less reflect adult activities, and thus may also be related to gender. The rolling

Figure 3.9 *Miniature plane, 6 cm long, with the runic inscription: "sath? owns" (0/12498). Photo: Bergen Museum.*

pins, the miniature vessel and possibly the miniature dipper, were perhaps used by girls, whereas boys used the planes and the wooden club. The use of the tools requires practical skills, which probably means that they were meant for older children, perhaps from the age of five or six.

Miniature pots

Among the medieval artefacts from Bergen there are as previously mentioned a number of miniature ceramic pots, probably originally containing e.g. spices, medicines and oil. It is also possible that they contained holy water, or functioned as inkwells. The pots containing balls may have been used as rattles, but the majority does not have anything in them. In all there are 46 pots like the latter from Bergen, about 3.5–7.5 cm tall (the majority 5–6 cm), and having five types of shape. The pots with two handles, and glazed in brown or white/beige, are the most common (fig. 3.10), in addition to a group of primarily dark brown or green glazed oblong pots. A few are shaped like kettles, others are rounded and oblong, and with a short stem. There are also a couple of partial pots with spouts. Perhaps they have been parts of a kind of miniature jug? In addition there is a single miniature similar to a pot, but made of metal. In general, all pots have simple shapes, and they are often uneven and asymmetrical. One even lacks passage through the neck.

Figure 3.10 *Miniature pot, c. 6 cm tall (number unknown). Photo: Bergen Museum.*

These pots must have been common in medieval urban societies, and have earlier among other things been interpreted as toys (Gläser 1995: 35). Although the pots probably had other functions originally, they are interpreted as possible toys, as a kind of service. This also means a probable relation to girls rather than boys. Based on the material of which they are made, it is also more likely that children in the two oldest age groups played with such toys than young ones, again perhaps from the age of five.

The group of tools and domestic utensils generally consists of possible toys. Only five of the tools made of wood or soapstone are interpreted as probable toys, whereas two others are interpreted as possible. In addition, the 46 miniature pots are also considered possible toys. Despite their small size, the toys are functional, and at least the miniature pots may originally have been used by adults. The owner's name inscribed on one of the planes may be another example of a possible connection between children and writing. The toys are directly related to and reflect adult activities, and are considered as part of role-playing. Only the planes and the wooden club are connected to boys, the other toys to girls. All the toys are assumed to have been played with by children from the age of five or six.

Toy weapons

The usual weaponry in the Middle Ages was shields, spears/pikes, swords and axes, in addition to bows and arrows (L III, 2). As expected, several scaled-down versions of these weapons have been found in Bergen, as well as in other medieval cities (Gläser 1995: 28–29). This material from Bergen includes axes, swords, bows, knives and daggers.

Axes

Axes are among the toy weapons that are most easily identified. Nine toy axes have been found in Bergen, made of wood, and measuring between 12 and 56 cm (fig. 3.11). Only one of them is complete, however – the others were probably 25–30 cm long originally. The axes have thin shafts – about 0.5–1 cm in diameter – and the blades have long edges with straight or outward-

curving corners. The latter seems to be the most common. One of the axes also has a particularly carved "handle". In his thesis on medieval weapons from Western Norway, Ole-Magne Nøttveit describes the "pure" medieval axe as a relatively light axe with a thin blade and a long edge with outward-curving corners (Nøttveit 2000: 39). In other words, the toy axes from medieval Bergen generally seem to be good imitations of real weapons.

Seven axes are interpreted as confirmed toys. In addition there are two flat specimens (83/912 and 0/45420), about 13 cm long, and with straight corners on the edges. Both axes lack important details, which in combination with their rather simple shapes results in their interpretation as possible toys.

Figure 3.12 *Toy daggers (0/42307 and 0/63452). Photo: Svein Skare, Bergen Museum.*

Daggers

There are three objects identified as toy daggers in Bergen. Like the axes, they are made of wood, and represent more or less detailed and realistic imitations of real daggers. Two of them, for instance, have so-called hilt guards between the hilt and the blade, like real pointed weapons have to prevent the hand from sliding down (Nøttveit 2000: 29). These relatively carefully made toy daggers measure 17 and 22 cm respectively (fig. 3.12). The third dagger, on the other hand, is a less elaborate miniature, about 10 cm long (0/79288). Based on the realistic appearances of the wooden daggers, they are interpreted as confirmed toys.

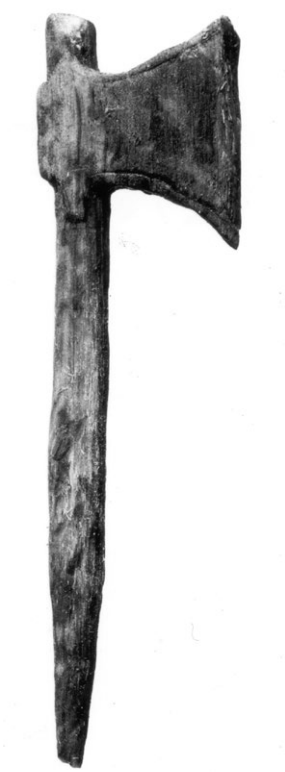

Figure 3.11 *Toy axe, c. 12 cm long (0/21697). Photo: Bergen Museum.*

Swords

In addition to five partial swords, there are seven complete wooden toy swords from Bergen. This includes both simple miniature swords, swords that may be interpreted as knife-beaters for weaving (Øye 1988: 80–84) and elaborate copies of real swords, scaled down to fit children. The length of the swords spans from about 18 to 55 cm. In general, the swords are simple, but a couple of them stand out when it comes to details and shape. The most remarkable is a big sword clearly made for a child (B7381d). The other one (0/81381/01) is a well-carved and elaborate miniature with a runic inscription on the blade: "skeke" (fig. 3.13). Both swords have pommels and tangs – the latter also has a carved hilt guard, which is found on real swords (Nøttveit 2000: 34–35). The five sword pieces probably represent grips or tangs. One grip (0/18057) lacks pommel,

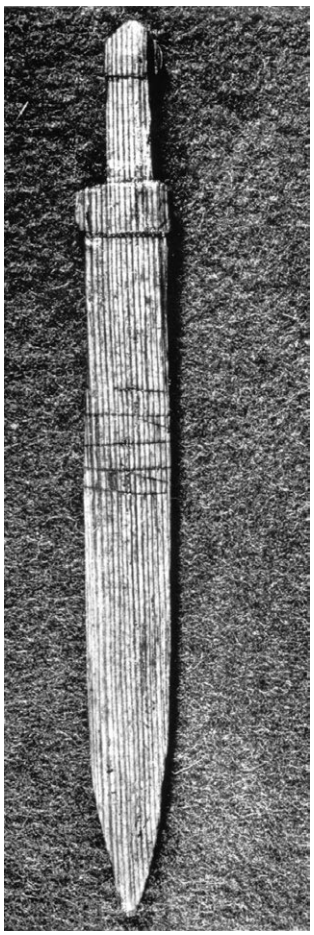

Figure 3.13 *Toy sword, c. 13 cm long, with the runic inscription "skeke" (0/81381/01). Photo: Bergen Museum.*

but is shaped like a round stick, decorated with stripes on both ends. Another tang (0/29162) has a symbol looking like a rune on its pommel.

Four of the complete swords are interpreted as confirmed toys, two as probable and one as a possible toy. Both ends of the latter are broken, and it may thus just as well be a knife. However, based on the possibility of it being a miniature sword, it is classified as a possible toy sword. Distinguishing between small knife beaters used for inkle band weaving, and toy swords may also prove difficult. Based partly on the overall impression, and partly on the pommel in the hilt, objects like these may be interpreted as toy swords. One sword similar to a knife beater was interpreted as a probable sword based on its grip, which is too small for an adult. One also has a triangular blade, making it look like a dagger. However, it lacks a hilt guard, hence the interpretation as a miniature sword.

Based on their incompleteness, the interpretation of the partial swords parts is more uncertain. Two tangs lacking blades, for example, may hardly with a high degree of certainty be classified as toy swords. However, another use of these objects has not been identified, and they are classified as possible toys. The other tangs without blades (one unnumbered, 0/12544 and 0/20076), on the other hand, are similar to their counterparts on real swords, and interpreted as probable toys.

Knives

The five knives from Bergen are all made of wood, and basically identified because of their edges, which are narrower than the blades in general, and/or have one flat and one curved side (fig. 3.14). Their grips are also placed more to the left or the right on the hilt than on the middle, so that the upper side of the grip more or less merges with the blade. The knives measure between 10 and 22 cm. Three of them have simple shapes, whereas a fourth (83/5100) is more elaborate. Another knife (0/36035) looks like a well-carved sheath knife, measuring 10 cm only.

With one exception, all knives are interpreted as probable toys, due to some uncertainties related to their functions. They *may* have been butter knives or knife beaters, but there is also a possibility that children have played with them. The sheath knife, on the other hand, is interpreted as a confirmed toy, based on its size and material.

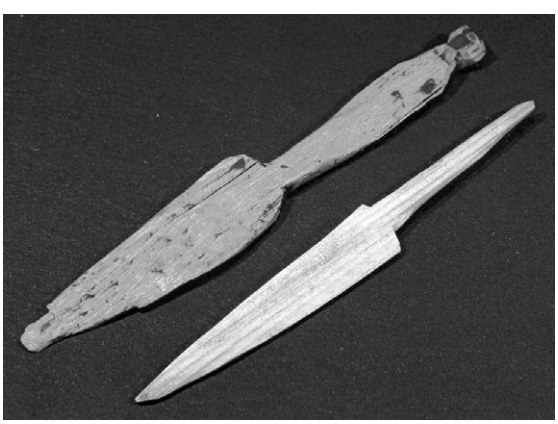

Figure 3.14 *Toy knives, c. 18 cm long (110/2022 and 83/2100). Photo: Tore Samset Mygland.*

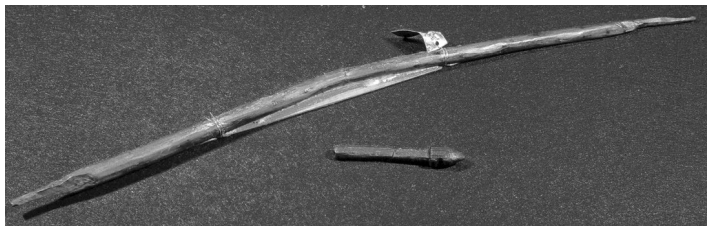

Figure 3.15 *Toy bow, c. 38 cm long (0/77794) and arrow, c. 7 cm long (0/27297). Photo: Tore Samset Mygland.*

Bows

Three wooden bows and three wooden arrows possibly related to children have been found in Bergen (fig. 3.15). The bows measure between 38 and 98 cm, and are shaped like simple curved sprigs with sharpened ends, which possibly also have one or two stammers. None of the arrows are complete, and what is left measures between 7 and 22.5 cm. Three are shaped like thin sticks with a round or a square tip.

Nøttveit interprets two of the bows as probable toys, "of almost functional, 'serious' character" (Nøttveit 2000: 79. Author's translation). He does not mention the third bow. This bow is more or less identical to the others, and is thus interpreted the same way. Still, the bows may have been used for hunting or in simple crossbows (*ibid*). The three arrows are also interpreted as probable toys.

Medieval written sources as well as paintings depict boys with weapons, and the toy weapons discussed earlier are thus interpreted as male toys (Gläser 1995: 31). Although the youngest children hardly had the skills for using weapons, it may well be that they played with such toys at a very early age. Perhaps the oldest children eventually tried real weapons. These wooden weapons are thus considered as toys used primarily by the oldest children in the second age group and the youngest in the oldest one, i.e. about 5–10 or 11 years old.

This group of toys represents several more or less realistic copies of real weapons. Fifteen weapons are interpreted as confirmed toys, another 15 as probable toys, and five as possible toys. Toy weapons are basically related to boys in the oldest age groups, perhaps from the age of about five.

Boats

Toy boats and parts of toy boats are well known finds from both Norwegian and other European medieval towns – ranging from simple boats to the ones that obviously represent real ships. In Dublin, Gdansk, Lund, Lübeck, Oslo and Trondheim urban excavations have uncovered such artefacts (*KLNM* X: 491–492; Christensen 1985: 157; Fahre 1998: 25–26).

In Bergen, 27 artefacts have been interpreted as toy boats, and an additional 27 may also be related to boats in different ways. The boats measure between 7 and 20 cm, the majority between 10 and 13 cm (fig. 3.16). Three boats are made of

Figure 3.16 *Toy boats, c. 8.5–13.5 cm long (0/17766, 0/62798 and 0/39900). Photo: Svein Skare, Bergen Museum.*

bark, the others of wood. The boats made of bark have simple shapes, and have possibly been made by children (Christensen 1985: 157). The other boats come in various shapes: some are simple, others more elaborate. Several boats are long and narrow, possibly shaped like a canoe, whereas others are smaller and more compact, almost lumpy and heavy. A few boats (e.g. 0/17545, 0/39990 and 0/81056) clearly represent a particular type of boat – one specimen may even be interpreted as a boat with cargo (*ibid*). The top side of the boats is flat or hollowed, possibly with just a minor hollow in the middle – perhaps for a mast. Many are flat underneath, but there are also examples of boats with a well-carved keel.

In his study of ships and parts of ships and boats from Bryggen, Arne Emil Christensen points out that miniature boats may have served other purposes than mere playing – for instance as model boats demonstrating shape during a sale (Christensen 1985: 159). However, he considers it as most likely that the boats have been used as toys, and they are therefore primarily interpreted as probable toy boats (*ibid*). The hollow in one of the boats made of bark (0/29198) makes it possible to interpret it as a casting mould, or the like. Yet, its shape in general leads me to interpret it as a possible toy boat. The same applies to another, relatively simple boat (346/4098). A third possible boat (104/1418) is perforated in both ends, and may rather be interpreted as a line sinker (Olsen 2004: 33). In addition, four boats with a hollow on the top side resemble objects from Gamlebyen in Oslo previously identified as possible tools related to drilling (Weber 1990: 18–21). However, it is not unlikely that they at least secondarily have been played with. Finally, three items (0/9250, 0/18557 and 0/39927) may best be understood as possible unfinished toy boats.

In addition to the toy boats, there is a number of miniature parts of boats, all made of wood: 16 stems and stem tops, four masts, two miniature oars, two bailers, a parrel, a mooring pin and a casting mould for weather vanes. Most of these artefacts have been studied by Christensen (Christensen 1985: 157–169). The stems or the stem tops are generally simple, and measure between 5–6 and 20 cm (fig. 3.17). Some, however, are stepped – possibly also with engraved stripes – a common feature of several ships from the Viking Period and the Middle Ages (Christensen 1985: 158). Contrary to the stem tops, the stems lack grips, and according to Christensen do not seem to have been parts of complete boats (*ibid*). The four masts are 19–38 cm long, the miniature oars 12 and 24 cm respectively. One of the latter (0/43965) is broken, and has runes that cannot be interpreted on one side, and a symbol on the other. Nor the bailers are complete, missing parts of their grips. What is left measures 7.5 and 9.5 cm. The parrel was not retrieved, but according to Christensen, it has the same distinctive curve as a real one, and was probably a part of a big model boat (*ibid*: 159). He also interprets a 7 cm long artefact as a probable model version of a mooring pin (0/30891) (*ibid*: 158). Finally, there is a 10 cm long casting mould for a vane, i.e. some sort of metal banner with an animal head, and with a cross on top. Several full-scale vanes from late Viking Period and the Middle Ages have also been found, in addition to some models (*ibid*: 159). On one side of the casting mould a "V" is carved, probably for casting sinkers – casting vanes was obviously not its only usage.

Figure 3.17 *Miniature stem (no number or measurement available). Photo: Bergen Museum.*

Christensen considers it likely that some of the discussed artefacts are toys, while other may have had other functions (Christensen 1985: 157). For instance, the stems and the stem tops were possibly used by ship builders for the purpose of demonstration, but as the use of models was not a part of the building process as we know it (*ibid*: 160), this is considered to be less probable. The miniature boats may also have been used by children playing shipbuilders, or they may be result from adults' more or less aimless whittling. Anyway, it is considered likely that the stems have been played with, and they are thus interpreted as probable toys. The remaining parts of the miniature boats have probably been parts of model boats, and both they and the bailers are also interpreted as probable toys. There are uncertainties related to the function of two miniature oars, however – they may only be interpreted as possible toys.

Activities related to shipping in the Middle Ages were strictly male dominated, which was probably also reflected in playing with miniature boats. The Icelandic saga Króka-Refsaga (chapter 10), for instance, refers to a son of a Norwegian merchant, who plays with a toy boat. These boats are therefore considered as predominantly male toys. Where age is concerned, presumably they were used by boys in the two oldest age groups, perhaps from the age of about four or five.

To summarize: 54 artefacts are related to miniature boats, i.e. 27 boats and 27 parts of boats and objects that may be related to boats. Altogether 17 boats and 25 of the other artefacts related to boats are interpreted as probable toys, whereas ten boats and two boat-related finds are interpreted as possible toys. Several artefacts seem to represent real types of ships and boats. Finally, playing with miniature boats is connected to boys, predominantly from the age of four or five.

Animal figures

The category of animal figures consists of 41 artefacts – primarily horses, in addition to some other animals – made of wood, ceramics or metal.

Horses

There are 27 horse figures from Bergen, made of wood, metal or ceramics. The 17 wooden horses measure 5–20 cm in length (the majority between 11 and 15 cm) and are up to 8 cm tall. A few have originally been taller, as their legs are now missing. Both where design, size and richness of details are concerned, the horses display great variety, but as a whole they are relatively good reproductions of real horses. Some are flat and/or edged, while other are more realistic reproductions. A couple of the horse figures also have holes through their legs, probably for wheels. Primarily this applies to the flat or edged horses – perhaps this type was easier to balance? The carvings and details the horses display, vary from little or nothing to more elaborate – like ears, mane, tail, saddle and/or engraved patterns on the body. Some horses even have a carved or engraved penis. Others were also probably supposed to have a rider on their back. Particularly 83/4295 stands out as very realistic horse (fig. 3.18).

Although the horse figures in general are interpreted as confirmed toys, there are uncertainties related to some of them. One horse (0/539), for instance, seems to originally have been the grip of a mangle. However, a possible later use as a toy if the mangle was broken cannot be ruled out, and the horse is interpreted as a possible toy. The head is missing on a single horse (83/373), whereas what is left of another is the head alone (0/12242). The latter has a long, slender neck, which was possibly meant to be attached to something. In addition, ears, nose and muzzle are hinted at. Both 83/373 and another animal figure (245/803) are simple, thus making it possible to interpret them not only as horses.

In addition to the 27 wooden horse figures, there are seven ceramic horses and two made of iron. The former are in general 5–6 cm tall, about 4.5 cm long, and weigh between 15 and 29 g (fig. 3.19). They are relatively uniform, with simple shapes and no engraved details. Most of them seem to be or have been glazed in black, and are more or less well preserved – although some have been damaged and lack a leg or the head. A few of the ceramic horses have been hollowed upwards between their front legs, perhaps as a result of the production method (Gläser 1995: 25) (fig. 3.20). The two metal horses are also small – 6.7 and 3.8 cm long, and 5 and 2.7 cm tall. They weigh 97.41 and 20.13 g respectively. The biggest is well preserved, and has many details, like face, ears,

Figure 3.18 *Toy horse, c. 20 cm long (83/4295). Photo: Svein Skare, Bergen Museum.*

forelock, mane and tail. Its body is patterned with circles, and the horse also bears a loose iron ring around its belly. The smallest horse, on the other hand, is in poorer condition and lacks any engravings. However, forelock, muzzle and tail are indicated.

There are more uncertainties related to these nine horses discussed above than to the wooden ones. Originally, at least the iron horses have probably functioned as weights. According to A. W. Brøgger, one *øre*, i.e.1/8 mark or one ounce, weighed 26.4 g in the Middle Ages, whereas there was a lighter *øre* in the Viking Period – about 24 g (Brøgger 1921: 77–96). Poul Grinder-Hansen points out that the weight of the actual weights varies, and corresponds for instance to about 200, 100, 50 and 25 g, which partly correspond to the weight of the ceramic and iron horses (Grinder-Hansen 1996). However, the horses may also have been used as toys. In the Icelandic saga Víga-Glumssaga (12: 4), for instance, we hear about four year old Steinolf who plays with a brass horse with his friend Arngrím. The iron horses are thus considered as possible toys, although they may have had other functions. A number of ceramic horses found in Lübeck are also interpreted as toys, and have been related to play tournaments with figures of horses and riders (Gläser 1995: 25). Yet, the material of which they are made, makes the horses break easily, which adds uncertainties to this interpretation. Finally, the ceramic horses, like the iron ones, may have functioned as weights, and are therefore only interpreted as possible toys.

Figure 3.19 *Miniature ceramic horse, c. 6 cm long (0/2689). Photo: Bergen Museum.*

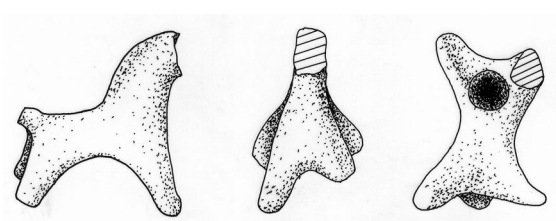

Figure 3.20 *Miniature ceramic horse hollowed upwards between its front legs, c. 6 cm long (237/3698). Drawn by J. I. Hanstvedt, Bergen Museum.*

Both boys and girls probably learnt how to ride a horse, but these activities are considered primarily connected to boys and men in the Middle Ages – also where playing is concerned. Several prints depict boys playing with horse figures, often in relation to some kind of tournament (Gläser 1995: 25–28). Playing with toy horses did not necessarily imply this type of game, but the overall impression is that boys to a higher degree than girls played with such toys. It is also likely that children played with toy horses from an early age, yet the youngest were perhaps not given ceramic horses. Steinolf in Víga-Glums-saga, for instance, is four years old when he is mentioned. His horse, by the way, he received from a friend who regarded himself too old for this type of playing. Were the oldest children more interested in real horses?

Altogether there are 13 confirmed toy horses, four probable and ten possible from Bergen. Particularly the iron and ceramic horses are considered uncertain, and at least some of them have functioned as weights. Finally, the horse figures are connected primarily to boys in the two oldest age groups, from the age of four or five.

Other animal figures

In addition to the horse figures, there are 14 wooden objects representing other types of animals. They measure between 5 and 17 cm in length, and are often well carved and rich in details. Six figures seem to depict dragons or snakes (fig. 3.21). One of these, described as a dragon's head in Bryggens Museum's database, was not retrieved. Few of the remaining figures are complete, but the preserved heads and their faces are generally highly decorated, with open jaws with the tongue hanging out, wide eyes, ears and other details, like collars and/or different patterns on the body. Another six animal figures probably represent cat's heads. Again, three heads were missing, and for them the interpretation is based on information from the find database. The last two animal figures are not easily interpreted. The first one (0/88786) is rounded and may look like a seal, while the second (0/28607) is a prone animal with eyes, an open mouth and engravings on parts of the body.

In contrast to the horse figures, the toy function of these well-carved, partly grotesque animal figures is less certain. Like the previously discussed human-like figures, the animal figures may have been used when visualizing stories, and/or had magic or ritual functions. Still, they may also have been used in relation to play, and they are all interpreted as possible toys.

Figure 3.21 *Animal figure, c. 17 cm long (0/40817). Photo: Tore Samset Mygland.*

Bearing in mind the uncertainties regarding their function, the animal figures cannot with certainty be related to a particular age group or to a particular sex. Yet, a greater appeal to boys than to girls may have been the case. It is also easy to think that the carefully carved figures were primarily given to children that knew to treat them with caution, probably children from the age of about seven.

The function of the 14 figures representing other animals than horses are somewhat uncertain, and are interpreted as possible toys, perhaps related to boys in the oldest age group.

Toys reflecting role-playing games comprise artefacts that more or less relate to and reflect adult activities and pursuits, both in and outside the home. A number of the artefacts and groups of artefacts may originally have had another function than toys, which makes them interpreted as possible toys. Unlike the musical objects or noisemakers, the toys reflecting role-playing are to a high degree related to gender – 133 toys are primarily connected to boys, 59 to girls. In addition, there are uncertainties regarding the gender relation concerning the 23 human-like figures.

More than two thirds of the toys reflecting role-playing are in other words connected to boys. In general this group of toys is also assumed to have been played with by children in the two oldest age groups, often from the age of five or six. Only the nine dolls are connected to younger children. This may to a certain degree be the case with the boats and horse figures as well, but it is presumed that predominantly older children used these toys.

Figure 3.22 *Skate with leather strings, 17.5 cm long (0/20883). Photo: Tore Samset Mygland.*

Toys related to board games and sports/physical activities

Board games and sports/physical activities were to a high degree related to adults in the Middle Ages, and are thus uncertain where children are concerned. However, both written and iconographic sources point to children in this connection as well – yet, rarely in relation to board games. The latter is therefore not a part of this study. Other artefacts of interest are skates (made of bone), balls, humming tops, yo-yos and marbles.

Skates

There are more than 50 leg bones (fibula) interpreted as skates, skate fragments or objects similar to skates. These leg bones functioned as skates, and were used on snow as well as on ice, possibly in combination with a stick with a spike in one end used to propel oneself forward. All bones are worn underneath the sole, and have holes for leather strings in the front and/or the back, used to tie the skate to the foot (fig. 3.22). The leg bones interpreted as skates measure from 11 to more than 30 cm, of which 32 may have been children's skates, based on size. These bones are 22 cm or less, the same as children's soles (cf. chapter 2). Naturally, in some cases the foot may have been longer than 22 cm, and the heel has protruded beyond the length of the skate. This may have been the case with the skates with perforated holes in one end of the bone only. However, only five skates are so long that a possible "protruding" heel means that the foot must have been longer than 22 cm, i.e. an adult's foot. In other words, this is not considered a problem here.

Skating was obviously a popular activity among medieval children, based on the high proportion of small skates. They are thus interpreted as confirmed toys. Girls as well as boys may have been skating, but when skating is mentioned in written sources, we normally hear about boys and men (e.g. Heimskringla III: 291). Physical activities in general were perhaps more stressed for boys than girls in this period. The leg bones functioning as skates are thus primarily regarded as male toys. Because the feet may be longer than the leg bones, the skates cannot be related to specific shoe sizes, the way it has been done to the sole material (cf. chapter 4). Yet, the sizes of the skates indicate a relation to children between the ages of three to eleven or twelve, the majority possibly to the oldest children. Young children probably did not have the necessary motor skills to skate.

To summarize: The skates made of leg bones are interpreted as confirmed toys, primarily related to boys in the two oldest age groups. However, girls may have skated as well.

Balls

All in all 112 confirmed or possible balls have been found in Bergen. Of these, 30 were not possible to retrieve, and the interpretations are based solely on information in Bryggens Museum's database. The balls are made of leather, and come in three different shapes, based on they way they are made (fig. 3.23). The largest group consists of 56 balls, which are made of a single round piece of leather, drawn together with a string. They are thus easy to make and have a simple shape.

Two balls of this type are clearly made of reused leather – along parts of the edge there is a seam edge similar to the ones found on shoe soles and the like. Another type of balls is made up of two round pieces of leather, sown together. Only two balls are made this way. A third variant is more complicated, and must have meant the most work. The starting point is two round leather pieces, sown to between one and four rectangular ones. Twenty-six leather balls from Bergen are made this way. Less than a third of the balls in general (27 items) are filled with leather, moss or straw – originally, the other balls probably also had such padding.

Figure 3.23 *Three different types of balls, diameter c. 7.5 cm (0/10913, 0/41394 and 0/50582). Photo: Tore Samset Mygland.*

In Egil's saga (40:4) we hear about children playing with balls, but because this type of game was just as often related to adults in the Middle Ages, the balls from Bergen are interpreted as possible toys. In addition, the balls consisting of a single piece of leather are confusingly similar to small purses. There are two balls in the material that may be interpreted this way. Yet, based on their size and the overall impression, they are considered possible balls as well.

Although girls playing with balls cannot be ruled out, balls, like the skates, are considered primarily male toys. For instance, several paintings depict boys and men playing with balls, while we hear little or nothing about girls and women in such contexts, perhaps because ball games could be very physical and involve serious personal injuries at times (*KLNM* VII: 328) – to which the following medieval ballad about Sigurd Svein bears witness (http://www.dokpro.uio.no/ballader/lister/alfa_titler/tittel_257.html):

Sigurd struck out with the toy bat (…)
He was big and strong, (…)
The king's men were wounded,
And the blood flowed on the ground
(Translation: Douglas Ferguson)

Other than a minimum of body control, a particular age is not needed for playing with balls – king Christian IV (1577–1648) was seven years old when he expresses his thanks for a couple of balls he has been given (*KLNM* X: 494). Both young and old children could in other words have had such toys, although it is likely that this kind of playing more often took place among children in the two oldest age groups, perhaps from the age of about five.

The balls are thus interpreted as possible toys, primarily related to boys in the two oldest age groups.

Humming tops

When studying the medieval artefacts from Bergen, more than 130 cone shaped objects of different sizes were discovered. Three are interpreted as so-called tops (Norw. "topper", i.e. a type of humming tops made spinning by a leather whip), and 11 as humming tops (fig. 3.24). The tops are made wood, and are about 9 cm tall, with a diameter between 6 and 8 cm. One of the tops has no engravings, whereas another is engraved with circles on top, and the third with stripes around its body. The latter is also hollowed. The interpreted humming tops are generally smaller and slimmer: 4–8 cm tall, and 2.2–5.5 cm in dia meter. Like the tops, they are made of wood, with the exception of a single humming top that has some metal in the tip. Only one has engravings, the others are simple, possibly with one or several hollows on top – interpreted by Lena Fahre as hollows for a stick (Fahre 1998: 43–44). Two humming tops stand out: one (0/19562) by its striking similarity to present-day humming tops, the other (76/9849) by its relatively low and wide shape, in addition to the remainder of what may have been a grip on the top.

The majority of the cone shaped objects is probably a by-product from woodturning, as Birthe Weber have interpreted similar items from Gamlebyen in Oslo (Weber 1990: 21).

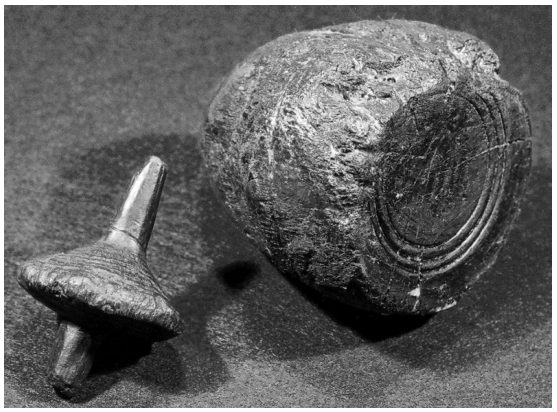

Figure 3.24 *A humming top, 6.5 cm long (0/27043) and a top, c. 13 cm long (0/19562). Photo: Tore Samset Mygland.*

In particular this applies to cones with hollows (comments from Arne J. Larsen and John Olsen 2002). However, the cones may also have been used as toys. In this material, it concerns nine specimens, which are interpreted as possible toys based on their more or less worn tips. The remaining two humming tops (0/19562 and 76/9849), on the other hand, are interpreted as confirmed and probable toys respectively. In addition, one top (0/27043) is interpreted as a confirmed toy, based on a clearly worn tip and its engravings. The other two are more uncertain, yet interpreted as possible toys because of their size and shape.

According to Weber, humming tops have been known from 4000 BC, and have been found in archaeological contexts in medieval towns like Lübeck, Gdansk, Oslo and Trondheim (Weber 1981: 86; Gläser 1995: 41–46; Fahre 1998: 43–44). Little is known about their function to indicate that either boys or girls played with them. Pieter Bruegel's "Kampf zwischen Karneval und Fastenzeit" from late sixteenth century, for instance, depicts both boys and girls playing with humming tops. Adults in the same situations, however, are usually men. Today, humming tops are normally considered toys for young children – whether this was the case in the Middle Ages is more uncertain. Spinning a top with a whip, for instance, requires some motor skill, which rules out the youngest children. Humming tops with grips, on the other hand, may have been easier to handle. Like the toys in this category discussed earlier, the tops and the humming tops are related to children in the two oldest age groups, possibly from the age of four or five.

All in all, two objects are interpreted as confirmed toys, one as a probable toy, and eleven as possible toys. It is likely that both boys and girls in the two oldest age groups played with both types of tops.

Yo-yos

There are nine artefacts interpreted as possible yo-yos from Bergen. They look like round, flat bobbins of wood, 4–7.5 cm in diameter, 1–2.5 cm thick, and with a furrow on the side (fig. 3.25). Their toy function is highly uncertain, and they can only be interpreted as possible toys. If toys, they cannot be related to any particular gender. Where age is concerned, however, yo-yos must have been used by children with some dexterity, considering that yo-yos are supposed to spin on a string, or be thrown up in the air and caught by the string. Probably both boys and girls in the two oldest age groups played with yo-yos, possibly from the age of five or six.

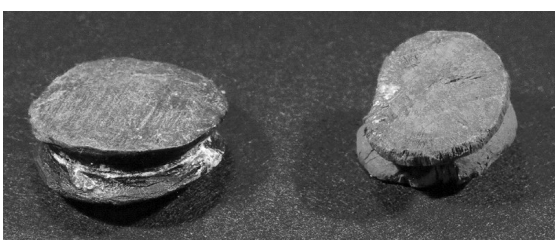

Figure 3.25 *Possible yo-yos, diameter c. 5 cm (0/42637 and 110/6035). Photo: Tore Samset Mygland.*

Marbles

Nineteen small marbles made of glass, marble or rock have been found in Bergen (fig. 3.26). The diameter generally lies between 1 and 2.5 cm, but there are also two bigger ones (3 and 4.5 cm respectively). The majority are beige, brownish grey or white, or grey. There is also a blue marble, and a red, green and white and a pink and green striped one. In addition to the 19 marbles, there are two wooden "marbles" or balls, about 4 cm in diameter.

Marbles have been used by adults of old, but children may also have played with them. Pieter Bruegel's "Kinderspiele", for instance, depicts boys playing with marbles. Thus, they are in-

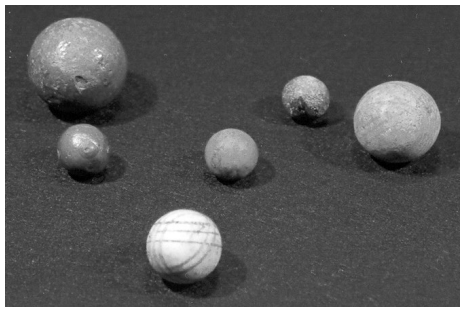

Figure 3.26 *Marbles, diameter 1–3 cm (344/18, 0/423/1, 237/10301, 0/13312, 0/13605 and 4/9678). Photo: Tore Samset Mygland.*

terpreted as possible toys, the two marbles/balls made of wood included. The latter have probably also been played with, and are common archaeological artefacts in Lübeck (Gläser 1995: 42–43). Like the yo-yos, it is likely that the marbles have been played with by both boys and girls, perhaps primarily boys. The youngest children probably did not play with small marbles, and it is assumed that primarily children in the two oldest age groups, from the age of about seven, used them.

A number of the toys related to board games and sports/physical activities are often related to adults in the Middle Ages, and thus considered primarily possible toys: a single object is interpreted as a probable toy, whereas no less than 153 are interpreted as possible toys. Only the 32 leg bones/skates, based on size, a top and a humming top can with some certainty be related to children. All in all, the toys in this category are also to a smaller degree than the toys reflecting role-playing games related to gender, but may have been used by both boys and girls. Yet, the skates, the balls and the marbles – in all 165 numbers – are interpreted primarily as male toys, whereas the yo-yos and the tops and the humming tops – 23 accession numbers – may have been used by girls as well. If related to children, the toys are generally assumed to have been played with by children in the two oldest age groups, predominantly children from the ages of five or six. Only a relatively small number of the skates, in addition to two humming tops, are related to younger children.

Toys – summary

All in all, there are 425 archaeological artefacts that may represent different types of games and playing, and which in different ways reflect the interaction between children and their environment. However, only 75 are interpreted as confirmed toys, whereas 79 are interpreted as probable and as many as 271 as possible toys (table 3.1). This means that 36 per cent of the material with more or less certainty can be related to children, and the remaining material is more uncertain. There are no confirmed musical toys or noisemakers, but almost 60 per cent are interpreted as probable toys. These toys are difficult to relate to a particular sex, and with the exception of the rattles, probably only children from the ages of six or seven played with them. When it comes to the toys reflecting role-playing games, close to 50 per cent are interpreted as confirmed or probable toys. Unlike the musical objects or noisemakers, they are highly relatable to gender, the majority to boys. However, the two oldest age groups dominate in this category of toys as well, normally children from the ages of five or six. Toys reflecting board games and sports/physical activities are also connected to adults, and thus interpreted as possible toys. In other words, less than a fifth of the material in this category is interpreted as confirmed or probable toys. To the degree that these toys can be related to children, there is a tendency to relate them to boys in the two oldest age groups, again from the ages of five or six. Yet, girls may just as well have taken part in these games.

The toys from Bergen thus often seem to relate to gender – preferably boys – and in most cases to children in the two oldest age groups, normally from the ages of five to seven. This way it seems that girls, as well as children under the ages of five or six in general, are underrepresented in the medieval archaeological material from Bergen.

Chronology of the toys

The 425 confirmed, probable and possible toys from Bergen are divided into three different categories: musical objects or noisemakers (22), toys reflecting role-playing games (215) and toys related to board games and sports/physical activities (188). In the following, their distribution in time and space, as well as the relation between

		Confirmed	Probable	Possible	Sum
Musical objects or noisemakers	Bone buzzers		11		**11**
	Ocarinas		2		**2**
	Rattles			9	**9**
Sum			**13**	**9**	**22**
Toys reflecting role-playing games	Dolls	6		3	**9**
	Human figures	6		17	**23**
	Animal figures	14	3	24	**41**
	Weapons	15	15	5	**35**
	Boats		42	12	**54**
	Tools		5	2	**7**
	Miniature pots			46	**46**
Sum		**41**	**65**	**109**	**215**
Toys related to board games and sports/physical activities	Skates	32			**32**
	Balls			112	**112**
	Humming tops/tops	2	1	11	**14**
	Marbles			21	**21**
	Yo-yos			9	**9**
Sum		**34**	**1**	**153**	**188**
Sum		**75**	**79**	**271**	**425**

Table 3.1 *Confirmed, probable and possible toys from Bergen. N=425.*

the three categories, will be examined. Gender and age are also considered.

There are 15 toys that come from excavations prior to the Bryggen excavation (B- or MA-numbers), and lack information necessary for dating. Additionally, there are 82 other artefacts that cannot be dated. Thus, these toys – about 23 per cent of the total material – are not discussed here. Where the remaining toys are concerned, it has not been possible to relate them to one simple dating system, because different methods of dating, as well as different dating frames, have been used for different excavations. The 33 toys that cannot be related to the fire layer chronology from the extensive Bryggen excavation will be mentioned in particular when discussing the dating of the other artefacts. Another problem is the different durations of the periods between the fires, lasting from 27–28 years to more than 200 years. The number of objects in one period may thus not uncritically be compared to the number of artefacts in another. To show *tendencies* in the material, the number of toys found *per year* in the different periods is examined.

General chronology

The toys from Bergen are distributed temporally from the 1120s to about 1700, as shown in table 3.2. Altogether 295 toys could be dated according to the fire layer chronology from the Bryggen excavation, whereas 33 do not relate to this form. Because of uncertainties connected to the find context, and because some of the toys had been given wrong numbers, 97 toys could not be dated.

There are toys from all periods – relatively few in period 2 (1120s–1170/71), then the numbers gradually increase in the following periods until period 5 (1248–1332). Also in periods 4 (1198–1248) and 6 (1332–1413) many toys have been found, but the number is heavily reduced in periods 7–8 (1413–1702), to an even lower level than in period 2.

	Bone Buzzers	Ocarinas	Rattles	Dolls	Human figures	Animal figures	Weapons	Boats	Miniature pots	Tools	Skates	Balls	Humming tops/tops	Marbles	Yo-yos	Sum
1120–1170/71 Period 2						1	1	3		1	5		1		1	**13**
1170/71–1198 Period 3				2	7	4	11	10	1		2	9	2		3	**51**
1198–1248 Period 4	6		2	1	8	5	6	14	3	1	13	6	3		2	**70**
1248–1332 Period 5			2	1	5	7	5	13	9	2	4	24	2	1		**75**
1332–1413 Period 6	1		1		1	5	3	6	2		1	42	5		1	**68**
1413–1476 Period 7	1			1	1	2	2		1		1					**9**
1476–1702 Period 8	1	1				1			3	1				2		**9**
Sum	**9**	**1**	**5**	**5**	**22**	**25**	**28**	**46**	**19**	**5**	**26**	**81**	**13**	**3**	**7**	**295**
1170/71–1248															1	**1**
1198–1332				2				1								**3**
1248–1332						2		1								**3**
1248–1413	2					2		1			1	4				**10**
1413–1702							1		2							**3**
1400–1425				1												**1**
1536–									1	1	1			6		**9**
1200–?											1					**1**
1332–?					1											**1**
1300–1400												1				**1**
No dating		1	4	1		12	6	5	24	1	3	26	1	12	1	**97**
Sum	**11**	**2**	**9**	**9**	**23**	**41**	**35**	**54**	**46**	**7**	**32**	**112**	**14**	**21**	**9**	**425**

Table 3.2 *Dating of the toys from Bergen. N=425.*

Where the dating of the 295 confirmed, probable and possible toys relating to the fire layer chronology from the extensive Bryggen excavation is concerned, a somehow different pattern appears, based on the certainty with which the toys can be related to children (table 3.3). The 54 confirmed toys date to the entire period of examination, except period 8 (1476–1702). Particularly periods 3 and 4 (1170/71–1248) stand out with a large number of toys in relation to other periods. In period 7 (1413–1476) there are few confirmed toys. A similar pattern is found for the 80 probable toys: periods 3 and 4 (1170/71–1248) stand out with a relatively large number of toys. In addition, period 5 (1248–1332) – and to a smaller degree period 6 (1332–1413) – are represented with relatively many probable toys, but the number is decreasing. Period 7 and 8 (1413–1702) stand out as periods with relatively few toys.

The 161 possible toys, however, are distributed differently in time, and form a pattern similar to the one for the temporal distribution of toys in general. The possible toys relate to all peri-

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	Sum
Confirmed	7	10	21	6	7	3		**54**
%	54	20	30	8	10	33.3		
Probable	4	19	26	15	10	3	3	**80**
%	31	37	37	20	15	33.3	33	
Possible	2	22	23	54	51	3	6	**161**
%	15	43	33	72	75	33.3	67	
Sum	**13** 100%	**51** 100%	**70** 100%	**75** 100%	**68** 100%	**9** 100%	**9** 100%	**295**

Table 3.3 *Dating of the confirmed, probable and possible toys from Bergen. Based on toys related to the fire layer chronology from the Bryggen exacavations. N=295.*

ods, with an increasing number up to period 5 (1248–133). The following period, the number of toys remains almost the same. Particularly periods 5 (1248–1332) and 6 (1332–1413) are thus represented with relatively many toys. Few possible toys from the following two periods have been found.

Where the relationship between confirmed, probable and possible toys is concerned, the former two dominate particularly in periods 2–4 (1120–1248). In these periods, the confirmed and the probable toys make up between 85 per cent and 67 per cent of the total number of toys, whereas the possible toys make up about 43 per cent at the most. In the following periods, however, the share of confirmed and probable toys is reduced. In period 5 (1248–1332) the possible toys make up no less than 72 per cent of all toys, and the share stays between 40 and 75 per cent the following periods. There are no confirmed toys from period 8, whereas the possible toys make up 63 per cent of all toys in this period. Thus, up to and including period 4 (1198–1248), confirmed and probable toys dominate, whereas the possible toys seem to dominate the following centuries. This difference in the distribution in time must be considered when interpreting the material further.

Dating the musical objects or noisemakers

The dating of the musical objects is represented in table 3.4. Five toys – just below one fifth – are undated, and an additional three cannot be related to the fire layer chronology established for Bryggen. Prior to 1170/71 there are no such toys, but half of the datable musical objects (eight items) come from period 4 (1198–1248). The remaining seven toys are relatively evenly distributed over the following four periods, i.e. from 1248 to 1702. In addition, two bone buzzers are dated to the time span 1248–1400. All the datable musical objects considered, 41 per cent comes from period 4 (1198–1248), another 41 per cent from periods 5 and 6 (1248–1413), and finally about a fifth from periods 7 and 8 (1413–1702). As mentioned earlier, one of the ocarinas could not be dated. However, ocarinas are considered relatively young toys. The dated ocarina from Bergen, for example, comes from period 8 (1476–1702), in addition to a number of ocarinas from Lübeck dated to the sixteenth and seventeenth centuries and onwards (Gläser 1995: 48).

Thus, period 4, between 1198 and 1248, is represented with the most musical objects, and the number of finds decreases in the following centuries. However, the number of this kind of toys in general is small, and their identification as toys is as previously mentioned not certain for all objects. Only the bone buzzers and the ocarinas are classified as probable toys. In addition, only the rattles are related to children in the youngest age groups – yet, they appear in a very small number in periods 4–6 (1198–1413).

	1198–1248 Perriod 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Periode7	1476– 1702 Period 8	Sum	Not dated	Not related to the Bryggen chronology	Sum
Bone buzzers	6		1	1	1	**9**		2	**11**
Ocarinas					1	**1**	1		**2**
Rattles	2	2	1			**5**	4		**9**
Sum	**8**	**2**	**2**	**1**	**2**	**15**	**5**	**2**	**22**

Table 3.4 *Dating of the musical objects or noisemakers. Based on toys related to the fire layer chronology from the Bryggen excavations. N=22.*

Dating the toys reflecting role-playing games

The largest category of medieval toys – 215 objects – is related to different types of role-playing games. Forty-one are interpreted as confirmed toys, 65 as probable toys and 109 as possible toys. There were 49 toys that could not be dated, i.e. 23 per cent, whereas 16 others did not relate to the fire layer chronology from the Bryggen excavation.

Thus, 150 of the 215 objects can be related to the fire layer chronology from the Bryggen excavation (table 3.5). The toys reflecting role-playing games come from the entire period of examination. The largest number of toys is found in periods 3–5 (1170/71–1332), gradually increasing up to and including the latter part (1248–1332). Also where this type of toys is concerned, it seems that the number of toys decreases in the following periods, but in this case starting after period 5, i.e. a little later than the musical objects or noisemakers. The dating of the toys that are not related to the fire layer chronology from the Bryggen excavation does not change this pattern. Two toys are dated to approximately periods 4–5 (1198–1332), one to periods 4–6 (1198–1413), five to periods 5–6 (1248–1413), two to periods 6–7 (1413–1476), three to periods 7–8 (1413–1702), and three to after 1476. The dating of the toys reflecting role-playing games corresponds in other words relatively well to the general distribution of toys in time.

Where distribution in time is considered in relation to the degree of certain identification, we see that confirmed toys appear in the largest numbers in periods 3 and 4 (1170/71–1248), followed by a more or less even decline in periods

	1120–1170/71 Period 2	1170/71–1198 Period3	1198–1248 Period 4	1248–1332 Periode 5	1333–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	Sum	Not dated	Not related to the Bryggen chronology	Sum
Dolls		2	1	1		1		**5**	1	3	**9**
Human figures		7	8	5	1	1		**22**		1	**23**
Animal figures	1	4	5	7	5	2	1	**25**	12	4	**41**
Weapons	1	11	6	5	3	2		**28**	6	1	**35**
Boats	3	10	14	13	6			**46**	5	3	**54**
Miniature pots		1	3	9	2	1	3	**19**	24	3	**46**
Tools	1		1	2			1	**5**	1	1	**7**
Sum	**6**	**35**	**38**	**42**	**17**	**7**	**5**	**150**	**49**	**16**	**215**

Table 3.5 *Dating of the toys reflecting role-playing games. Based on toys related to the fire layer chronology from the Bryggen excavations. N=215.*

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	Sum
Confirmed	2	8	8	2	4	2		**26**
%	33	23	21	4.8	23.5	28.6		
Probable	4	19	20	15	9	2	1	**70**
%	67	54	53	35.7	53	28.6	20	
Possible		8	10	25	4	3	4	**54**
%		23	26	59.5	23.5	42.9	80	
Sum	**6** 100%	**35** 100%	**38** 100%	**42** 100%	**17** 100%	**7** 100%	**5** 100%	**150**

Table 3.6 *Dating of the confirmed, probable and possible toys reflecting role playing games. Based on toys related to the fire layer chronology from the Bryggen excavations. N=150.*

5–7 (1248–1476) (table 3.6). Approximately the same pattern applies to the probable toys, but here period 4 (1198–1248) stands out with the highest number of toys. The number of probable toys is high also in period 5 (1248–1332), but decreases the following periods. The possible toys are missing in period 2 (1120s–1170/71), but then the number increases up to and including period 5 (1248–1332). A large reduction then follows, and a small number of possible toys dominate in the remaining periods. Like the general distribution of toys indicates, confirmed and probable toys reflecting role-playing games particularly dominate periods 2–4 (1120s–1248).

Dating the toys related to board games and sports/physical activities

The category made up of toys related to board games and sports/physical activities is almost as big as the category of toys reflecting role-playing games, i.e. 188 objects. Of these, 34 are interpreted as confirmed toys, one as a probable toy and 153 as possible toys. The dating is presented in table 3.7, of which 43 toys are undated, and 15 could not be related to the Bryggen chronology.

This category is more uncertain than the toys reflecting role-playing games, where relation to children is concerned. However, this is hardly reflected in the general temporal pattern for the toys. The number of toys increases up to and including period 6 (1332–1413), then appearing in very small numbers in the following two periods 7 and 8 (1413–1702). The temporal distribution of the remaining toys, dated by other systems than by the fire layer chronology from Bryggen, does not change this pattern – only a few items are younger than 1413. The others come from all the preceding periods, although mainly the later periods.

Only a small number of the toys related to board games and sports/physical activities is characterized as confirmed, the majority is interpreted as possible toys (table 3.8). A uniform distribution pattern is not discerned. The category possible toys, however, dominates almost all periods, except period 2, 4 and 7, i.e. primarily prior to 1248. The distribution of these toys is thus somehow different from the distribution of the musical objects/noisemakers and the toys reflecting role-playing games.

Temporal representation

We have seen that the musical objects or noisemakers and the toys related to role-playing and to board games and sports/physical activities are more or less equally distributed in time. To a high degree these distributional patterns also correspond with the general temporal distribution

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	Sum	Not dated	Not related to the Bryggen chronology	Sum
Skates	5	2	13	4	1	1		**26**	3	3	**32**
Balls		9	6	24	42			**81**	26	5	**112**
Humming tops/tops	1	2	3	2	5			**13**	1		**14**
Marbles				1			2	**3**	12	6	**21**
Yo-yos	1	3	2		1			**7**	1	1	**9**
Sum	**7**	**16**	**24**	**31**	**49**	**1**	**2**	**130**	**43**	**15**	**188**

Table 3.7 *Dating of the toys related to board games and sports/physical activities. Based on toys related to the fire layer chronology from the Bryggen excavations. N=188.*

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	Sum
Confirmed	5	2	13	4	3	1		**28**
%	71	12.5	54	13	6	100		
Possible	2	14	11	27	46		2	**102**
%	29	87.5	46	87	94		100	
Sum	**7** 100%	**16** 100 %	**24** 100 %	**31** 100 %	**49** 100 %	**1** 100 %	**2** 100%	**130**

Table 3.8 *Dating of the confirmed, probable and possible toys related to board games and sports/physical activities Based on toys related to the fire layer chronology from the Bryggen excavations. N=130.*

of the toys. With the exception of the musical objects or noisemakers, which first and primarily appear in period 4 (1198–1248), the different toy categories display an increasing number of objects up to and including periods 5 (1248–1332) and 6 (1332–1413). From about 1330 and onwards, the number of objects decreases.

Where the number of toys found per year is concerned, the pattern becomes slightly different (fig. 3.27). Generally, the number of toys per year increases to a maximum in period 3 (1170/71–1198), followed by a reduction up to period 5, a levelling off in period 6, and then there is a marked reduction. The distribution of the toys reflecting role-playing games corresponds to this pattern, but the decrease in the number of toys after period 3 (1170/71–1198) is less marked than that of the toys in general. Also the number of toys relating to board games and sports/physical activities is high in period 3, followed by a reduction up to and including period 5 (1248–1332). However, in period 6 (1332–1413) the number of toys is even larger than in period 3. In the following two periods, there are hardly any toys of this type. There are few musical objects or noisemakers, which first appear in period 4 (1198–1248). The largest number of these toys is also found in this period, but the number then generally stays the same. In general, period 3 (1170/71–1198) thus stands out with the most toys, where toys per year is considered.

In her master thesis, Hilde Vangstad has studied soapstone vessels from Bryggen in Bergen, and examined the distribution of altogether 1,171 pieces of such vessels (Vangstad 2003). The distribution of this type of artefacts is almost iden-

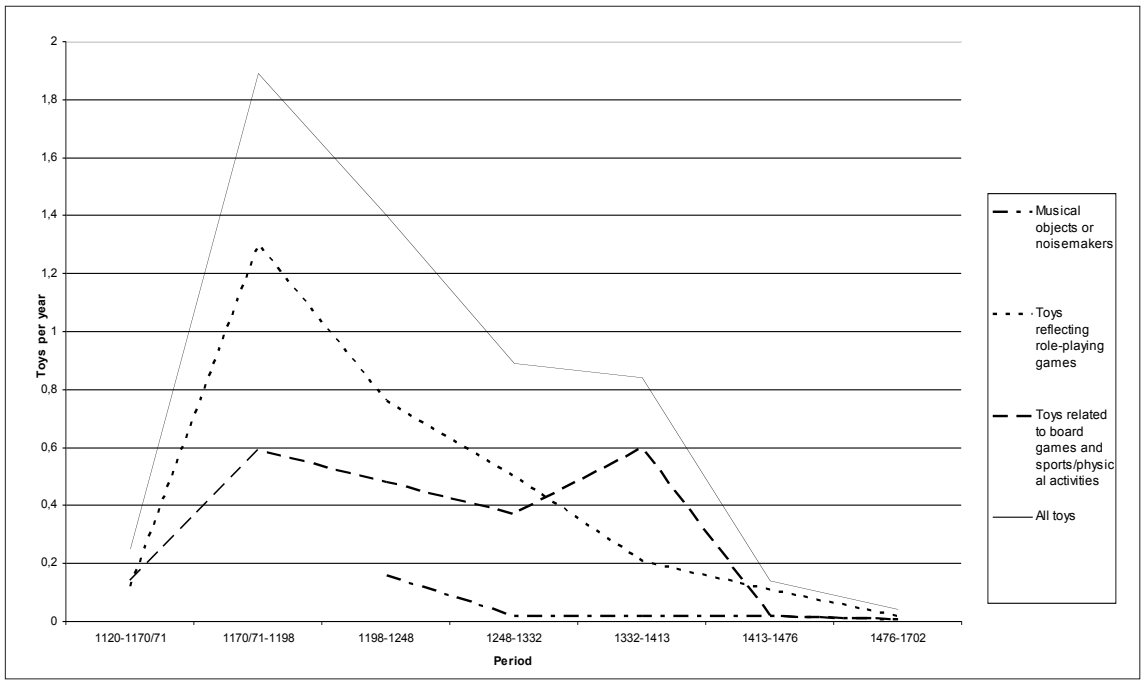

Figure 3.27 *Musical objects, toys reflecting role-playing games and toys related to board games and sports/physical activities per year per period.*

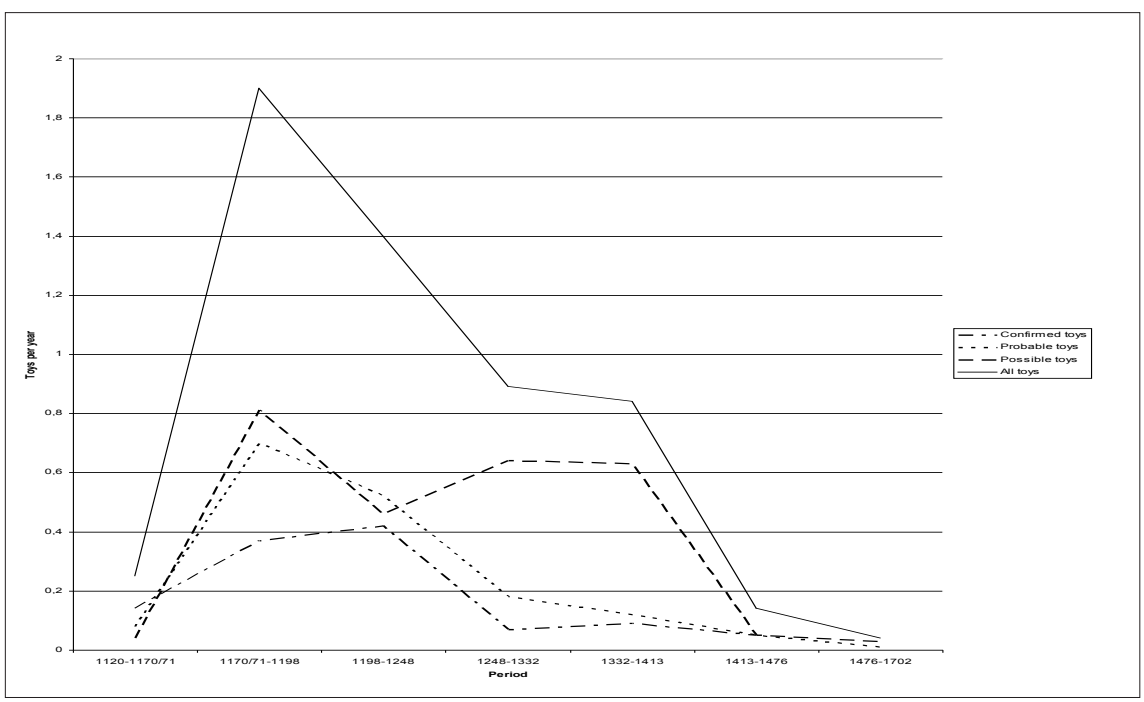

Figure 3.28 *Confirmed, probable and possible toys per year per period.*

tical with the distribution of toys, i.e. there are most objects per year in period 3, and then the number decreases, particularly from 1332 and onwards (*ibid*: 113–115). The temporal distribution pattern of fishing tools and textile equipment also follows the same pattern (Øye 1988: 141–142; O. M. Olsen [1998] 2004: 86–88). The distribution of toys from Bryggen thus more or less seems to correspond to the distribution of objects related to household, women's work and primary production, such as fishing.

An examination of the distribution of confirmed, probable and possible toys also seems to correspond to the general distributional pattern (fig. 3.28). The number of toys in all three categories increases up to and including period 3 (1170/71–1198), followed by a more or less gradual reduction. The number of confirmed toys, however, does not increase as much as the toys in general in period 3, and the reduction up to period 5 (1248–1332) is also not particularly even. After period 6 (1332–1413) the number is reduced. The distribution of probable toys more or less follows the same pattern. The distribution of the possible toys deviates more, with a larger representation between period 4 and 5 (1198–1332). To a certain degree, this deviation strengthens the uncertainties connected to the identification as toys.

Types of games – gender and age

The relationship between the three different categories of toys varies in the survey period (table 3.9). In the earliest period where toys are represented, i.e. period 2 (1120s–1170/71), there are no musical objects or noisemakers, whereas the share of toys related to board games and sports/physical activities makes up more than half of all toys. This situation changes radically in the following period (1170/71–1198), in which there are twice as many toys reflecting role-playing games as there are toys related to board games and sports/physical activities. In period 4 (1198–1248) the musical objects or noisemakers make up a tenth of the toys. The percentage of toys reflecting role-playing games has decreased, but these toys still make up more than half of all the toys in this period. In addition, their share is close to twice as big as the share of toys related to board games and sports/physical activities.

In period 5 (1248–1332) the share of toys reflecting role-playing games stays about the same, but is reduced to one fourth in period 6 (1332–1413). Also the share of musical objects or noisemakers is reduced, to three percent. The toys related to board games and sports/physical activities, on the other hand, make up almost three quarters of the toys in this period. However, the number drops drastically in the following period (1413–1476), while the musical objects or noisemakers make up about a tenth, and the toys reflecting role-playing games now make up almost 80 per cent. The share of the latter category of toys is also high in period 8 (1476–1702), while the toys related to board games and sports/physical activities and the musical objects now make up about a fifth each of the toys in general. However, the extent of the material is relatively small after period 6.

To summarize: the toys reflecting role-playing games thus dominate in practically all periods, whereas toys related to board games and sports/physical activities make up a smaller share. The exceptions are period 2, from which there are few toys in general, and period 6. The musical objects or noisemakers generally make up a rather small share in the periods where they appear, from 1198 and onwards – about a tenth or lower.

The toys have also been tentatively related to gender. In table 3.10, the absolute and relative distribution of toys related to boys and girls in different periods is represented. Also toys that may be related to both boys and girls are included here. The share of female toys lies between six and eight per cent in periods 2–4 (1120s–1248), and then increases to close to 50 per cent in period 8 (1476–1702). The share of male toys, on the other hand, decreases from 77 per cent to about 64 per cent from period 2 up to and including period 4 (1198–1248). Yet, in the following two periods it increases to 84 per cent. Thus, the male toys dominate in these periods, and make up between two thirds and a fourth of all toys. However, in periods 7–8 (1413–1702) this number is reduced to 33 per cent. The share of toys without any certain relation to gender increases from 15 to 30 per cent in periods 2–4 (c. 1120–1248). In the following period, the number drops to a tenth, and in the end of the sixteenth century increases to almost half of all toys. Yet, the material

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	Sum
Musical objects or bone buzzers			8	2	2	1	2	**15**
%			11.4	3	3	11	22	
Toys reflecting role-playing games	6	35	38	42	17	7	5	**150**
%	46	69	54.3	56	25	78	56	
Toys related to board games and sports/physical activities	7	16	24	31	49	1	2	**130**
%	54	31	34.3	41	72	11	22	
Sum	**13** 100%	**51** 100%	**70** 100%	**75** 100%	**68** 100%	**9** 100%	**9** 100%	**295**

Table 3.9 *The relationship between the three toy categories in different periods. Based on toys related to the fire layer chronology from the Bryggen excavations. N=295.*

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	Sum
Female toys	1	3	4	10	2	2	4	**26**
%	8	6	6	13	3	22	44	
Female/male toys	2	12	21	9	9	2	2	**57**
%	15	23	30	12	13	22	44	
Male toys	10	36	45	56	57	5	3	**212**
%	77	71	64	75	84	56	33	
Sum	**13** 100%	**51** 100%	**70** 100%	**75** 100%	**68** 100%	**9** 100%	**9** 100%	**295**

Table 3.10 *Toys related to boys or girls in Bergen throughout the examination period. Based on toys related to the fire layer chronology from the Bryggen excavations. N=295.*

in the two last periods is too small to calculate usable percentages from.

Generally, toys related to boys dominate in all periods with a representative amount of material, whereas toys related to girls make up a relatively small part. If the toys without certain relation to a certain gender to a higher degree are considered male than female toys – the way several of these toys are interpreted – it seems that there is a large majority of male toys in these periods as well.

The distribution of the toys related to boys and girls in time is different where toys per year are considered (fig. 3.29). This is probably the result of the identification of confirmed, probable and possible toys. The toys presumably related to boys display a distributional pattern more or less identical to that of the toys in general, with a peak in period 3 (1170/71–1198), followed by a reduction up to and including period 5 (1248–1332). In period 6 (1332–1413), however, the number of

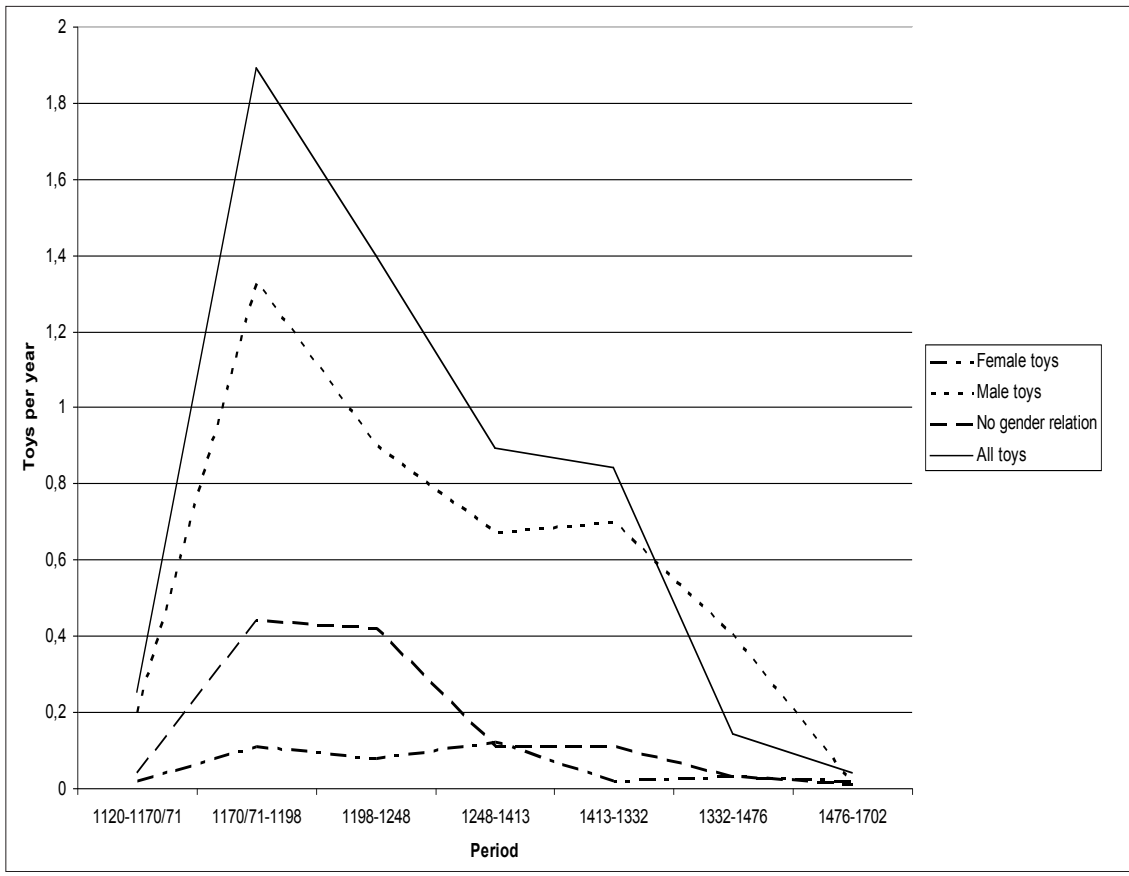

Figure 3.29 *Toys related to boys and girls per year per period.*

such toys increases. The toys without relation to gender display a similar pattern, but the reduction between periods 3 and 5 is not as marked. There are few female toys, and their distribution is somehow different from the other toys. There are few toys related to girls per year in period 2 (1120s–1117/71), and the number rises a little in periods 3–5 (1170/71–1332). A few more female toys per year are documented in period 5, yet the number is about the same throughout the periods.

Where age is concerned, only a small number of toys is related to children younger than five or six years, and based on the distribution of toys in time it may seem that there were relatively few young children represented in Bergen in the period of examination. The toys thus indicate a demographic, or cultural, pattern concerning children, dominated by boys from the age of five or six.

Medieval toys from Bergen – an evaluation

So far, this study has proved that children in Bergen in the period between c. 1120 and 1700 played with a broad range of toys – all in all 15 different types (20 if the different tools are considered separately). Most of these are also represented in the toy material from Trondheim (Fahre 1998). The 307 toys from Trondheim come in 30 different types, dated to between c. 970 and 1500 (*ibid*). Although there are more varied types of toys in the material from Trondheim than from Bergen, some types are also missing. Horse figures made of iron, rattles, miniature pots, ocarinas, planes and certain parts of boats were not documented there. On the other hand, skis, wheels for toy horses, toy spears, tools like hand grinder and spatulas, astragals, diablos or jackstraws were not found in the material from Bergen. In addition,

wooden miniature bowls, dishes and the like, slings and unworked toys of objects found in nature are not a part of this study. Yet, the overall impression is that the toys from the two medieval towns are relatively similar, and the lack of certain toy types is primarily considered as a result of different evaluations and limitations related to the examinations. Several groups of toys identified in the material from Bergen also have their counterparts in other medieval towns – e.g. Lübeck. Is it possible that medieval toys were relatively uniform within a certain geographical boundary, stretching from Northern Germany in the south to the Mid-Norway in the north?

An almost universal and widespread way of playing is imitation, often related to socialization and learning (cf. chapters 1 and 2). This was obviously also the case in the Middle Ages – about half of all toys from Bergen in the period between c. 1120 and 1700 are toys that are related to role-playing and that reflect adult activities and pursuits both in the home and outside. The share of these toys also dominates over the two other toy categories in the entire period of examination. Where different types of toys are concerned, the largest concentration of toy weapons, for instance, is found in period 3 (1170/71–1198), at a time where the civil wars in Norway were at their fiercest (Helle 1982: 154). During the thirteenth century, the civil wars gradually ended, and in period 4 (1198–1248) there is a striking decrease in toy weapons in relation to the previous period. Perhaps playing with toy weapons was a way of acting out and taking the edge off these turbulent times, as Fahre has suggested. Additionally, from the second half of the tenth century and beyond the high Middle Ages, Norwegian domestic and foreign trade expanded, and particularly Bergen became a focal point for trade and shipping (Helle 1982: 167, 305). Whether or not this is reflected in the toy material is uncertain, but both toy boats and parts of toy boats do appear in largest number in periods 3 (1170/71–1198) and 4 (1198–1248). There are also many of these categories in period 5 (1248–1332). However, the distribution of the different categories is more or less identical, so that no certain connections regarding the societal context can be affirmed.

Also the toys from Trondheim are interpreted as expressions of socialization – a large number of toys related to role-playing games thus reflect children's surroundings (Fahre 1998: 48). Like in Bergen, the toy weapons from Trondheim are primarily dated to periods of more or less local turbulence, here 1025–1275 (*ibid*: 98–99). Toy boats and parts of toy boats, on the other hand, are dated to 1150–1325, which Fahre associates with an increasing interest in and need for skills and knowledge about shipping and building of ships (*ibid*: 97, 103). As Fahre points out, political events probably had consequences for socialization of children, as well as their ways of playing.

Where gender relation is considered, 70 per cent are regarded as primarily toys for boys, about 14 per cent attributed to girls, and the remaining as toys without confirmed gender relations. Boys' toys dominate the entire period of examination, except between 1413 and 1702, where toys are scarce. In addition, female toys are only found among toys reflecting role-playing games, although girls may have taken part in board games and sports/physical activities as well. However, such toys are considered as primarily related to boys – at least I assume that gender roles and restrictions were more enforced with age. The musical objects or noisemakers are rarely related to gender. In addition, they make up a relatively small part of the toys in general, and none are interpreted as confirmed toys.

The majority of the toys in this study is related to children in the two oldest age groups, particularly from the age of five or six. No less than 335 out of a total of 425 toys – i.e. close to 80 per cent – are connected to children at this age, whereas just below 20 per cent (81 toys) is connected to children from the age of four to five. Only the nine rattles (about two per cent) may possibly be related to younger children. Girls and young children thus seem to be underrepresented in the toy material from Bergen, which may indicate a demographical pattern where particularly boys from the age of five to six are represented.

Fahre has to a smaller extent considered the toys from Trondheim in relation to age and gender. However, based on the number of toys and the combination of the different types of toys represented here, it seems that the gender pattern is similar to the one indicated for Bergen. Toys that are considered primarily related to boys domi-

nate here as well. Yet, the extent of the different toy types indicates that the share of toys attributed to boys generally is smaller, and that the share of toys without relation to a certain gender is larger than they are in the material from Bergen. Female gendered toys from Trondheim, though, seem to make up just as small a share as the ones from Bergen, and toys for very young children have not been found. Like Bergen, Trondheim may have been dominated by boys in the oldest age groups, judging by the toys. A generally high population mobility is documented for towns in the Middle Ages, leading to an overrepresentation of men of working age (including men at an age termed "boys" today) compared to the general demographic pattern in the countryside (Øye 2005: 56–57). Perhaps this can serve as an explanation also for the uneven age and gender distribution of children's toys in medieval towns in general, and in Bergen in particular?

Objects with runic inscriptions may be interesting in connection to a toy material primarily related to older boys. Of the four toys with runic inscriptions, all were attributed to boys. Also, seven out the ten toys from Trondheim with runic inscriptions were related to boys, i.e. toy weapons (Fahre 1998: 50). In addition, some of the inscriptions are interpreted as male names, both in Bergen and Trondheim. However, the material is too small to prove any relation between boys, runes and writing.

The toys themselves show that medieval children played games and had fun, also at an age where they were able to work. Yet, at the age of five or six children could to a higher degree participate in adult work. In this connection it is interesting to notice that only a small number of toys seem to represent actual participation in adult activities. For instance, only the different tools can be connected directly to an actual use in the adult world, although several toys reflecting role-playing may have been made by adults in order to teach their children. Based on children's imitating way of playing, however, I find it just as probable that children on their own initiative asked for toys like weapons or boats. Yet, there must have been some adult influence. Medieval children were probably more integrated in the adult world and adult work, but all the toys prove that playing was an important part of childhood as well.

Thus, playing was a part of childhood in the Middle Ages, and the toys from Bergen have parallels in other medieval towns – both Norwegian and foreign – with regard to material, shapes and types. A number of medieval toys and games in general, and in Bergen in particular, can also be understood as an interaction between children and their environment, where the game is a part of a learning and socialization process. Board games and sports/physical activities may also have been a more or less important part of childhood, but toys related to these activities are generally uncertain in relation to children – like the musical objects or noisemakers. In some cases, runic inscriptions may be related to children, preferably boys. It also seems that a majority of the toys from Bergen are connected to boys in the oldest age groups – girls generally seem underrepresented. In addition, the toys particularly indicate older children, and we cannot rule out that these age groups more actively took part in work in the town. Whether or not the shoe material points in the same direction, or if it also includes younger children, is the subject of the following chapter.

4 CHILDREN'S SHOES

The way children were dressed and shod may give indirect evidence of the adult image of children. Shoes – or rather the soles of the shoes – make up the largest group of the source material in this study, altogether 2,088 accession numbers. A classification of a selection of these artefacts will hopefully illuminate different questions regarding children's clothing (i.e. shoes) compared to adults' clothing. Did children wear same types of shoes as adults, or were their shoes different? What age groups do the sizes of the soles indicate? Do they point to a demographical pattern different from that of the toys, dominated by particularly boys from the age of five or six? The sole material may in addition give information about how children were equipped and treated, and shed light on the question of the presence of children in the town – and thus also issues related to settlement and household structure in the urban society.

Limitations

Shoemakers and others working with leather were common inhabitants in medieval towns, and shoes usually make up large groups of artefacts from urban archaeological excavations. Yet there are few complete shoes from medieval Bergen – the majority are obviously worn out and thrown away. In addition, soles and uppers have in most cases been separated. Identifying the parts that possibly belong together has proved difficult, and would require a relatively extensive and time-consuming study. The choice has therefore been made to focus on the soles alone.

All in all, 231 of the children's soles from Bergen were so fragmented that certain measurements from heel to toe could not be given. Based on their preserved size and shape, however, it seems reasonable to interpret them as children's soles. They are thus included where the general distribution of objects related to children in time and space is concerned, but are excluded from the analysis of shoe sizes. Additionally, two sole types are left out in this study, due to uncertainties related to their actual sizes – i.e. soles characterized as "back-pointed" (fig. 4.1) and soles with "straight cut heel". The latter type, Erik Schia considers examples of half-soling or mending (Schia 1977: 127–129). He finds it unlikely that soles with such heels were made this way originally, and that the shape probably stems from the wearing down of the original heel, and that a new heel was sown to the sole (*ibid*). Anyway, there does not seem to be any soles of this type in the material from Bergen that are so small that they without further analysis can be identified as children's shoes.

The soles vary from size 14 up to size 33 inclusive. Partly because of uncertainties linked to the length of the soles, and partly because of the fact that children at the same age may display considerable differences concerning physical appearance, the soles cannot directly be related to a particular age. Shoemakers and shoe-dealers contacted in relation to the evaluation of the soles could also only indicate possible relations between age and shoe size. When discussing age groups in Bergen based on shoe sizes, the soles are therefore connected to the three main age groups discussed in the introduction. However, the group of children up to two years is extended to cover children up to and including three years, because children at this age have feet that are partly different from older children's and adults' feet. Based on anthropometrical measurements presented in *Design Standards for Children's Environments*, it seems that present day children up to the age of three generally wear shoes up to and including size 22, children between three and seven sizes up to and including size 28, and children between seven and 11/12 up to and including size 34 (Cain Ruth 2000: 16). Medieval children in the same age groups would have wore shoes approximately up to and including size 21, from and including size 22 up to and including size 27, and from and including size 28 up to and including size 33 – based on Pia Bennike and Anna-Elisabeth Brade's conclusions about an average difference of about 4.35 per cent between medieval and present day population (cf. chapter 2). However, definitions of which sizes correspond to which age groups are constructed and include several uncertainties, and should be considered as work definitions more than as definite limits. As mentioned earlier, at the age of 11/12 and above children's shoes probably over-

lap with the smallest adult shoes. Older children are therefore not discussed here.

Shoes and physiology

The classification of the soles also takes into account the relation of the soles to the physiology of the foot. The foot is supposed to keep the body balanced in an upright position, in addition to moving it around (Jernberger and Jernberger 1996: 221; comment Runar Braut), and is thus built to serve this purpose the best (fig. 4.2). In the region of the ankle there are two large bones – *talus* and *calcaneus*. These bones articulate with the *cuboideum*, the *naviculare* and the three *cuneiforms*. In front of them there are five metatarsals, prolonged by the toe bones (*phalange*). The bones are tightly bound together by ligaments, and there is little movement between them. The majority of the muscles that move the foot, however, are found in the lower leg – the foot would be too big and lumpy if all the muscles were attached to and originated in the foot. Only the slim muscles reach down to and are attached to upper or under side of the foot.

Along the inner side of the foot the bones make one longitudinal and one transverse curve that together make up the instep – the arch of the foot. The outer side, on the other hand, comes in contact with the ground. Ligaments hold the bones tightly together. Longer ligaments and short muscles also connect the ends of the heel to the toes, which is important for preserving the arch. Some leg muscles attached to the bones in the foot also tighten the arch. Finally, the five metatarsals that radiate from the tarsus make the foot look slightly like a fan. The foot is thus normally widest by the toes.

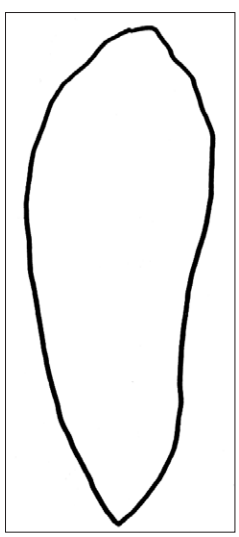

Figure 4.1 *Back-pointed sole. After Larsen 1992.*

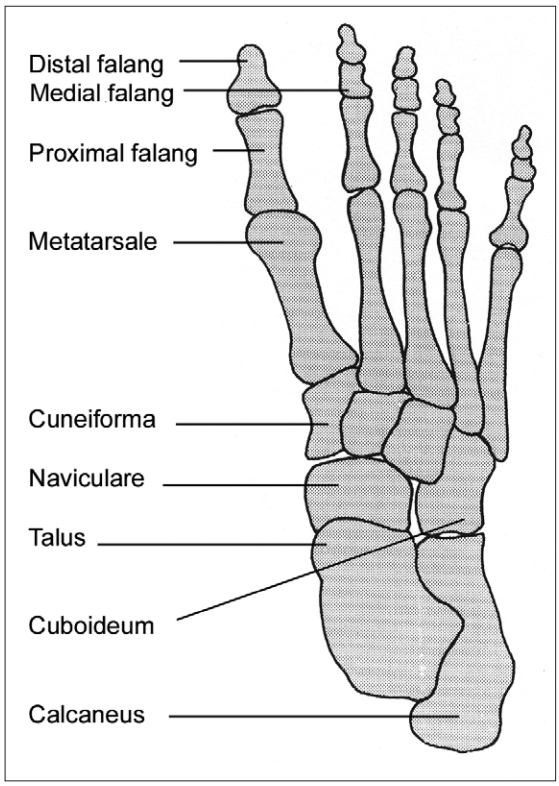

Figure 4.2 *The foot.*

In addition to the arch, the shape of the foot is among other things dependent on the position of the big toe (Servais Bentsen 1974: 10). Its position can be examined by drawing a line between two points, i.e. on the middle of the heel and on the middle of the toe pad of the big toe respectively (Meyer's line, fig 4.3) (*ibid*). If the line passes over the middle of the big toe, the position is correct, but if the toe or most of the toe is inside the line, the big toe is crooked. In this study, Meyer's line is used when studying sole types from the Gullskoen area at Bryggen. However, the results are considered individually, because Larsen's classification – on which this analysis is based – was not worked out with the position of the big toe in particular and the toes in general in mind. Thus, it is not possible to pinpoint the measuring points with the same certainty on a standardized sole type on paper as on a real foot.

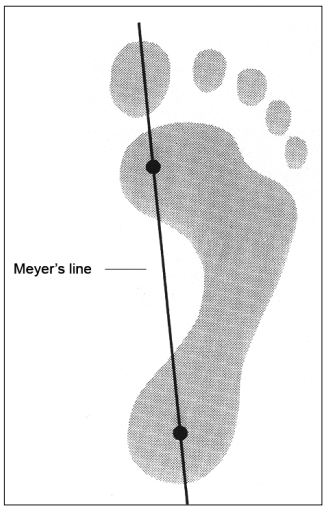

Figure 4.3 *Meyer's line. After Servais Bentsen 1974.*

In addition, one does not know much about the shape of the sole in front of the maximum length C–D in Larsen's classification. Yet, considering these uncertainties, Meyer's line can to a certain extent shed some light on the relationship between foot and shoe/sole.

Children's feet are different from adults' feet up to a certain age. The feet of infants are shaped like a fan, and the arch is commonly present. However, the arch may also be covered by a fat cushion, which fills the arch and thus makes the child appear flat-footed (Servais Bentsen 1974: 7). The way young children put their feet to the ground may also give the impression of being flat-footed. When walking, adults, as well as older children, put their weight on the middle of and the outer side of the foot. When children start to walk at the age of about ten to twelve months, however, they initially put the whole sole of the foot on the ground. The weight of the body is thus put on the inner side of the foot, so that the arch disappears. This position of the feet gradually ceases, as body movements develop and weight is put on the middle of the foot and along the outer side of the foot. This change normally takes place after the age of three (*ibid*). In general, children younger than three thus normally have feet that are more or less differently shaped than the feet of adults or older children. Whether or not these physiological differences had consequences for the shape of children's shoes and children's soles at different ages in the Middle Ages will be examined in the following.

Ideally, a so-called normal adult foot is thus shaped like a fan, and has a distinct arch, as well as a big toe related to Meyer's line in the best possible way. Men and women have feet that are built and formed the same way, and where feet are considered, no biological factors beside size may thus possibly indicate sex. The feet of children younger than three years, however, stand out from elder children's and adults' feet by a more or less missing arch.

Classifications

Shoes and soles originating from excavations in Norwegian medieval towns vary according to shapes and types, and several classifications have been worked out for shoe material from the Viking Period and the Middle Ages. Schia (1975, 1977) and Marstein (1989), for example, have classified shoes and soles from Gamlebyen ("the old town") in Oslo and Folkebibliotekstomta (the site of the present public library) in Trondheim respectively. In addition, Keth E. Lindh (1991) has classified shoes from medieval Vågan in Austvågøy in Lofoten, but did not examine soles in particular. Larsen's classification, based on soles found in the Gullskoen area at Bryggen (fig. 4.4), is however preferred, as it opens up the possibility of comparing types of children's and adult shoes in Bergen (Larsen 1992: 26–29).

In order to measure chronological and typological distribution, Larsen divided his material (1,361 soles, both children's and adults' soles included) into four types, based on formal differences (1,220 soles). In addition, there are four atypical variants (141 soles) (Larsen 1992: 26–29). The present examination of these soles showed that three soles had been given wrong numbers. For this part of the study, the total number of soles is therefore 1,358, of which 1,218 belong to the ordinary types of soles, and 140 to the atypical.

When classifying, Larsen measured the soles according to a system of coordinates, based on a horizontal line, *x*, drawn as a tangent to the tip of the toe A (fig. 4.5). From this line six vertical lines were drawn – of which five touched the inner and outer curves in the front, middle and the back parts of the sole. The tangent points are marked by the letters C, D, E, F, G and H. Here C and D, and G and H represent the tangent

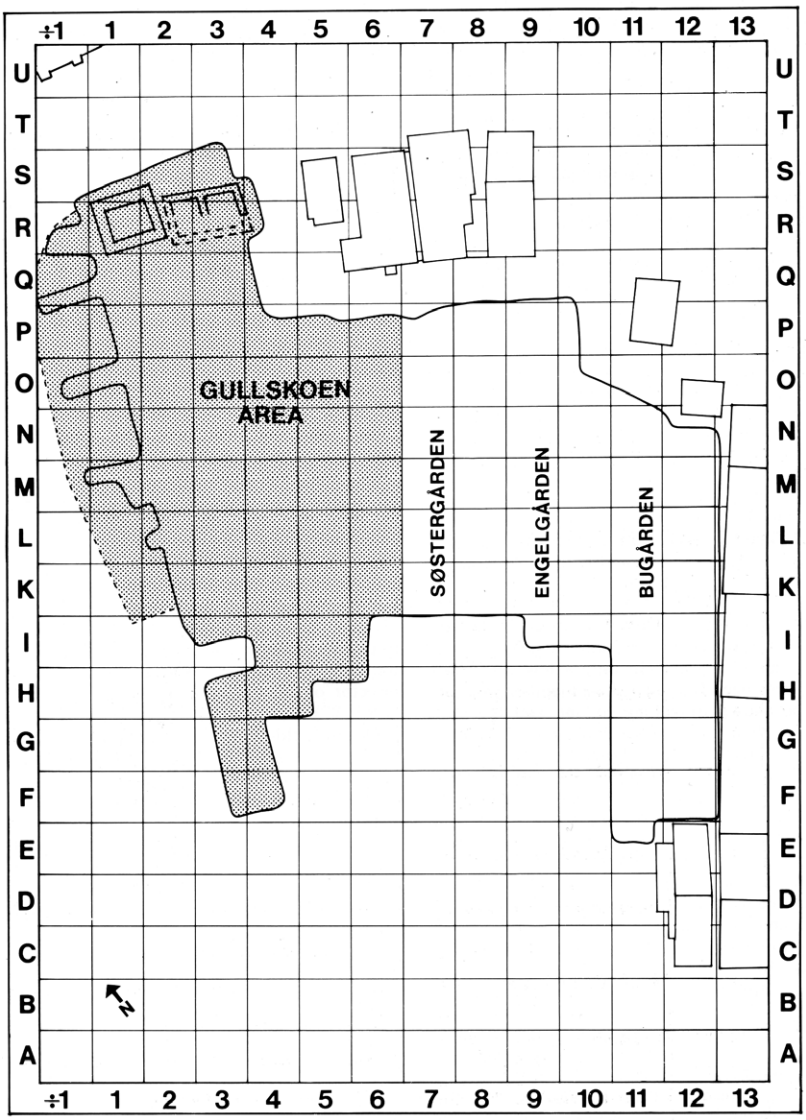

Figure 4.4 *The Bryggen site. The Gullskoen area is hatched. After Larsen 1992.*

points that touch the outer curves in the front and the back of the sole. E and F touch the inner curve along the middle, whereas the line A–B makes up the maximum length of the sole.

The distance between the tangent points represents the maximum width in the front and back parts of the sole, and the minimum width along the middle. The width, however, varies according to the length, so that in order to get an impression of the variations of sole types, the maximum length A–B and the different widths were calculated. Based on a discriminant analysis, it was decided that only the relationship between the maximum length A–B and the minimal width E–F of the sole would provide a meaningful grouping of the soles. According to this system, the relationship between the maximum length A–B and the minimal width E–F thus provides a base for studying sole variations. The ratio between the length A–B and the width E–F made up a base for the sole types, and the values varies between 2.5 and 10.1. As previously mentioned, Meyer's line was not examined in Larsen's classification. Yet, this can be characterized as a diagonal variant of the length A–B (either to the left or the right, depending on whether it is a left or

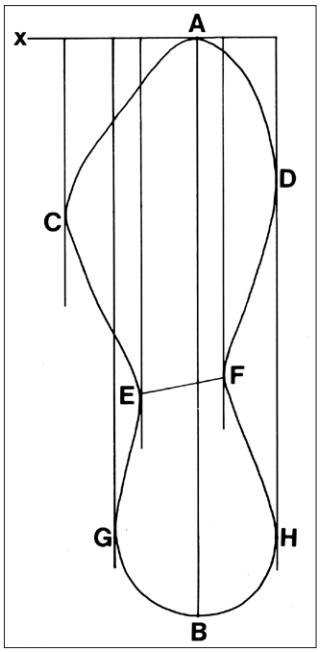

Figure 4.5 *Arne J. Larsen's system for measuring soles. After Larsen 1992.*

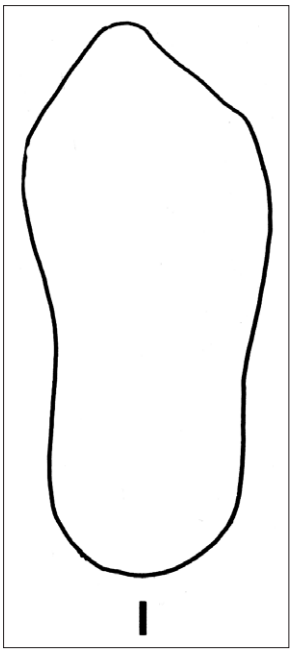

Figure 4.6 *Sole type I. After Larsen 1992.*

a right sole), crossing the measure points on the heel and the toe pad. The two measure points have been decided based on my own evaluation.

Ordinary sole types from the Gullskoen area

Type I

Type I soles are almost oval-shaped – due to a rather small difference between the outer curves in the front and back, and the inner curve along the middle, i.e. between the minimum width E–F by the instep/transition to the heel, and the maximum widths C–D over the toes and G–H on the heel (fig. 4.6). The relationship between the length of the foot, A–B, and the width of the instep, E–F, also contributes to this oval form. The ratio lies between 2.5 and 3.9, which indicates a relatively wide minimum width E–F compared the maximal length of the sole A–B. Based on these evaluations, this type of sole does not follow the shape of the foot completely.

The oval shape means that the fan shape of the foot has been partly considered. Except for the little curve inwards by the instep, marked by E–F, type I soles gradually widen in the front, and reach maximum width where the toes normally start. However, it seems that the front end of the sole is somewhat too pointed for a good position of the big toe. In addition, Meyer's line also indicates that the big toe would be at a slightly sharpened angle compared to a real foot. The relatively wide instep area also indicates that the arch has not been considered. The shape of the sole is thus not optimal compared to a real foot, but at least some considerations have been taken with regard to the biological shape of the foot. The oval form, characterized by a relatively wide instep area, may also indicate that this type should fit a small child's foot well. This observation makes it interesting to compare the relative distribution of children's soles to adults' soles.

Type II

This type of soles is generally better adapted to a normal foot than the type I soles (fig. 4.7). The minimum width E–F by the instep is smaller than the maximum width C–D in the front and G–H at the back of the sole – especially compared to the former. In addition, a higher ratio between the maximum length A–B and the minimum width E–F (4.0–5.6) points to a smaller width around the transition to the heel than was the case for soles of type I.

This shape indicates that the arch of a normal foot has been considered. In addition, the shape

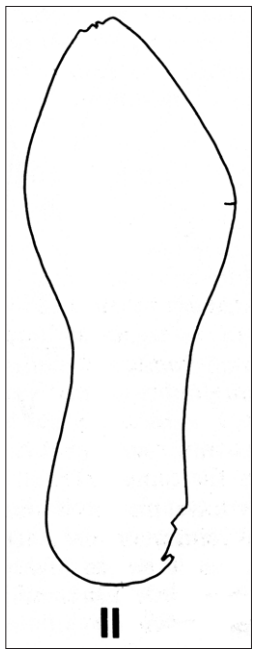

Figure 4.7 *Sole type II. After Larsen 1992.*

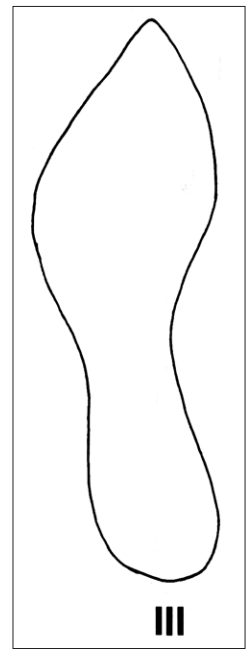

Figure 4.8 *Sole type III. After Larsen 1992.*

displayed by type II soles follows the lines of a normal foot to a higher degree than is the case for type I soles. Type II soles are not oval, like type I, and the curves in the front and the back are more distinct. According to Meyer's line, it seems that the big toe has a good position, although the shape in front of C–D is not optimal. The overall impression of type II soles, then, is that they are relatively well adjusted to the foot. In theory, this means that type II soles also were suitable for children. To what degree this was actually the case, will be examined more closely below.

Type III

Type III soles can be characterized as extreme forms of type II soles (fig. 4.8). The minimum width E–F around the middle of the sole is smaller than for type II, and the ratio between E–F and the maximum length A–B lies between 5.7 and 7.9. In addition, the width E–F is distinctly smaller than the maximum widths C–D in the front and G–H in the back of the sole, which makes these soles almost bend like an S.

Compared to their length, type II soles are relatively narrow. In addition, the S-shape makes them correspond less to normal feet than type II soles do. Yet, at the same time the inward curve by the instep indicates that the arch has been considered. In addition, the width C–D represents the maximum width over the toes, and according to Meyer's line the big toe has more or less the same position as was the case with type II – although the line here is slightly more diagonal. This type of soles is thus well adjusted to a normal foot, yet, to a smaller degree than type II soles.

Type IV

Type IV soles make up the smallest group of normal soles from the Gullskoen area, and also have the most unnatural shapes compared to a real foot (fig. 4.9). Compared to the maximum widths C–D in the front and G–H in the back of the sole, the minimum width E–F by the area of the instep stands out as extremely narrow. The high ratio between E–F and the maximum length of the foot A–B – which lies between 8.0 and 10.1 – points in the same direction.

All in all these soles seem to be unnaturally narrow compared to a human foot. A distinctly limited heel area and a maximum width C–D over the toes are the features that correspond the best to a normal foot. Most of the big toe, on the other hand, lies within Meyer's line, which means that it is angled. The sole is thus shaped in

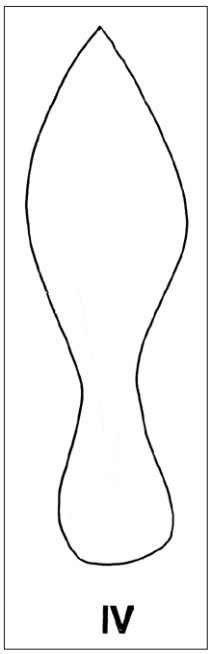

Figure 4.9 *Sole type IV. After Larsen 1992.*

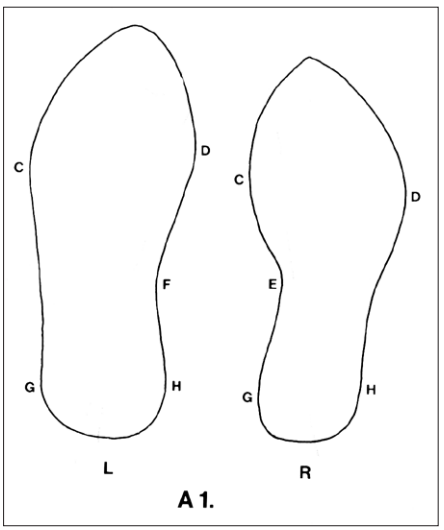

Figure 4.10 *Sole type A1. After Larsen 1992.*

a way that partly corresponds to a normal foot, but the overall impression is that aesthetics was more important than practical and comfortable use. It is thus interesting to see whether or not children wore such "fashion" shoes.

Atypical sole from the Gullskoen area

The curves of the atypical soles are shaped in a way that makes the diagonal lines cut the edge of the sole on the middle of one or both sides, instead of touching the outer point in a curve. This means that points E and/or F are missing, and the sole cannot be classified based on the relationship between the minimum width E–F and the maximum length A–B that Larsen based his classifications on. In addition, at least one of the other tangent points may be missing. Based on the different shape variants resulting from the appearance or absence of different tangent points, these soles have been divided into four types.

Type A1

The fringe (outer edge) on this type of soles curves inwards around the middle of the sole to such a little extent that the line from the baseline does not touch point E for left soles or F for right soles (fig. 4.10). According to Larsen's classification, type A1 soles are thus characterized by points C, D, F, G and H for left soles, and by C, D, E, G and H for right soles.

In other words, compared to the physiognomy of the foot, the sole only has a distinct curve inwards along the inner edge of the foot, around the area where the bones make up the arch. The sole is a little wide compared to a normal foot. Enough space for the toes has apparently been considered, at least the widest part of the sole is found in this area. In addition, it seems that the toes generally have been given a good position above the maximum width C–D. Yet, large parts of the big toe presumably lie within Meyer's line. Although the big toe has an angled position, the overall shape makes the sole well adapted to a normal foot, and the sole has probably not been uncomfortable. This form should therefore also be well adapted to a child's foot.

Type A2

Type A2 is similar to type A1, but is somehow more extreme – among other things these soles are more angled (fig. 4.11). The inner curve along the middle of the sole, as well as the outer curve at the back of the sole, is shaped so that the diagonal lines do not touch any tangent points. According to Larsen's classifications, points E and G for the left soles are thus missing, and the soles

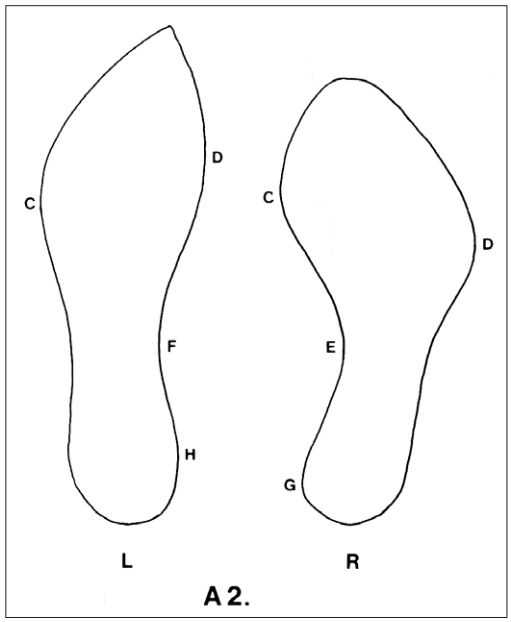

Figure 4.11 *Sole type A2. After Larsen 1992.*

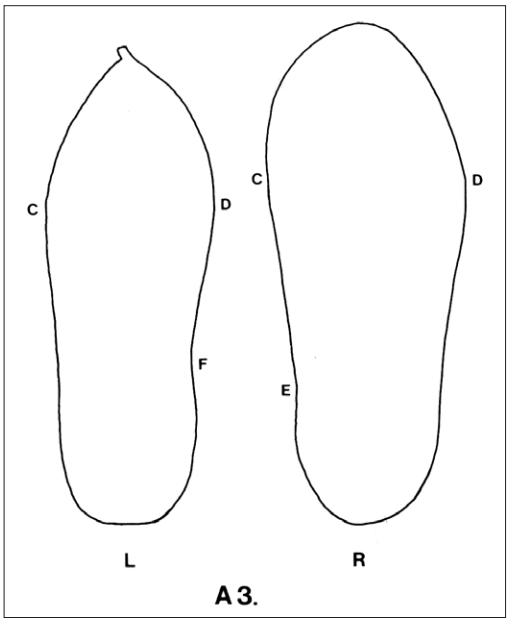

Figure 4.12 *Sole type A3. After Larsen 1992.*

are characterized by C, D, F and H. The right soles, on the other hand, are characterized by C, D, E and G, missing points F and H.

In practice this means that A2 soles are relatively angled. They curve inwards by the arch, but the minimum width E–F is narrower than the same width for soles of type A1. Like the latter, type A2 soles are at the same time widest over the toes. However, this maximum width C–D is kind of angled compared to a normal foot. In addition, Meyer's line indicates an angled position of the big toe, as most of the toe seemingly lies within the line. This type of sole is thus more or less compatible with the shape of a normal foot.

Type A3

The parts in the middle and the back of A3 soles are according to Larsen's classifications shaped in a way that makes it impossible to define the points E, G and H on the left sole, and F, G, and G on the right sole (fig. 4.12). This type is thus characterized by C, D and F, and C, D and E, for the left and the right sole respectively.

The heel of this type of soles is not easily distinguished from the rest of the sole. Another characteristic feature is that they do not curve much inwards along the inner edge of the foot. Unlike the more or less angled type A1 and A2 soles, soles of type A3 are relatively oval. Yet the soles are normally the widest over the toes, and the shape of the sole gives the big toe a good position in relation to Meyer's line. This wide and oval form should fit children's feet particularly well. It is therefore interesting to consider the relationship between the sizes with regard to children.

Type A4

The soles of type A4 are so distinctly oval that the diagonal line from the baseline does not touch any tangent points on curves neither on the middle nor at the back of the sole (fig. 4.13). The heel is therefore almost impossible to distinguish from the rest of the sole. Both left and right soles are consequently defined based on points C and D alone.

We see that the sole is not formed with regard to the arch, yet the width C–D makes up a maximum width over the toes. The big toe also has a good position in relation to Meyer's line, although it is slightly more angled than type A3. The characteristic oval shape makes this type more fit for children's feet than soles of type A3.

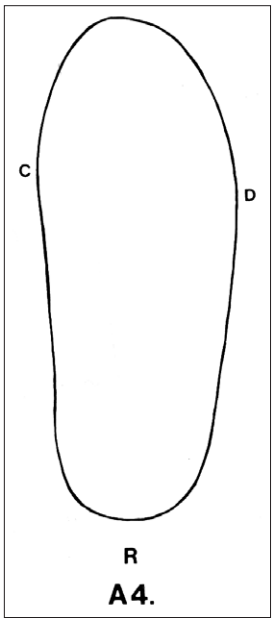

Figure 4.13 *Sole type A4. After Larsen 1992.*

Sole types from the Gullskoen area – summary

All the eight types of soles from the Gullskoen site seem to be shaped so that they more or less correspond to a normal foot. They are also characterized by a maximum width in the front of the sole – a width that approximately corresponds to the maximum width over the toes on a foot. Regardless of type, this characteristic feature of the foot has been taken into consideration. With regard to the area above the widest part of the sole, however, it seems that enough space for the toes, as well as the general position of the toes, have not been given much thought. Particularly this applies to the big toe.

In addition, the soles are more or less distinctly curved inwards around the area of the instep on the middle – except for type A4. Perhaps this is an attempt to adjust the sole to the arch? Yet, where type IV is concerned, the inward curves are so large that shoes with such a sole must have been uncomfortable to wear. The remaining sole types are considered to be more comfortable, although not all of them are correspondingly well adjusted to a normal foot.

Soles without inward curves or distinct inwards curves around the instep – i.e. soles of type I, A3 and A4 – are of particular interest. The lack of inward curves around the arch suggests that these types of soles are a better fit for at least the youngest children than the others, since they up to the age of about three generally lack the arch under the foot and put the entire sole of their feet on the ground.

Distribution of sole types

In the following, the distribution of the soles from the Gullskoen area in sole types is studied (table 4.1). About one third – 31 per cent – of these soles are defined as children's soles, which in the following are tentatively divided into three age groups, as discussed earlier. Children up to the age of three thus wore shoes with soles up to and including size 21, children between the age of three and seven wore shoes with soles from size 22 up to and including size 27, and children from seven to about twelve years wore shoes with soles from size 28 up to size 33 inclusive. An examination of the relationship between children's and adults' soles of the total number of children's and adults' soles may illuminate whether or not children and adults wore the same type of soles. Other questions relate to the size of the soles. What does the distribution of soles look like when size is concerned? Do the same sizes vary between the types of soles? Additionally, is it possible to discern gender patterns, including shoes for children?

Altogether 140 of the 1,358 soles from Gullskoen can be characterized as atypical soles. Because of the small number of such soles, any reliable conclusions can hardly be drawn based on the tendencies this material indicates. In particular this applies to types A1 and A3. The results thus need to be considered in each case.

Type I

All in all there are 244 soles of type I from the Gullskoen area, i.e. a fifth of the total number of classified soles (18 per cent). Together, type I soles make up the second largest group of classified soles, and are relatively common among both adults and children – 154 are adults' soles, 90 are children's soles. This means that two thirds (63 per cent) of type I soles are adult soles, which corresponds to the general relationship between the number of children's soles and adults' soles from the Gullskoen area. The share of type I adults'

	Type I	Type II	Type III	Type IV	Type A1	Type A2	Type A3	Type A4	Sum	Type I	Type II	Type III	Type IV	Type A1	Type A2	Type A3	Type A4	%
Sizes 0–21	14	7	1			2	1	2	**27**	52	26	4			7	4	7	**100**
Sizes 22–27	42	51	2		1	2		11	**109**	38.5	46.8	1.8		0.9	1.8		10.1	**100**
Sizes 28–33	34	179	47	2	3	16	1	4	**286**	11.9	62.6	16.4	0.7	1	5.6	0.3	1.4	**100**
Sum 0–33	**90**	**237**	**50**	**2**	**4**	**20**	**2**	**17**	**422**	**21.3**	**56.2**	**11.8**	**0.5**	**0.9**	**4.7**	**0.5**	**4**	**100**
Sizes 34–49	154	484	175	26	13	50	7	27	**936**	16	52	19	3	1	5	1	3	**100**
Sum	**244**	**721**	**225**	**28**	**17**	**70**	**9**	**44**	**1358**	**18**	**53**	**17**	**2**	**1**	**5**	**1**	**3**	**100**

Table 4.1 *Classified soles from Gullskoen. Number of soles to the left, percentage to the right. N=1358.*

soles lies between one tenth and one fifth of the total number of classified adult soles – 16 per cent – whereas the 90 children's soles make up a little more than one fifth of all children's soles from the Gullskoen area – c. 21 per cent. The percentage of children's and adults' soles are in other words about the same for both age groups, which may indicate that this type of soles were not considered a typical children's or adults' sole. Yet, the same numbers also imply that a larger share of children than of adults wore shoes with this type of sole. Perhaps this can be seen in relation to the fact that type I soles are shaped in a way that makes them fit young children's feet.

If type I soles at least to some degree may be considered particularly suitable for the feet of young children, one would expect to see a relatively high share of small sizes. However, only 14 of type I children's soles were smaller than size 22, and thus related to the youngest group of children. At the same time, 42 soles belong in the group consisting of sizes from 22 up to 27 inclusive, and 34 to the group of sizes from size 28 up to size 33 inclusive. The smallest sizes represent only between one tenth and one fifth of the total number of type I children's soles – 16 per cent. On the other hand, these 14 soles make up 52 per cent of the total number of soles of sizes smaller than 22. More than half of the smallest soles are thus of type I, which may indicate that this type of soles was the most common for the youngest children.

In addition, the largest group of type I children's soles consists of soles of sizes 21 up to and including size 27 – almost half of this type of soles are of these sizes. Close to 40 per cent of the total number of soles with the middle sizes were type I soles. Yet, the same results are not proved for soles of larger sizes. Although they make up nearly 40 per cent of all type I children's soles, this only represents c. 12 per cent of the total number of older children's soles. In other words, it seems that the younger the child, the higher the share of soles of this type – perhaps because of their less developed feet.

Type II

Both with regard to soles from the Gullskoen area in general, as to children's soles in particular, soles of type II make up the largest group. More than half of all soles are of type II – altogether 484 adults' soles and 237 children's soles. Like type I, the adults' soles make up about two thirds of the total number of type II soles – 67 per cent. Children's soles of type II make up about 33 per cent of all of this type of soles. In other words, the general relationship between adults' and children's soles from the Gullskoen area is reflected in the distribution of soles also of type II. Moreover, both adults' and children's soles of type II separately make up more than half of the total number of adults' and children's soles from the Gullskoen area (c. 57 per cent of the children's soles, and 52 per cent of the adult soles). Like type I, the percentage of children's and adults' soles is thus relatively similar. In addition, the percentage is slightly higher for children's soles. This means that like type I soles, type II soles cannot be characterized as typical children's or adults' soles. The same numbers also imply that shoes with type II soles were slightly more common among children than among adults.

Where sizes are concerned, there are only seven children's soles of the smallest sizes, whereas

no less than 51 and 179 soles, respectively, are found in the group of middle- and large-sized soles. Compared to soles of the smallest sizes, children's soles of middle and large sizes are thus much better represented. A possible explanation may be that type II soles to a lesser degree than type I soles were adapted to the smallest feet, and also fit a developed foot better. A rise in the percentage of medium- and large-sized type II soles compared to type I may indicate this. The medium-sized soles of type II make up barely half of all medium-sized soles (47 per cent) – opposed to type I soles of the same sizes, which make up close to 40 per cent of all such soles. The same number for the largest type II soles is close to two thirds of all large children's soles (about 63 per cent) – and a little more than one tenth for large type I soles (12 per cent). Consequently, a relatively high share of the two groups of large soles (the largest in particular) is of type II. In addition, there is a considerable increase of soles of these sizes compared to type I.

The seven smallest soles, on the other hand, make up a little more than one fifth of all small-sized soles (26 per cent). The share of type II soles of the smallest sizes is in other words halved compared to the share of small type I soles. Despite this small number, type II soles are the second largest group among the smallest soles. This, as well as the fact that the largest groups of medium- and large-sized soles in general are of type II, is another example of the popularity of this type. Types I and II together may thus indicate that children to a larger degree than adults wore shoes that were comfortable and fitted their feet.

Type III

Altogether 225 soles of type III have been recorded in the Gullskoen area, which makes the group of type III soles almost as big as type I. Yet, of these there are only 50 children's soles, while 175 are adults' soles. Opposed to type I and type II, the number of children's soles compared to adults' soles is smaller than for the first two types – about three quarters of the soles are adult soles (78 per cent). In addition, the percentage of type III adults' soles of the total number of adults' soles of this type is almost the double of the share of the children's soles. Barely one fifth of all classified adults' soles is of type III (19 per cent), whereas the same number of children's soles is just above one tenth (12 per cent). In other words, it seems that adults rather than children wore shoes with such soles, maybe because this type of soles is slightly less adapted to a normal foot, and in addition fits a child's foot less than type I does. However, the fact that type III soles are the third most popular type of soles both among adults as well as among children, indicates at the same time that this type was relatively common.

With regard to sizes, there are one small (size 20), and two medium-sized soles, leaving the remaining 47 in the group of large soles. Nine tenths of type III children's soles are thus to be found in the group consisting of the largest sizes, of which more than a half are of sizes 31, 32 or 33. Compared to the largest soles, there are hardly any type III soles of the medium- and small-sized soles. This underlines the understanding of type III soles as primarily adults' soles.

Type IV

Type IV is with its 28 soles the smallest group of the main sole types. All in all 26 soles are adults' soles; only two are children's soles – one sized 32, the other sized 33. Both these soles are in other words relatively large and can possibly be related to adults or old children and youths. Therefore, they cannot alone document children's shoes. In addition, these two children's soles make up about one tenth of all type IV soles (seven per cent) – if one can divide such a small number – and also a minimal share (less than one per cent) of all classified children's soles. Neither do adults' soles of type IV make up a large part of the total number of classified adult soles; still, the share is five times bigger than the share of children's soles (2.8 per cent). The share of children's shoes with type IV soles is in other words very small, and it seems that such soles primarily were meant for adults – perhaps because of their relatively extreme shape.

Type A1

Compared to the main types, the atypical soles are relatively few. There are only 17 soles of type A1, which makes this type the second smallest group of atypical soles. Among these there are four children's soles. Despite the shape, which

corresponds to a foot relatively well, this type of soles apparently was not particularly widespread neither among children nor adults. The adults' soles make up about four fifths of all type A1 soles, which means that the relationship between children's and adults' soles differs from the general 1:3 relationship. This may indicate that more adults than children wore shoes with such soles. However, the percentage of the total number of classified children's soles is only one per cent – about the same as the adults' soles of this type. Type A1 cannot thus be characterized as a typical children's or adults' sole.

There are no soles with the smallest sizes of this type, but the medium- and large-sized soles are represented by one and three specimens respectively – sizes 25, and 28, 31 and 32. Thus, only two of these can with any certainty be attributed to children. This underlines the impression of A1 as primarily an adults' sole.

Type A2

Soles of type A2 make up the biggest atypical sole group, both when adults' and children's soles are concerned. Of the total of 70 A2-soles, 50 are related to adults, and 20 to children. The relationship between children's and adults' soles is thus one in three, which corresponds to the general relationship between children's and adults' soles from the Gullskoen area in general. However, within the groups of children and adults the percentage of soles compared to the total number of classified soles is about one twentieth each. The adults' soles of type A2 make up about five per cent of all classified adults' soles – the same number applies to children's soles. Like type A1 this may mean that type A2 soles neither are typical children's nor adults' soles.

It is a paradox that the two relatively similar types of soles A1 and A2 differ so much with regard to number of soles. Neither of the two is better adapted to a normal foot than the other in terms of correspondence in shape. Still, there are three times as many adults' soles and five times as many children's soles of type A2 as there are A1 soles. How to interpret this is not obvious – other than that one of the types was more popular than the other.

Also in the group of type A2 soles there are few small-sized soles: only two small- and two medium-sized soles are found (sizes 20 and 21, and two soles with size 25). The great majority of A2 children's soles are thus relatively large – 16 soles. In addition, all of these come in sizes 30–33, which are close to adults' sizes. Perhaps shoes with this type of soles as well were more often worn by adults.

Type A3

The oval type A3 soles resemble type I soles – soles that fit children's feet well. As already mentioned, soles of the latter type make up the second largest group of soles. Additionally, the percentage of type I soles of the total number of classified children's soles is twice as high the same percentage of adults' soles. Soles of type A3, however, are distributed the opposite way. All in all there are only nine type A3 soles, of which two are attributed to children. The relationship between children's and adults' soles are thus about one to five – and differs from the general relationship between children's and adults' soles from the Gullskoen area. Of the children's and adults' soles, these two and seven soles respectively make up only about half a per cent of all classified children's and adults' soles. Despite the expectations regarding the distribution of this type of sole, A3 is thus an equally uncommon type of sole among children and adults. Based on size, we cannot draw any firm conclusions about whether or not these soles have been regarded as adults' soles – one of the soles is relatively small (size 25), whereas the other comes in size 32.

The general distribution of A3 soles can be compared to the distribution of types IV and A1, but the three types do not seem to share any common characteristics that would make them less attractive than other types. Type IV may be characterized as en extreme variant of type III, and type A1 and A3 as moderate forms of type A2 and A4, respectively. Of the three types, only type IV soles were probably shaped in a way that must have made the shoes uncomfortable to wear. Comfort alone is thus not the reason why type A3 soles are rare, particularly among children's soles. Perhaps types A1 and A3 represent soles that did not stand out in any way, or did not fit adults' feet that well – and at the same time were less adapted to children's feet compared to type I, so that the latter was preferred.

Type A4

Type A4 is also similar to type I, but is even more oval than both this type and A3. However, type A4 soles are more common than the latter. Including 44 soles, type A4 makes up the second largest group of atypical soles. Among these are 27 adults' soles, i.e. almost two thirds of the total number this type of soles (62 per cent). The relationship between children's and adults' soles thus corresponds to the general relationship between children's and adults' soles from the Gullskoen area. The adults' soles of this type make up almost three per cent of the total number of classified adults' soles, whereas the 17 type A4 soles make up four per cent of the total number of classified children's soles. In other words, the share of children and adults who wore shoes with this type of sole is almost the same. The share of type A4 children's soles, however, implies that there were a few more children than adults that wore shoes with this type of sole – perhaps because of its better adaption to children's feet.

With regard to sizes, however, only two small-sized soles have been found (sizes 18 and 20). In addition, there are only four large children's soles (30, 32 and 33) of this type. The group of medium-sized children's soles is thus the largest – comprising eleven soles. All in all these soles make up the third biggest group of small soles, together with small-sized type II soles. This underlines the understanding of type A4 soles as well adapted to children's feet.

Male or female shoes?

Based on the preceding classification, it is to a certain degree possible to relate some types of soles to children's and/or adults' shoes. Relating particular types of soles to men or women, however, has proved difficult. Contemporary written sources – e.g. price lists in Bergen from 1282 (Helle 1982: 428) – separate between male or female shoes, but neither based on form nor archaeological context it is possible to decide whether or not a particular shoe belonged to a man or a woman (Grew and de Neergaard 1988: 103, 105). Larsen also draws similar conclusions in his study of the shoe material from Bryggen (Larsen 1992: 73). Although it is not stated whether the same applies to the types of *soles*, it is considered unlikely that there should be any differences. Thus, it seems impossible to decide whether children wore shoes related to a particular sex or not.

Soles from the Gullskoen area – tendencies

The overall impression of the shoe material from the Gullskoen area is that there are no obvious children's or adults' sole types. As previously mentioned, the general relationship between children's and adults' soles is about one in three. This relationship has been proved for half of the sole types (types I, II, A2 and A4), which represent three of the four largest types (types I, II and A2). Regarding the remaining sole types (types III, IV, A1 and A3), the relationship between children's and adults' soles only varies to a small degree – in general the relationship between children and adults is one in five. Only type IV stands out, by a relationship of c. one in ten.

The same ratios, however, point to a certain relation between sole type and age group. For example, if the general relationship between children and adults (1:3) is not proved for a sole type, this relationship is always characterized by fewer children compared to adults. Although the soles types in question (types III, IV, A1 and A3) in general are relatively small (except type III), they at least indicate a wider distribution among adults than among children. Comparing the percentage of all children's and adults' soles to the total number of children's and adults' soles hints in the same direction, although the differences are small. For types IV, A1 and A3 the percentage of children's soles is only just one per cent of the total number of children's soles, whereas the same numbers for adults are 2.8, 1.4 and 0.7 per cent, respectively. The exception is type III, which shows a percentage of 20 for adults and ten for children. This type of soles can thus to a higher degree than the others be related to adults.

The impression that children and adults to some degree wore different types of shoes with different soles is underlined when examining the distribution of the smallest children's soles. Generally, it seems that the largest shares of small soles appear in types that fit small children's feet well or at least fit feet in general. Types I, A3 and A4 are considered well suited for small children's feet. The most widely distributed soles among

children up to about three years also proved to be type I soles – more than half of the small-sized soles are of this type (14 out of 27), while only just one fifth of all adults' soles (159 out of 936). In addition, type II soles – soles that best fit a normally developed foot – were relatively popular. The remaining small soles, on the other hand, were more or less evenly distributed among types III, A2, A3 and A4 – sole types that seem to fit children's feet. There are no obvious explanations for this, but as previously indicated it may be that of the oval soles, type I soles were preferred for children (perhaps because this type of soles relates the best to small children's feet in general) – and type II when a more characteristic "adult" foot shape is considered. However, in general there are so few soles and so little difference concerning distribution of the types III, A2, A3 and A4 that it seems random which type of soles were worn by the youngest children if they did not wear types I or II.

Where differences in shape are concerned, it seems that there were no particular children's or adults' soles in medieval Bergen – all the eight sole types distinguished in this study were used by both children and adults. At the same time one gets the impression that children – and particularly small children – to a higher degree than adults wore shoes with soles that fitted the shape of their feet. A study of shoes where also the uppers could be considered would provide a more extensive understanding of children's and adults' shoes. However, this represents both a time-consuming and difficult work beyond the limits of this study. Regarding possible male or female shoes, there are also few possibilities of making such a correlation.

The presence and perception of children

The differences between soles (and thus shoes) children and adults wore – in addition to the differences between children in different age groups – may also give information about how children were perceived at different stages. Altogether the children's soles and adults' soles are distributed similarly – there seem to be small differences regarding the use of different types. Examining soles of the age groups 0–3, 3–7 and 7–12 separately, however, changes this pattern. With the exception of types I and II – which apparently were common among all three age groups – the distribution of soles used by the youngest children (and to a certain extent also children in the middle age group) differ from the distribution of soles used by adults. The children in the youngest and middle age groups thus seem to have worn different types of shoes than adults did.

The distribution of sole types related to children in the oldest age group, however, is mistakably similar to the one related to adults. Contrary to the other children's soles, they show an "adult" pattern – a pattern which to some degree differs from the shoes worn by children in the two youngest age groups.

Although the number is too small to conclude with any certainty, the soles indicate a tendency that children of different ages wore different types of shoes, in addition to the differences between shoes for children and adults. This may also imply that a notion existed of children as a category of its own – and that children were not regarded as a uniform group, but was differentiated according to age. When shoes are concerned, it seems that it was not until at the ages of seven to twelve that children started to wear the same types of shoes as, and maybe also dress like adults.

All children's soles from Bergen

The 1,857 children's soles from all excavations in Bergen that can be measured from heel to toe represent sizes from 14 up to 33 inclusive (table 4.2) (fig. 4.14). All in all, there is a steady increase in the number of soles of each size up to and including size 32. The number of soles of size 33, however, is just half of the number of size 32 soles. According to Larsen's study of the shoe material from the Gullskoen area, this is not the case there, and it is unlikely that there should not be an increase in the number of soles from Bergen in general of this size as well. During the examination of the sole material from all archaeological sites in Bergen, only soles that measured up to and including 22 cm have been included – a length that corresponds to size 33. After the examination of the whole material, it became clear that soles measuring about 22.2–22.3 cm rounded off after calculations also correspond to this size. Because of lack of time needed to identify these soles, they had to be left out in

	C. 0–3 years sizes 14-21							C. 3–7 years sizes 22-27						C. 7–12 years sizes 28-33						Sum
Size	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
	1	7	8	17	16	36	41	49	81	67	69	102	82	111	170	219	293	360	128	
Sum	**126**							**450**						**1281**						**1857**
%	**7%**							**24%**						**69%**						**100%**

Table 4.2 *Number of soles per size. N=1857.*

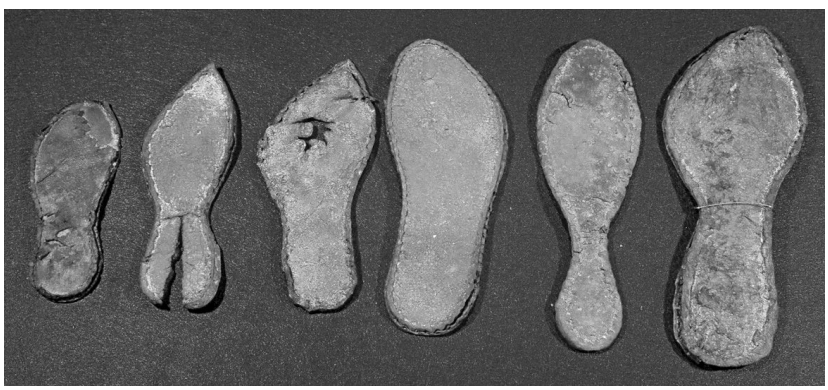

Figure 4.14 *Children's soles measuring from 11 to 19 cm (sizes 17–29) (346/6250, 346/5167, 346/4888, 346/317, 346/4721 and one without number). Photo: Tore Samset Mygland.*

this analysis – which again probably has led to a lower number of size 33 soles than what one would expect.

Studying the relationship between soles and different age groups, the number of soles increases with each group of sizes. The small-sized soles make up only seven per cent and the medium-sized 24 per cent, whereas more than two thirds of the soles belong to the group of large sizes. Particularly sizes 31–32 stand out, characterized by a distinctly higher number of soles compared to the remaining soles. This may indicate that these sizes represent a borderline between children's and adults' shoes. The distribution of children's soles from the Gullskoen area in different size groups corresponds to the general distribution of soles from Bergen – where only six per cent of the soles belong in the group of small sizes, 26 per cent in the medium size group, and 68 per cent in the group of large soles. The great increase in the number of soles per age group may indicate that it became more common to wear shoes, the older the child became. In addition, this underlines the tendencies as shown for the toys, with the highest representation of older children, while at the same time the youngest groups of children also are represented in the archaeological material.

Chronology

Of the 2,088 children's soles examined in this study, 254 (i.e. 12 per cent) were not datable, due to wrong numbers and/or uncertainties related to find context. Among these, there are three B-numbers and three MA-numbers, which stem from rather old excavations. In addition, 420 soles cannot be related directly to the fire layer chronology from Bryggen. In the chronology of the different soles types from the Gullskoen area will be presented, followed by the dating of all soles from Bergen, the soles from the Gullskoen area are included.

Chronology of the soles from the Gullskoen area

The chronology of the 422 children's soles and the 936 adults' soles from the Gullskoen area is presented in tables 4.3 and 4.4. Because of misnumbering and uncertainties related to their context, 49 (about 12 per cent) of the children's soles cannot be dated. Where adults' soles are concerned, the dating is based upon Larsen's dating from 1992, primarily worked out before the revision of the fire layer chronology from Bryggen. This probably does not have much impact on the tendencies in the material, yet, the reservation is made that there may be certain incon-

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	1702–1955 Period 9	Not dated	Sum
Type I		13	11	37	13	6		1	9	**90**
Type II	2	7	16	55	97	22	5		33	**237**
Type III			2	10	23	6	4		5	**50**
Type IV				1					1	**2**
Type A1				3	1					**4**
Type A2		2		8	6	4				**20**
Type A3		1		1						**2**
Type A4	3	7	3	2	1				1	**17**
Sum	**5**	**30**	**32**	**117**	**141**	**38**	**9**	**1**	**49**	**422**

Table 4.3 *Dating of the children's soles from Gullskoen. N=422.*

	1120–1170/71 Period 2	1170/71–1198 Period 3	11198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	11476–1702 Period 8	Sum
Type I	4	65	45	16	18	5	1	**154**
Type II	9	59	104	119	119	54	20	**484**
Type III		7	24	22	81	28	13	**175**
Type IV		1	2	2	14	7		**26**
Type A1		3	3	4	2	1	1	**14**
Type A2	9	15	4	7	5	10		**50**
Type A3	3	1	2					**6**
Type A4	9	10	5	2	1			**27**
Sum	**34**	**161**	**189**	**172**	**240**	**105**	**35**	**936**

Table 4.4 *Dating of the adults' soles from Gullskoen. N=936. Based on Larsen 1992.*

gruities between the dating of the children's and the adults' soles.

Chronology of the sole types

In general, there is an increase in the number of soles for each period up to and including period 6 (1332–1413), followed by a distinct fall (tables 4.3 and 4.4). Particularly periods 5 (1248–1332) and 6 (1332–1413) stand out with a large number of children's soles. Contrary to the children's soles, the adults' soles come in large numbers also in the three preceding periods 3–5 (1170/71–1332).

Examining the chronological distribution of each sole type, however, gives a more complex picture. *Type I* children's soles are dated to periods 3–7 (1170/71–1476). For this type period 5 (1248–1332) is marked by the largest number of soles. The number of soles is generally the same in the remaining periods, but is then halved in period 7 (1413–1476) compared to earlier periods. Where the number of soles per year is concerned, periods 3 (1170/71–1198) and 5 (1248–1332) have the highest number of soles. Type I soles are thus primarily found in periods 3–6 (1170/71–1413), although they are represented later, as well. Also the adults' type I soles date from the entire examination period, but they come in largest numbers in period 3 (1170/71–1198), followed by a gradual reduction.

Type II soles are the only children's soles represented in the whole time span, from c. 1120 to 1700. Both when the number of soles per period and per year is considered, the chronological distribution of this type of children's soles gradually increases up to and including period 6 (1332–1413). After this period there is a distinct fall in the number of soles. Regarding the number of soles per period, the distribution of adults' soles of this type corresponds to the distribution of children's soles. Yet, there are the most soles per year in periods 3 (1170/71–1198) and 4 (1198–1248). Children's soles of *type III* show a similar distribution, but are not represented before period 4 (1198–1248). Up to and including period 6 (1332–1413) the number of soles both per period and per year increases, followed by a gradual reduction up to and including period 8 (1476–1702). Type III adults' soles, on the other hand, appear somewhat earlier – for the first time in period 3 (1170/71–1198) – but shows more or less the same distribution pattern as the children's soles of this type. Regarding soles per year, most soles are represented in period 4 (1198–1248), followed by a gradual reduction throughout the rest of the examination period.

The only type IV children's sole that is dated, belongs to period 5 (1248–1332). There is a small number of adults' soles of this type in periods 3–5 (1170/71–1332), but both where soles per period and per year are concerned, type IV soles are primarily found in periods 6 (1332–1413) and 7 (1413–1476).

The atypical soles are, as previously mentioned, few and additionally unevenly spread among the different periods. The four *type A1* children's soles are dated to periods 5 and 6 (1248–1413). The adults' soles, on the other hand, are represented in all periods, except period 2 (1120–1170/71). Taking into consideration the number of soles per year, there are most soles in the three earliest periods, yet it seems that the number is falling from period 3 (1170/71–1198). Children's soles of *type A2* are recorded in period 3, and in increasing numbers from period 5 to 7, i.e. mainly after c. 1300. The adults' soles are unevenly distributed among periods 2–7. Here, periods 2, 3 and 7 stand out with a higher number of soles than in the other periods. Focusing on soles per year, though, period 3 is marked by the highest number of soles, followed by a reduction through the remainder of the examination period. The two children's soles of *type A3*, on the other hand, belong to periods 3 (1170/71–1198) and 5 (1248–1332). Type A3 adults' soles are dated to periods 2–4 (1120–1248), the number of soles per year as well as per period falls in each period. *Type A4* children's soles are concentrated in periods 2–6, i.e. from about 1120–1413. Both per period and per year, the highest number of soles is documented in period 3 (1170/71–1198), followed by a gradual reduction. This same distribution pattern is also proved for the adults' soles of this type.

It thus seems that the majority of children's soles belongs to the period between 1170/71 and 1476. However, there are also older and younger specimens. In general, the sole types from the Gullskoen area show a corresponding distribution pattern, both when children and adults are concerned.

Temporal trends

The number of all children's soles from the Gullskoen area per year displays a marked increase up to about 1200 (fig. 4.15). In the following decades, the number of soles is reduced, and increases again between c. 1330 and 1413. From then on, the number of soles per year falls to a minimum. This is, however, hardly representative for the actual use and discarding of worn out shoes, but probably also related to new methods of waste disposal at Bryggen in the fifteenth century, as mentioned in chapter 2; waste now to a higher degree than earlier being removed from the Bryggen area (Økland 1998). The temporal distribution of soles in the size groups 28–33, 22–27 and 0–21 is more or less corresponding, but their fluctuations are less marked compared to the general distribution pattern for all children's soles from the Gullskoen area. In addition, only size group 28–33 shows a distinct peak in period 6 (1332–1413), as documented for the general distribution of children's soles. Like the soles from the Gullskoen area in general, the number of soles in the medium size group peaks in period 3 (1170/71–1198), but not significantly. All in all, the chronological distribution of the three sole categories related to children in different age groups show a similar pattern, but de-

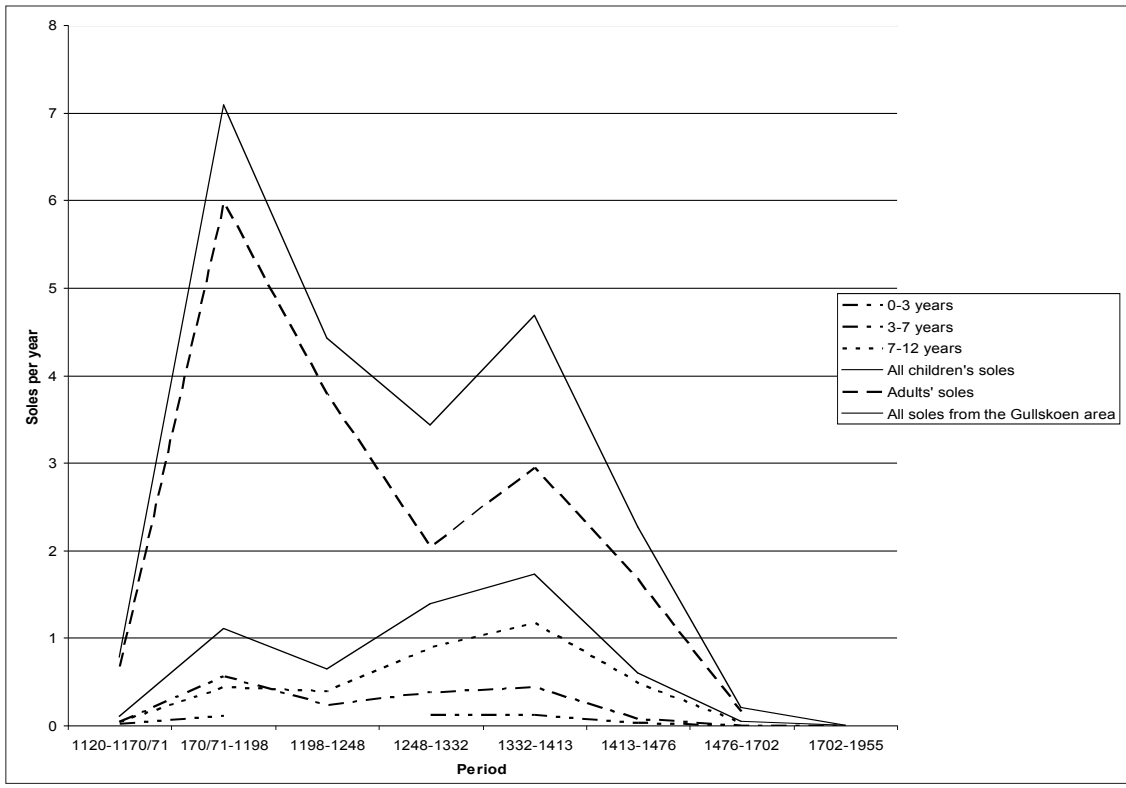

Figure 4.15 *Children's soles and adult's soles from Gullskoen per year.*

viates somewhat from the general distributional pattern of soles from the Gullskoen area.

As compared to the toy material, the children's shoes represented by soles from the Gullskoen area show a somewhat different pattern: Whereas the highest number of toys per year is recorded in period 3 (1170/71–1198), the number of soles increases up to period 6 (1332–1413).

The distribution of adults' soles is relatively similar to the general distribution of children's soles. Yet, children's soles appear relatively more frequently somewhat later than adults' soles – with a peak in periods 5–6 (1248–1413), not in period 3 (1170/71–1198) as for the adults' soles. The increase and decrease in the number of soles per year is also less distinct. From period 5 (1248–1332), however, the distribution patterns for children's and adults' soles are relatively similar. Based on Larsen's dating of all of the soles – children's soles included – this pattern remains the same.

Soles with sizes representing children in the oldest age group, 7–12 years, dominate the whole time span in the Gullskoen area (table 4.5). In periods 2 and 3 (about 1120–1198), they make up 40 per cent of all children' soles from this area, a share that increases to more than 60 per cent in period 4 (1198–1248), to 82 per cent in period 7 (1413–1476) and to 78 per cent in period 8 (1476–1702). Also the share of soles representing children in the middle age group varies. The largest concentrations of these soles are found in periods 2 (40 per cent) and 3 (50 per cent). In periods 4–6 (1198–1413) these soles generally make up about one third of all children's soles, but the share is reduced to about one tenth from 1400 onwards. Children's soles related to the youngest children are missing in period 4 (1198–1248), but generally make up about only just one tenth in the remaining periods. In period 2 (1120s–1170/71), however, the share of small-sized soles is 20 per cent, but the number falls from the middle of the thirteenth century, in periods 5–7 (1248–1476). Additionally, the number of small soles is generally very low. Based on the soles, it thus seems that children in all age

	1120–1170/72 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	1702–1955 Period 9	Sum
0-3 years	1	3		10	10	2	1		**27**
%	20	10		9	7	5	11		
3-7 years	2	15	12	32	36	5	1	1	**104**
%	40	50	38	27	26	13	11	100	
7-12 years	2	12	20	75	95	31	7		**242**
%	40	40	62	64	67	82	78		
Sum	**5** 100%	**30** 100%	**32** 100%	**117** 100%	**141** 100%	**38** 100%	**9** 100%	**1** 100%	**373**

Table 4.5 *Age groups throughout the examination period in the sole material from Gullskoen. Sizes 0–21 represent children at the ages 0–3 years, sizes 22–27 children at the ages 3–7 years, and sizes 28–33 children at the ages 7–12 years. N=373.*

groups are best represented before 1200, and that older age groups are overrepresented in the later material.

For the whole examination period, c. 1120–1700, the relationship between children's soles and adults' soles from the Gullskoen area was about one in three – 31 per cent of the soles were children's soles, and 69 per cent were adults' soles. Is this proportion indicative for the demographic structure? Not before 1865 are there reliable numbers to compare this result with later demographic patterns in Norway. At this time, 25 per cent of the population was younger than ten years of age, and 36 per cent if children under the age of 15 are included (Dyrvik 1983:60). If shoes and shoe sizes can reflect and represent actual age groups in the area, the 1:3-relationship between children and adults documented in the Gullskoen area may thus indicate a "normal" demographic pattern also in an early urban community. However, the relationship between children's soles and adults' soles from Gullskoen is not fixed throughout the examination period, but varies in time, possibly reflecting changes concerning the composition and age structure of the population (although the new ways of waste disposal from the fifteenth century must also be considered). Until the middle of the thirteenth century, the children's soles make up between 13 per cent and 16 per cent of all soles from the Gullskoen area – in other words lower than in the general relationship between children and adults. In periods 5–6 (1248–1413), however, the percentage of children's soles is 40 and 37, respectively. This represents a relatively large share of children's shoes compared to a normal population composition, particularly because the material to a higher degree consists of large soles, and thus primarily represents children older than seven years. This may indicate a more atypical age structure, which may support the interpretation of a town that did not have an ordinary household structure, and where older children perhaps have served as labour force. After about 1410, however, the relationship between children's soles and adults' soles is one in three – 27 per cent of the soles are children's soles, perhaps indicating a decreasing share of children in this area, possibly due to the Hansa taking over the tenements at Bryggen.

Children's soles and adults' soles from the Gullskoen area thus indicate a chronological pattern where the last decades of the twelfth century stand out regarding finds related to children. Where children's soles are concerned, however, there are most soles in period 6 (1332–1413). I will return to this unusual representation when presenting and discussing the chronology of soles from Bryggen in general. After period 6 (1332–1413) the number of both adults' and children's soles drop. Like the toys, the soles from the Gullskoen area demonstrate a predominance of artefacts related to children in the oldest age group, from seven to twelve years, where the share of

children in this age group in addition increases in each period. Judging by the soles, it seems that only in the period between about 1250 and 1410 is the relationship between children and adults higher than one in five.

Chronology of all soles from Bergen

About 12 per cent – 254 soles – of the 2,088 children's soles from Bergen could not be dated. Additionally, 420 soles are dated according to chronologies that do not correspond to the fire layer chronology from the extensive Bryggen excavation (tables 4.6 and 4.7). To make the presentation as simple and straightforward as possible, these datings have tentatively been presented according to centuries (table 4.7). Altogether 1,414 soles are dated according to the fire layer chronology from Bryggen, of which only a small number originates from other excavations than the extensive Bryggen excavation in the northern part of the Bryggen area. Aspects related to the chronology of soles from other parts of Bergen, is mentioned specifically.

The children's soles from Bryggen cover all the six hundred years long period of this study. In addition, four soles are dated to after 1700. No soles have been dated to period 1 (after 1069–the 1120s), and only a few soles are represented in period 2 (1120s–1170/71). Up to and including period 6 (1332–1413), however, the number increases distinctly, followed by a decline in the two following periods 7–8 (1413–1702). Period 6 (1332–1413) is best represented, but also periods 4–5 (1198–1332) stand out with many soles. The soles from the Gullskoen area thus show the same distribution pattern as from all of Bryggen in general. In addition, it can also be observed that children's soles generally are distributed differently than both toys and other groups of artefacts found at Bryggen.

The remaining 420 soles dated according to other methods than at Bryggen, reveal more or less similar pattern as the Bryggen material. However, they show a peak in the thirteenth century – particular in the second half – followed by a reduction in the fourteenth century, and particularly in the late Middle Ages (c. 1350–1536).

Age groups

The relationship between soles and the three age groups throughout the examination period may also give an idea of the age composition of children in Bergen in different periods. Table 4.8 presents the 1,414 soles divided into the age groups 0–3 years (sizes 0–21), 3–7 years (sizes 22–27) and 7–12 years (sizes 28–33). The biggest share of the small-sized soles is recorded in period 2 (1120s–1170/71), making up about 17 per cent of all children's soles in this period. In the following periods, the share gradually falls to about five per cent in period 7 (1413–1476). Period 8 (1476–1702), however, is marked by a small increase in the share of small soles. The medium-sized soles are distributed in more or less the same way – the share falls from almost 42 per cent in period 2 (1120s–1170/71) to nine per cent in period 8 (1476–1702). Five medium-sized soles were also dated to period 9 (1702–1955), representing an increase of these soles of 25 per cent.

Each period the small- and medium-sized soles – attributed to children under the age of seven – thus make up a steadily smaller share of the total number of children's soles, whereas the largest children's soles show an opposite chronological distribution. The share of these soles increases in each period, from about 42 per cent in period 2 (1120s–1170/71) to 80 per cent in period 8 (1476–1702). Based on the sole material, it may thus seem as the youngest children are underrepresented and that the material mainly reflects children from the age of seven in most periods. Also in this area the results from the Gullskoen area apparently correspond with the results from the Bryggen area as a whole.

The distribution patterns for the three size groups per year are more or less the same (fig. 4.16). Like the children's soles from the Gullskoen area, the general number of soles per year increases from a relatively small number in period 2 (before 1170), to a maximum in period 6 (1332–1413). After around 1400 this number is markedly reduced. Similar to what was evidenced for the children's soles from the Gullskoen area, the three size groups fluctuate less when the representation per year is considered. The group of large-sized children's soles, however, shows a dis-

	1120–1170/71 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413– 1476 Period 7	1476–1702 Period 8	1702–1955 Period 9	Not related to the Bryggen chronology	Not dated	Sum
Number of soles	12	93	233	429	518	87	38	4	420	254	**2088**

Table 4.6 *Dating of the children's soles from Bergen. N=2088.*

	Sum
C. 13th century	**214**
C. 14th century	**115**
C. 15th century	**54**
C. 16th century	**23**
C. 17th century	**14**
Sum	**420**

Table 4.7 *Dating of the children's soles originating from other areas than Bryggen, or not related to the Bryggen fire layer chronology. N=420.*

	1120–1170/72 Period 2	1170/71–1198 Period 3	1198–1248 Period 4	1248–1332 Period 5	1332–1413 Period 6	1413–1476 Period 7	1476–1702 Period 8	1702–1955 Period 9	Sum
0–3 years	2	7	13	23	24	4	4		**77**
%	16.7	8	6	6	5.2	5	11		**6%**
3–7 years	5	31	60	98	107	14	3	1	**319**
%	41.7	36	29	25	23.4	18	9	25	**25%**
7–12 years	5	48	135	264	327	60	28	3	**870**
%	41.7	56	65	69	71.4	77	80	75	**69%**
Sum	**12** 100.1%	**86** 100%	**208** 100%	**385** 100,1%	**458** 100%	**78** 100%	**35** 100%	**4** 100%	**1266** 100%
Unknown size		7	25	44	60	9	3		**148**
Sum	**12**	**93**	**233**	**429**	**518**	**87**	**38**	**4**	**1414**

Table 4.8 *The relationship between different age groups in Bergen throughout the examination period. Based on the soles from the Bryggen-area related to the fire layer chronology from the Bryggen excavation. N=1414.*

tribution almost identical to the children's soles from the Bryggen site in general.

Both at the Bryggen site as a whole and at the smaller area of Gullskoen within the Bryggen site, large-sized soles dominate, as is also the case in the excavations from other parts of the town. The exception is Strandsiden, where only one sole sized 21 and another sole that could not be measured are recorded. All six soles from Øvregaten/Stretet, on the other hand, belong to the group of the oldest children. In addition, large children's soles dominate this material from Vågsbotn (table 4.9). In general, almost three quarters of all dated children's soles from Vågsbotn are large, whereas the medium- and small-sized ones make up about one quarter and one twentieth of the total number of dated soles. This pattern corresponds with the general relationship between the sole categories from the Bryggen site, although the share of large-sized soles is somewhat smaller.

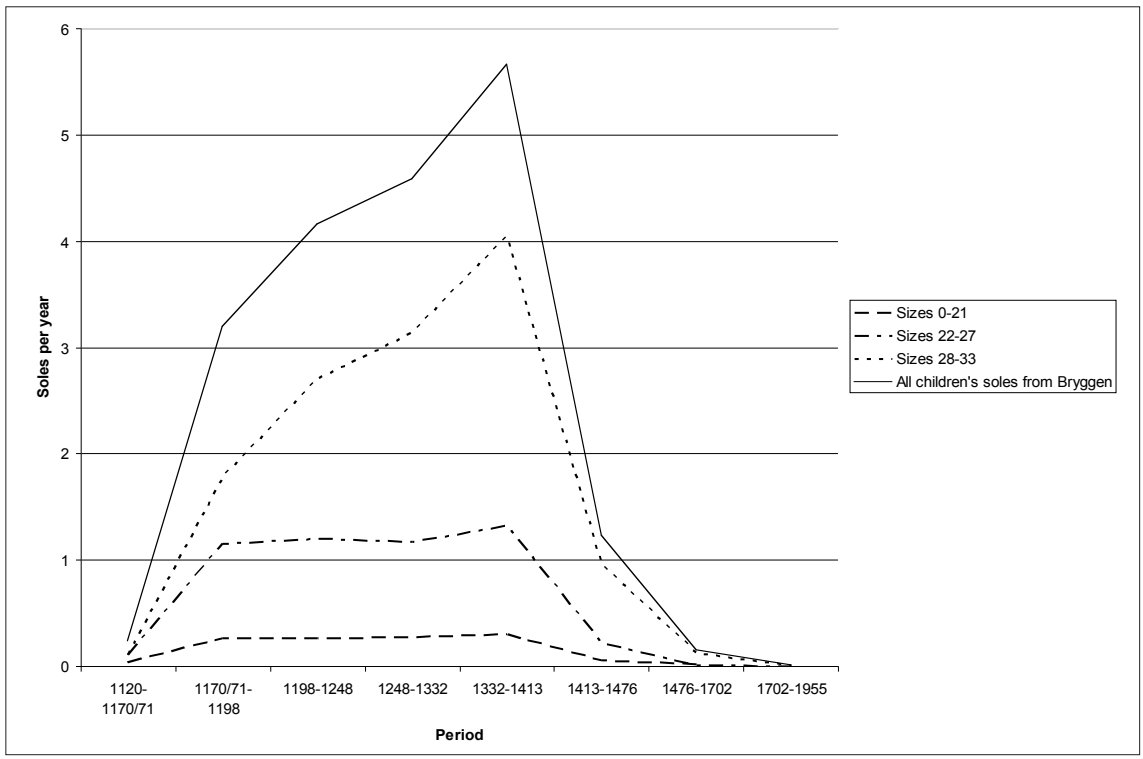

Figure 4.16 *Children's soles from Bryggen per year.*

	C.14th century	C.15th century	C.16th century	C.17th century	C.18th century	Not dated	Sum
Sizes 0–21	6	2	2			2	**12**
%	14	5	15				**9%**
Sizes 22–27	11	8	6	5	1	4	**35**
%	26	19	46	25	100		**26%**
Sizes 28–33	26	33	5	15		11	**90**
%	60	76	49	75			**65%**
Sum	**43**	**43**	**13**	**20**	**1**	**15**	**137**
Unknown size	5	8		1		9	**23**
Sum	**48**	**51**	**13**	**21**	**1**	**26**	**160**

Table 4.9 *The relationship between different age groups based on soles from Vågsbotn. N=160.*

Because these soles are dated according to somewhat different methodologies than at Bryggen, it is difficult to distinguish particular distribution patterns. It seems, however, as if the relationship between the three sole categories remains more or less the same over time, yet with some deviations. All in all, the relationship between the age groups in Øvregaten/Stretet and Vågsbotn seems

to correspond to the pattern revealed at the Bryggen site.

Children's soles – an evaluation

The sole material from Bergen proves that urban children wore shoes in the Middle Ages – and that they also wore shoes with the same types of soles as adults did. At the same time it seems that some types of soles were more commonly used by either adults or children. At least there is a tendency that children to a higher degree than adults wore shoes with soles that more or less fitted the foot. This may also reflect an understanding of children as a separate group with special needs and a notion of childhood as a separate stage in life. Additionally, the differences in types may indicate that children were not regarded as a uniform group – as small-sized soles usually were shaped to fit the foot of a young child.

The fact that the soles related to the oldest children demonstrate an "adult" shape, may indicate a transitional stage from child to adult in the Middle Ages – and that children between the age of seven and twelve were looked upon differently than younger children. The study cannot, however, distinguish between soles related to gender. Like the toys, the soles show a predominance of children in the oldest age group in the entire period of examination, particularly from the beginning of the fourteenth century. The material from the Gullskoen area bears evidence of an atypical age composition of children and adults, indicating a relatively large share of children compared to a normal population composition, particularly of children older than seven years.

5 TRACES OF CHILDREN

In the following, a closer examination on how child-related artefacts are temporally distributed in different parts of the town is presented. The survey includes the distribution in the various socio-economic zones, with a particular focus on the Bryggen area. The main purpose is to examine traces of children in various parts of medieval Bergen at different periods in time – amongst other things to reveal possible areas with households with resident children. In this context it is interesting to see if the toys and the remains of children's shoes are distributed in the same way, or if their distribution patterns diverge – and if this be the case, look at possible causes. It will also be focused on what age groups and sexes are represented, and whether any changes can be observed.

Studies based on the archaeological material from the Bryggen excavation seem to indicate a division of this area in a forward and a rear zone. Hanne Merete Rosseid Moldung has for one of the tenements in the Gullskoen area demonstrated a crude functional division between a forward zone towards the waterfront, with buildings related to storage and activities as loading and unloading of commodities, and a rear part, where the buildings seem to be linked to work and residential use (Moldung 2000: 124). Analyses of different find groups, like fishing tackle, soapstone vessels and textile tools also reveal different distribution. Ole Mikal Olsen has in his analysis of fishing tools found what he characterizes as a forward zone distinguished by activities related to fishing, and a rear, more land oriented zone (O. M. Olsen [1998] 2004: 70–77). The distributional pattern for soapstone vessels from Bryggen does not give as good indications for such a division of the area, and this is according to Hilde Vangstad to a great extent linked to where refuse was dumped rather than the site of use (Vangstad 2003: 115). Vangstad does, however, see it as plausible that for instance fishing tackle and soapstone vessels have been used in different environments (*ibid*). As for the distribution of different groups of finds over time, based on textile tools and fishing tackle there seems to be a dividing line in the mid 1300s, which could indicate important cultural changes (Øye 1988; O. M. Olsen [1998] 2004).

How do the children's soles and toys fit into this spatial pattern? The main goal of the spatial analysis of the material from the Bryggen excavation is to see how it is spread in the forward and rear parts of the area. Only a very small number of objects have been found in contexts that represent the original place of use. In addition, the information on the finds condition for the shoe material on a more detailed level is generally lacking, and I have therefore only been able to plot the child-related artefacts within grid-squares of 8x8 m. The few objects considered to have been found in situ (0–5 cm above proved fire-layer) will, however, be mentioned separately.

Holmen

Bergen can, as already mentioned, be divided into five socio-economic zones in the Middle Ages – Holmen, Bryggen, Øvregaten/Stretet, Vågsbotn and Strandsiden. No child-related medieval objects have so far been found at Holmen. This can partly be explained by the few excavations in this area, where the main focus have been on the monuments and architectural features, and less on finds and find contexts. The fact that Holmen was the residence of the secular and ecclesiastical aristocracy in the high Middle Ages may also explain the lack of objects related to "normal" family households in this area.

Bryggen

Altogether 2,290 of the in all 2,513 artefacts from Bergen that have been discussed in connection with children, stem from 14 excavations in the Bryggen area on the eastern side of the bay Vågen. Three of the excavations (BRM 41 – Sandbrugaten, BRM 48 – Slottsgt. 3/Sildesalslaget, and BRM 223 – Kroken) do not contain dated artefacts related to children; hence this material will not be used in the following analysis. The number of child-related objects taken into account with regard to the Bryggen area is then 2,257 in total, of which 1,878 are soles and 379 are toys or possible toys. Around 90 per cent of the child-related artefacts come from this area of

Bergen. Of these, 241 (11 per cent) are undated: 177 soles and 64 toys. Only 494 of the artefacts from Bryggen stem from other excavations than the extensive Bryggen excavation (BRM 0) – all in all 439 soles and 55 toys. Of these 71 are undated, i.e., 14 per cent.

The Bryggen excavation (BRM 0)

The Bryggen excavation comprised an area of around 5,700 sq metres, and in all 1,763 child-related artefacts originate from this site (fig. 5.1) (Herteig 1990: 9). These objects constitute 78 per cent of this kind of artefacts in the Bryggen area, and 70 per cent of all child-related artefacts when looking at the excavations from the medieval town as a whole. The Bryggen material comprises 1,439 children's soles (82 per cent) and 324 toys (18 per cent). 171 artefacts are undated, i.e., ten per cent of the material.

The soles and toys from the extensive Bryggen excavation are analyzed at a grid level, with regard to whether they were found in the forward or rear part of Bryggen, based on the previously indicated dichotomy of the area and what Olsen refers to as a zone related to fishing or a work zone. The bulk of the artefacts come from fillings, and a more accurate find location than grid square is therefore seen as having little purpose. The scope of the shoe material has also influenced the decision to simplify the spatial analysis. In situ-finds (found 0–5 cm above proved fire-layer) will be mentioned specifically. Since there for some finds

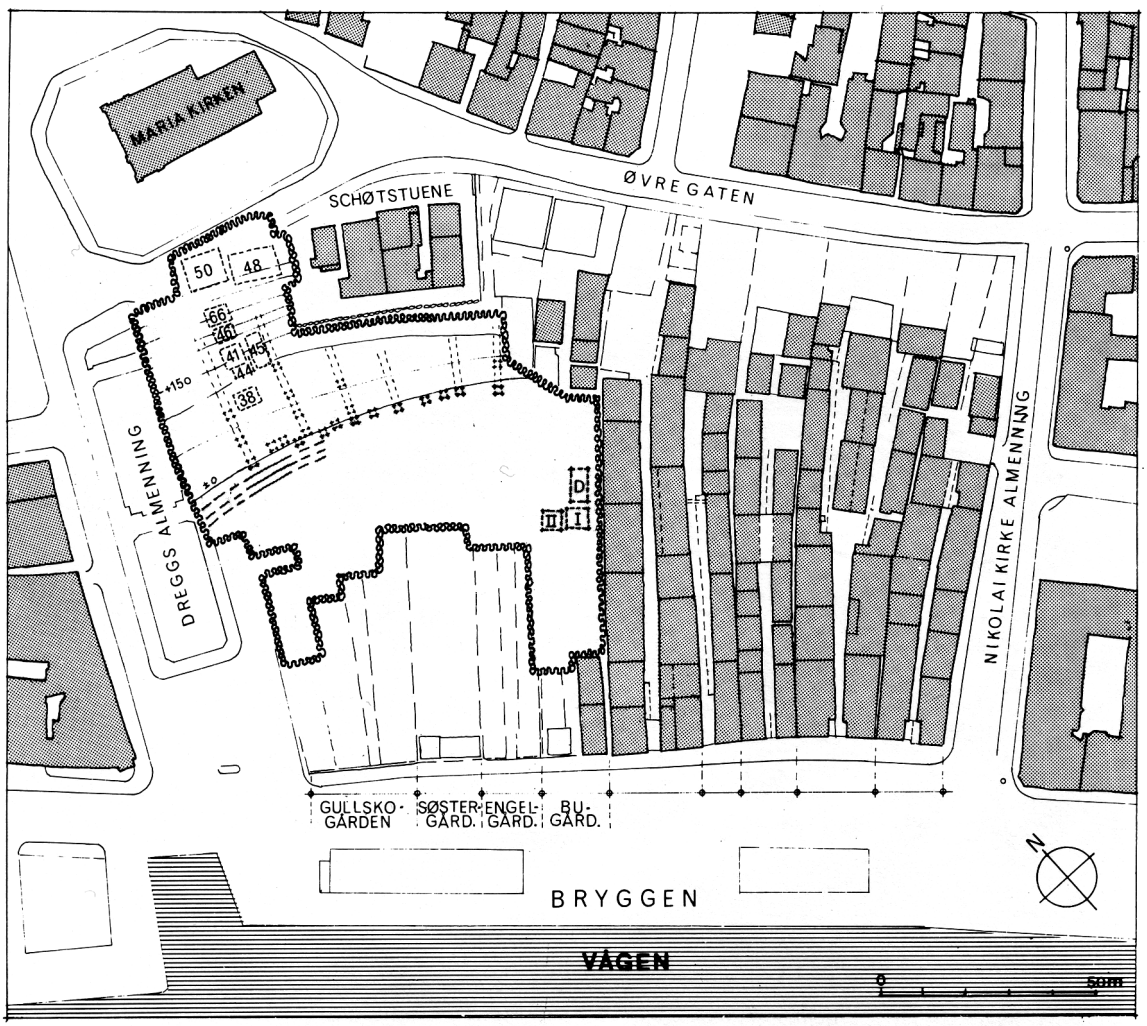

Figure 5.1 *The Bryggen site, BRM 0. After Øye 1988.*

is no reference to where in the grid the find was made, all finds are plotted from the north-western part. Toys are indicated by a square, soles by a dot. A small square/dot indicates a single artefact, while a larger one indicates two to five finds. A solid square inside a square or a solid dot inside a dot marks in situ-finds relative to remains of passage-ways, buildings or other constructions among the soles or toys in this grid. A closer look will also be taken at the distribution of toys in relation to soles to see if specific patterns emerge. The soles must be seen as remains of worn-out shoes and thrown-away refuse, whereas the toys to a greater extent can have been dropped and lost during play or other activities.

Finds in the fillings constitute a problem of representativity with regard to dating, since they represent time after usage. This is, however, not seen as a major issue since the thin soles in general must had had a very short lifetime. The reservation must also be made that the artefacts cannot with certainty be said to originate from the exact grid they have been found in. This is especially valid for the soles, which are in most cases worn out and have consequently been thrown away. There are, however, indications in the town's

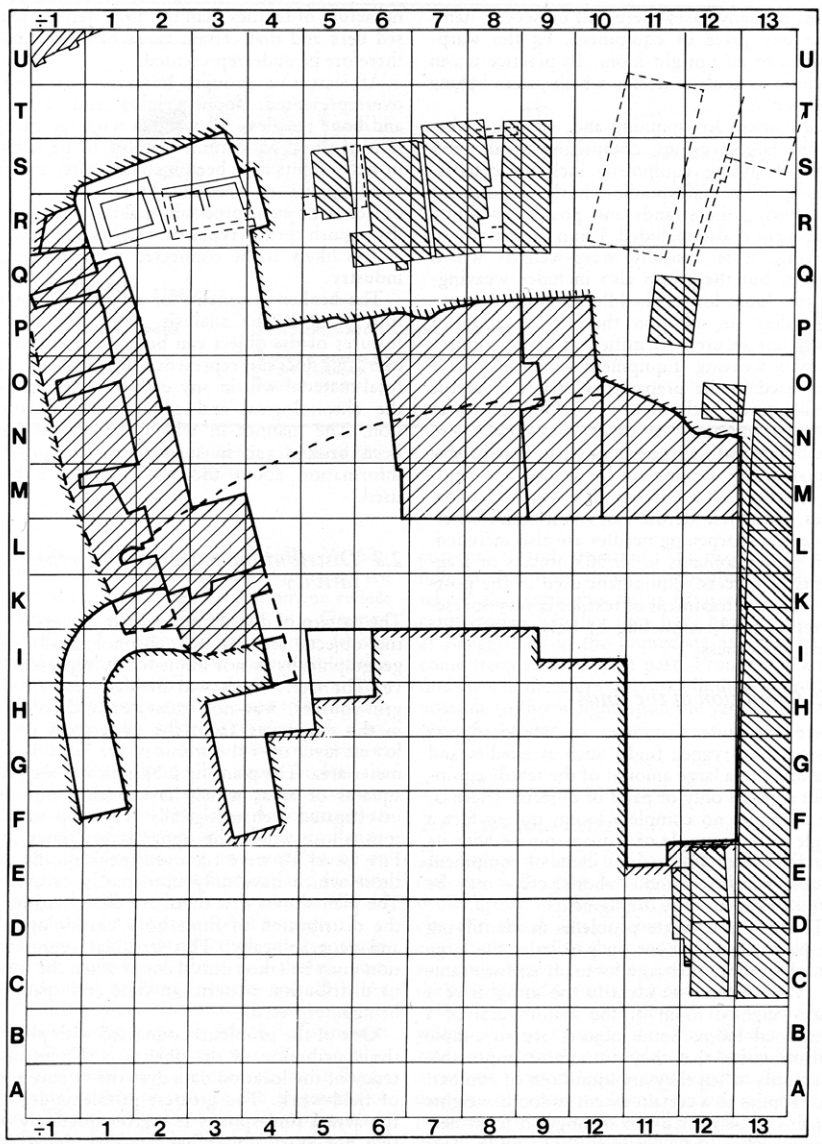

Figure 5.2 *The Bryggen site. Hatched areas were dug by machine down to fire layer no. V. After Øye 1988.*

earliest centuries that artefacts actually stem from an area close to where they were found. As mentioned in chapter 2, findings seem to indicate that finds made in the eaves-drops between the tenements represent refuse from the adjacent building, within the lot boundary (Moldung 2000: 92–93). Additionally, it has been pointed out that not before early in the 1400s was refuse transported from the Bryggen area (Økland 1998). Material was also dumped in the sea, and finds near the waterfront are marked in the various periods as long as they are situated within the excavated site, up to period 6 (1332–1413).

It should also be mentioned that the entire site has not been excavated in the same way and that parts of the tenements Søstergården and Engelgården were excavated by machine down to fire V (1248) (fig. 5.2). However, Vangstad has in her study of soapstone vessels from Bryggen found that the temporal distribution of artefacts was not essentially affected quantitatively, even when the finds from the machine-excavated grid squares are left out (Vangstad 2003: 114).

Period 2 (1120s–1170/71)

Only 24 child-related artefacts have been recorded in period 2 (fig. 5.3). They comprise 12 soles and 12 toys, of which there are two confirmed, eight probable and two possible toys. The toys and soles thus make up 50 per cent each of the child-related artefacts from this period. This constitutes only one per cent of all dated child-related artefacts from the Bryggen excavation, and represents approximately 0.5 child-related artefact per year. Almost all the artefacts stem from fillings, and no artefacts from this period have been found in situ. Only four (17 per cent) have been found in the rear zone, the majority – 20 items (83 per cent) – in the forward area. Of these, six are linked to caissons at the waterfront, and one is from old seabed.

The soles and toys reveal a similar pattern with regard to spatial distribution in this period, with the exception that somewhat more toys than soles are linked to the waterfront. Otherwise, there are no clear differences in the distribution of toys and soles. All three size groups of soles are represented – the smallest (linked to children up to three years) with two soles, and the two others (three to seven years and seven to 12 years) with five each. The toys consist mainly of skates and boats, primarily found towards the rear part of the site. In addition, a horse figure, a toy sword, a spinning top, a miniature soapstone vessel and a yo-yo have been found. Altogether the material representing child-related artefacts is linked to the two older age groups, especially boys from the age of five or six years of age and above.

Period 3 (1170/71–1198)

All in all, 138 of the child-related artefacts have been recorded in period 3 (1170/71–1198), 50 toys (36 per cent) and 88 soles (64 per cent) (fig. 5.4). Of the toys, ten are confirmed, 18 probable and 22 possible child-related artefacts. The number of both toys and soles increased relative to period 2, and the proportion of toys versus soles shows an increase in the number of soles compared to the number of toys. Altogether, the artefacts from this period constitute nine per cent of all dated child-related artefacts from the Bryggen excavation, amounting to just over five child-related artefacts per year. A somewhat greater share of the artefacts than in period 2 have been found in the rear zone – 32 of the artefacts (23 per cent), while 106 items (77 per cent) have been found in the forward zone. One artefact was found in situ in a fire-layer, but no find location beyond grid square is given. By far the majority are found in general fillings.

In general, the finds from this period seem to be concentrated in the area of Gullskoen and along the waterfront. The soles and toys are almost evenly distributed, with a slight overweight of toys in the rear part of the area – 26 per cent of the toys (13 items) and 22 per cent of the soles (19 items) were located here. A smaller share of the toys than the soles is attributed to caissons in the front part – 32 per cent of the toys (25 items) can be linked to such constructions, where as the same figure for the soles is 39 per cent (34 items).

The soles come from all size groupings, with a majority of children from the two upper age brackets – only ten per cent of the soles can be linked to the smallest children. In the toy material, more different types are represented than in the preceding period. In addition to the artefact categories found in the previous period, new categories emerge, such as balls, dolls and human figures, various toy weapons, a spinning top, a

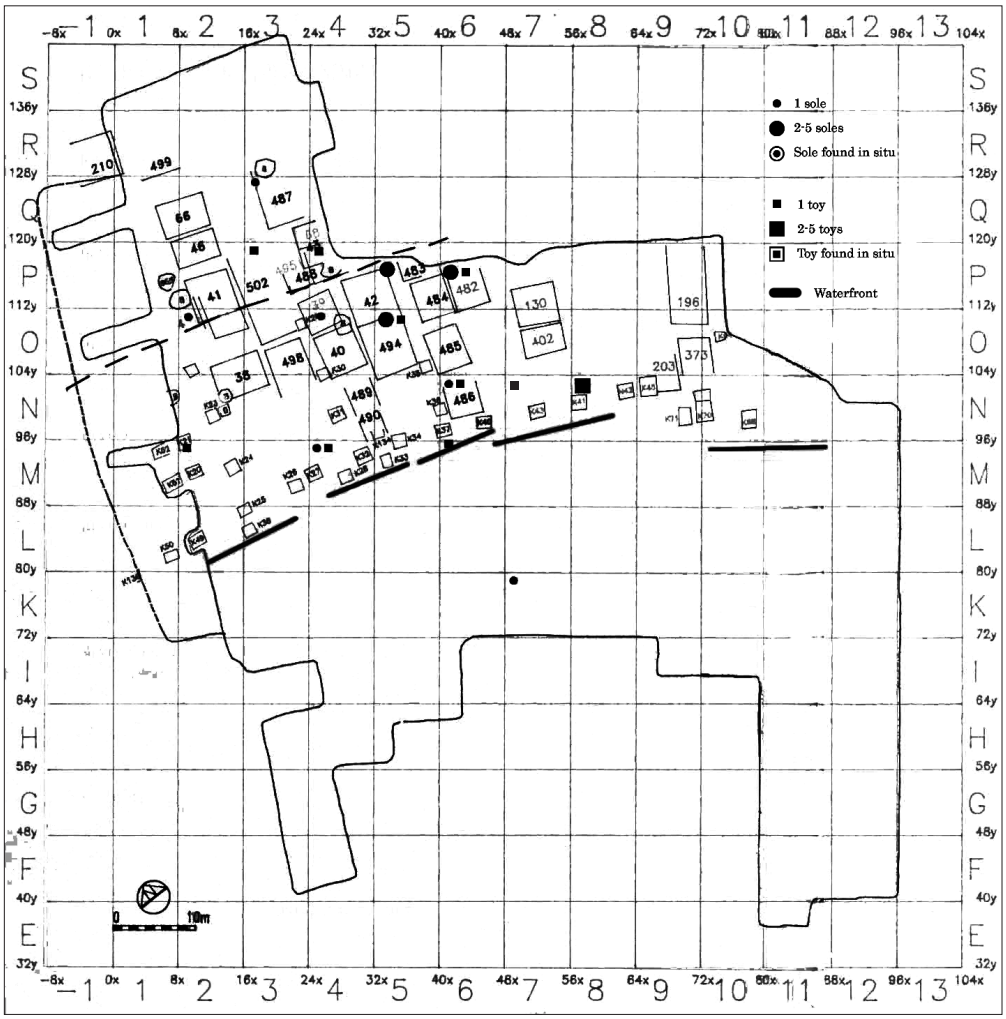

Figure 5.3 *Distribution map, Bryggen (BRM 0), period 2 (1120s–1170/71). Dashed line indicates the northern extent of O. M. Olsen's fishing-related zone. Based on Egill Reimers and Elin Jensen 1997–1998.*

miniature ceramic pot and more boats. Balls, toy weaponry and boats and boat parts dominate, and together these make up 58 per cent of the toy material from this period (29 artefacts). Additionally, the dolls and human figures make up a relatively large group of toys (nine artefacts). As opposed to period 2 (1120s–1170/71) only one skate has been found. The toy material thus consists of artefacts that can be linked to both boys and girls, supposedly from the ages four or five and older. They also represent role-playing games and playing connected to games, sports and other physical activities. The distribution of these various toys does not seem to follow any particular pattern; the same types can be found in different parts of the site, and relate to the same types of constructions. In the rear part of the site, however, first and foremost balls, boats and human figures have been found.

Period 4 (1198–1248)

Of the 236 child-related artefacts from period 4, there are 58 toys (25 per cent) – of which 16 are confirmed, 24 probable and 18 possible – and 178 soles (75 per cent) (fig. 5.5). Again the number of toys and soles has increased, in addition to a further shift in the proportional relationship between the two categories, in the form of an increase in the number of soles relative to the number of toys. Most of the toys are also identi-

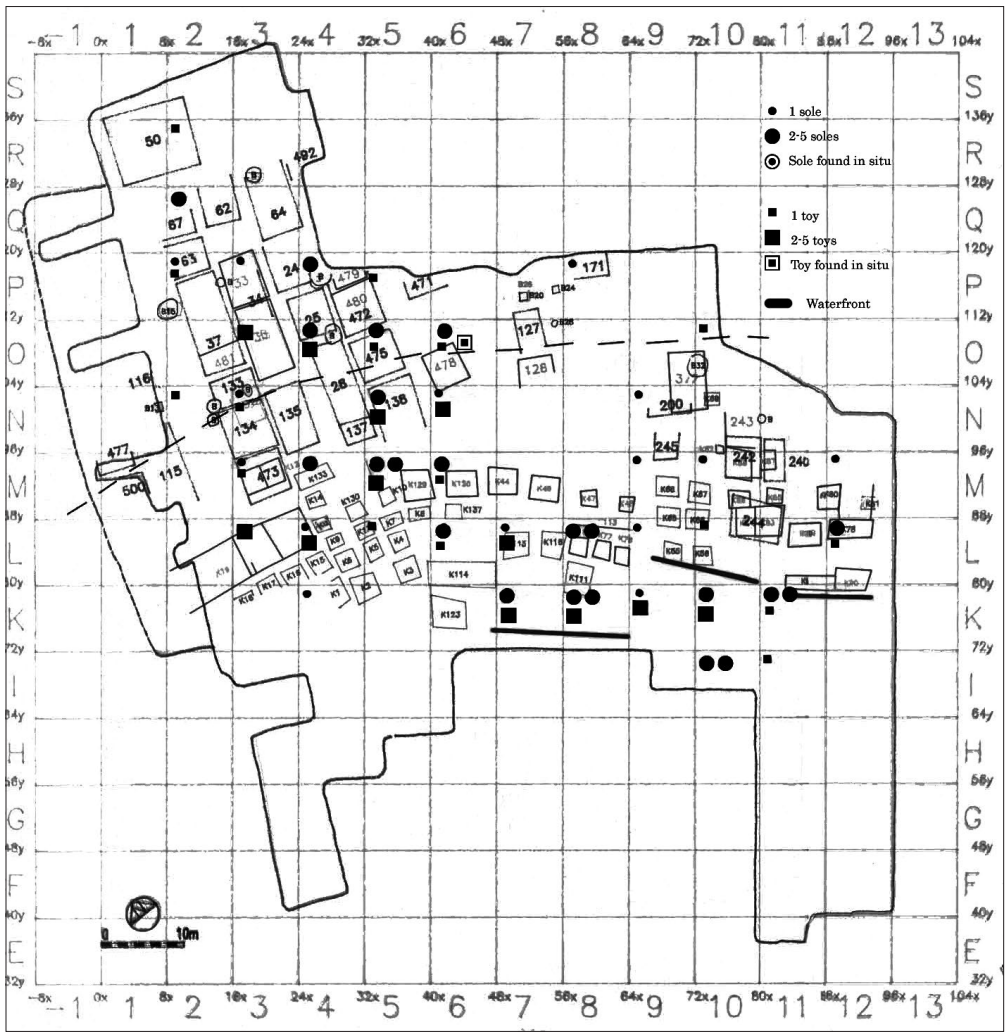

Figure 5.4 *Distribution map, Bryggen (BRM 0), period 3 (1170/71–1198). Dashed line indicates the northern extent of O. M. Olsen's fishing-related zone. Based on Egill Reimers and Elin Jensen 1997–1998.*

fied with a relatively high degree of probability. Together the artefacts from this period make up 15 per cent of all dated child-related artefacts from the Bryggen excavation, which represents 4.7 child-related artefacts per year – i.e. a slight decrease from the preceding period. The ratio between artefacts in the forward and rear parts of the site is approximately as before, albeit with fewer artefacts in the rear of the zone – 20 per cent of the artefacts (48 items) have been found in the rear zone, and 80 per cent (189 items) in the forward area. Nine soles were found in situ in fire layers, of which five are linked to buildings (three in the rear zone (one in building no. 191 and one in an unknown building), and two in the forward zone (nos. 149 and 466)), and one in a passageway. The last two are not related to buildings. None of the toys have been found in in situ contexts.

In general, the finds in the forward zone are concentrated to the waterfront, in front of the buildings. Also the rear parts of the area of Gullskoen, and to some degree in the forward parts of the area of the tenements Søstergården and Engelgården, appear to have many artefacts. The ratio of toys to soles is almost even, but in contrast to in period 3 (1170/71–1198) there is a much higher degree of soles than toys in the

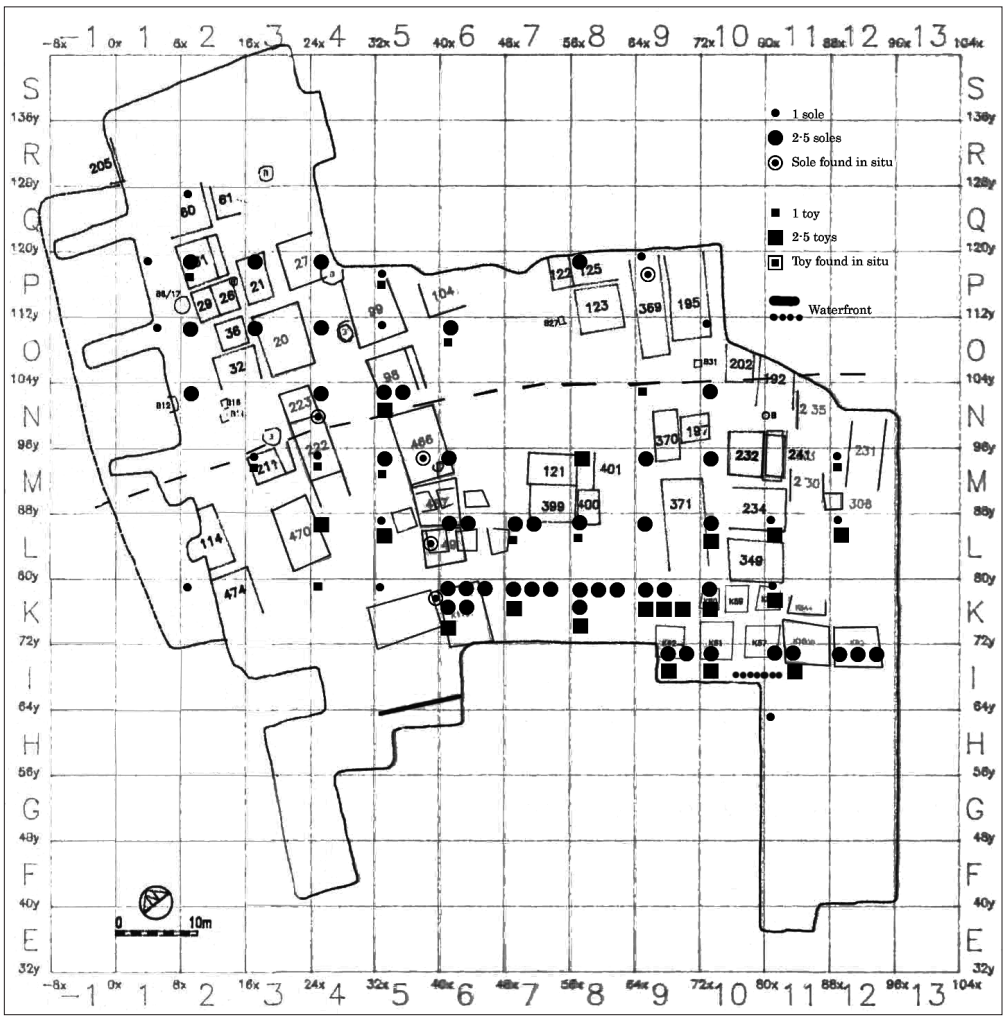

Figure 5.5 *Distribution map, Bryggen (BRM 0), period 4 (1198–1248). Dashed line indicates the northern extent of O. M. Olsen's fishing-related zone. Based on Egill Reimers and Elin Jensen 1997–1998.*

rear zone of the site. Around 24 per cent of the soles (43 items) stem from this area, while the toys constitute only nine per cent (five items). A major part of the soles is related to caissons and fillings, but the difference between the distribution pattern for toys and soles is smaller than in the preceding period. A total of 37 per cent of the soles (66 items) and 33 per cent of the toys (19 items) are connected to such constructions, indicating that they have been dumped.

The soles from this period represent all the age groups, with an increasing overweight of soles linked to the oldest children. Only five per cent of the measurable soles are of the smallest sizes (eight items), while 28 per cent and 67 per cent respectively are of the middle (44 items) and the largest sizes (107 items). In addition, a clear majority of the soles in the latter group represents the three largest sizes. As far as the toys are concerned, the same categories of toys as in the preceding period appear in increasing numbers in this period. In addition, bone buzzers and a small wooden club have been found. Toy boats dominate also in this period, and to a lesser degree skates, human figures and various toy weapons. The number of balls has been halved in comparison with the preceding period, from nine to four artefacts. As a whole, a majority of

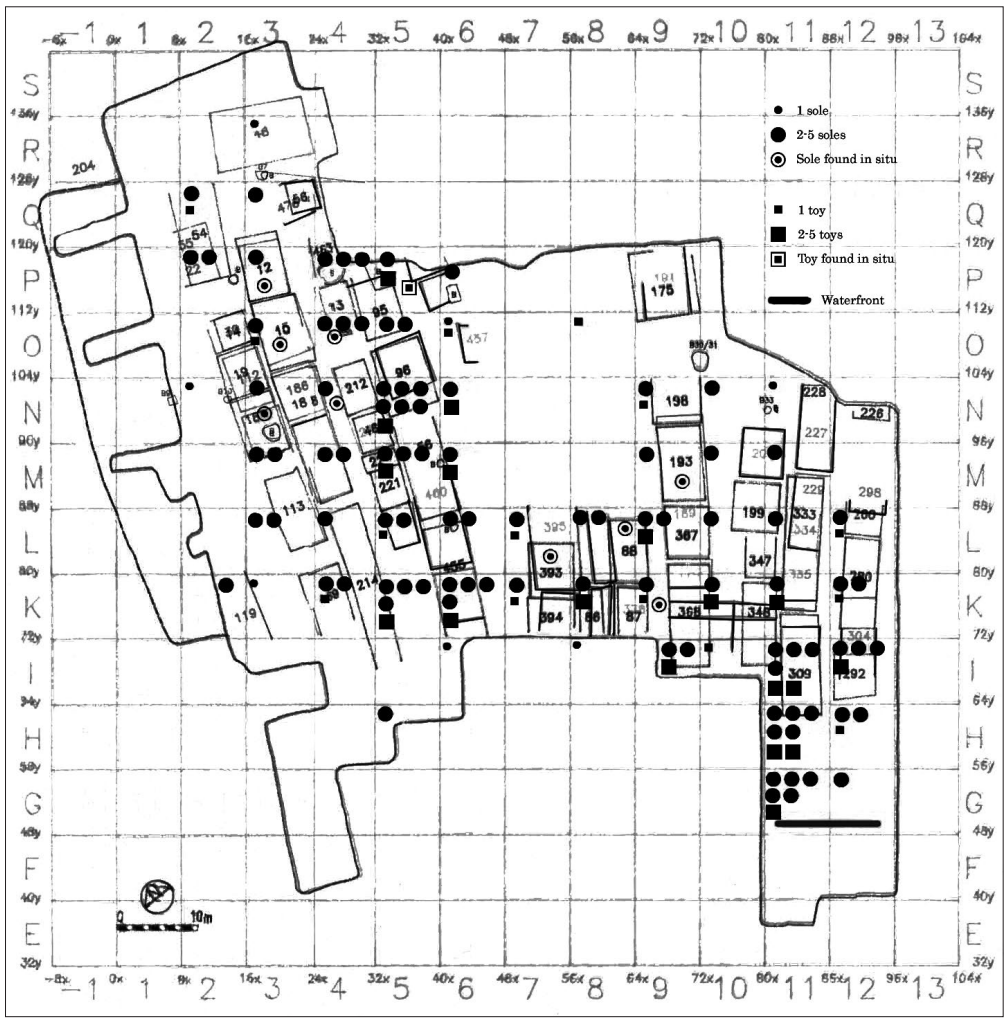

Figure 5.6 *Distribution map, Bryggen (BRM 0), period 5 (1248–1332). Based on Egill Reimers and Elin Jensen 1997–1998.*

boy's playthings and role-play toys are represented, in addition to less gender-specific toys related to board games, sports and physical activities, such as bone buzzers, humming tops, tops and yoyos (ten items). Again, it seems as if children in the two upper age brackets are represented, mainly from the ages five or six and up.

With the exception that most of the bone buzzers and skates are found at the waterfront, it is not possible to point out any clear pattern with regard to the distribution of toy categories. Few toys have been found in the rear parts, and no particular toy category stands out.

Period 5 (1248–1332)

Of the 470 child-related artefacts dated to period 5, 70 are identified as toys (15 per cent) and 400 as children's soles (85 per cent) (fig. 5.6), giving an even lower percentage of toys than in preceding periods. Five of the toys are interpreted as confirmed, 13 as probable, and as many as 52 as possible toys. In total, the toys and soles make up 30 per cent of all the dated child-related artefacts from this excavation, and the number of such artefacts per year has risen to 5.6. On the other hand, a greater part of the toys are only identified as probable or possible toys, more than 70 per cent. In this period, the waterfront has moved so far into the bay of Vågen that only the forward

part of the tenement Bugården in the forward area of the harbour is covered by the excavation.

A total of 23 artefacts have been found in situ in fire layers, of which there is only one toy and 22 soles. Nine have no information about location beyond the grid-square, while six have been found in passages or eaves-drops, and eight in buildings (buildings nos. 10, 12, 13, 88, 183,193 and 393). For three of the buildings where child-related artefacts have been found (nos. 10, 12 and 13), Moldung in her survey of tenements in the Gullskoen area has found several artefacts that can be related to cooking, textile production and games (Moldung 2000: 101–104). Opposed to in period 4, the percentage of soles and toys that can be related to caissons is now larger – 30 per cent of the soles (118 items) and 23 per cent of the toys (16 items) are related to such constructions, and indicative of waste thrown in the waterfront area.

The finds are concentrated in the forward, southern parts of the site, especially the waterfront in front of the Bugården tenement. In addition, many artefacts stem from the eastern parts of the Gullskoen area. The toys and soles exhibit similar spatial distribution patterns, but in the rear parts of the tenements Gullskoen, Engelgården and Bugården in general, and the western parts of the Gullskoen area in particular, the artefacts are predominantly soles.

The relationship between the various categories of sole size is more or less identical to the preceding period – five per cent of the measurable soles are of the smallest sizes (19 items), 26 per cent (94 items) of the medium sizes, while 69 per cent (248 items) are of the largest ones. A majority of the largest soles are, however, of the three largest children's sizes, 31–33, as was the case also in period 4. This means that the oldest age group, from around seven till 12 years, is the best represented. The toys in this period are dominated by balls, whereas boats and miniature pots also make up a large part of the toy material. In addition, the toys comprise a small plane with a runic inscription, skates, animal figures, a marble, some toy weapons, and dolls and human figures. Male toys and role-playing toys are still predominant, but at the same time toys linked to board games, sports and physical activities are better represented in this period. With regard to age, both toys and soles indicate that older children are over-represented. In this period there are, however, also a few toys related to smaller children – a couple of rattles – but their identification as children's toys is rather uncertain, as shown in chapter 3.

A majority of the toys are found in the forward, southern parts of site, and it is also here that most of the finds have been made that are only represented by one or a few artefacts. In the rear areas mainly balls and toy boats/parts for toy boats have been recorded, in addition to some miniature pots. A total of 20 out of 23 toys linked to the Gullskoen area, for instance, are of these types.

Period 6 (1332–1413)

Period 6 has the largest representation of child-related finds: 515 soles and 68 toys – of which seven are interpreted as confirmed toys, 11 as probable and 50 as possible toys (fig. 5.7). The proportion of unconfirmed toys is thus relatively high (74 per cent). A total of 37 per cent of all dated child-related artefacts from the Bryggen excavation belong in this period, representing 7.2 child-related artefacts per year. The relative proportion of toys, however, is still decreasing – 88 per cent are soles, while 12 per cent are toys. The majority of the toys is unconfirmed. Seven soles have been found in situ in fire layers – three in buildings in the eastern parts of the excavation (nos. 297, 320 and 359) and two in foundations/caissons. Additionally, two soles have no other location than grid-square.

The distribution of artefacts shows a similar pattern as the preceding period, only that there are more. The main concentrations have been recorded in the northern and south-eastern parts of the site – in the north-eastern parts of the Gullskoen area, and especially in the forward part of the area around the tenement Bugården. In addition, many toys are fairly evenly distributed in the middle parts of the site. The Engelgården tenement seems to have the lowest find representation, which *may* be a result of it being dug with machine down to the level of fire number V (1248). The toys and soles have a quite similar distribution pattern. The overweight of the soles in the rear and western parts of the Gullskoen area in the preceding period, is, however, not as clear anymore. In this period, 23 per cent of the

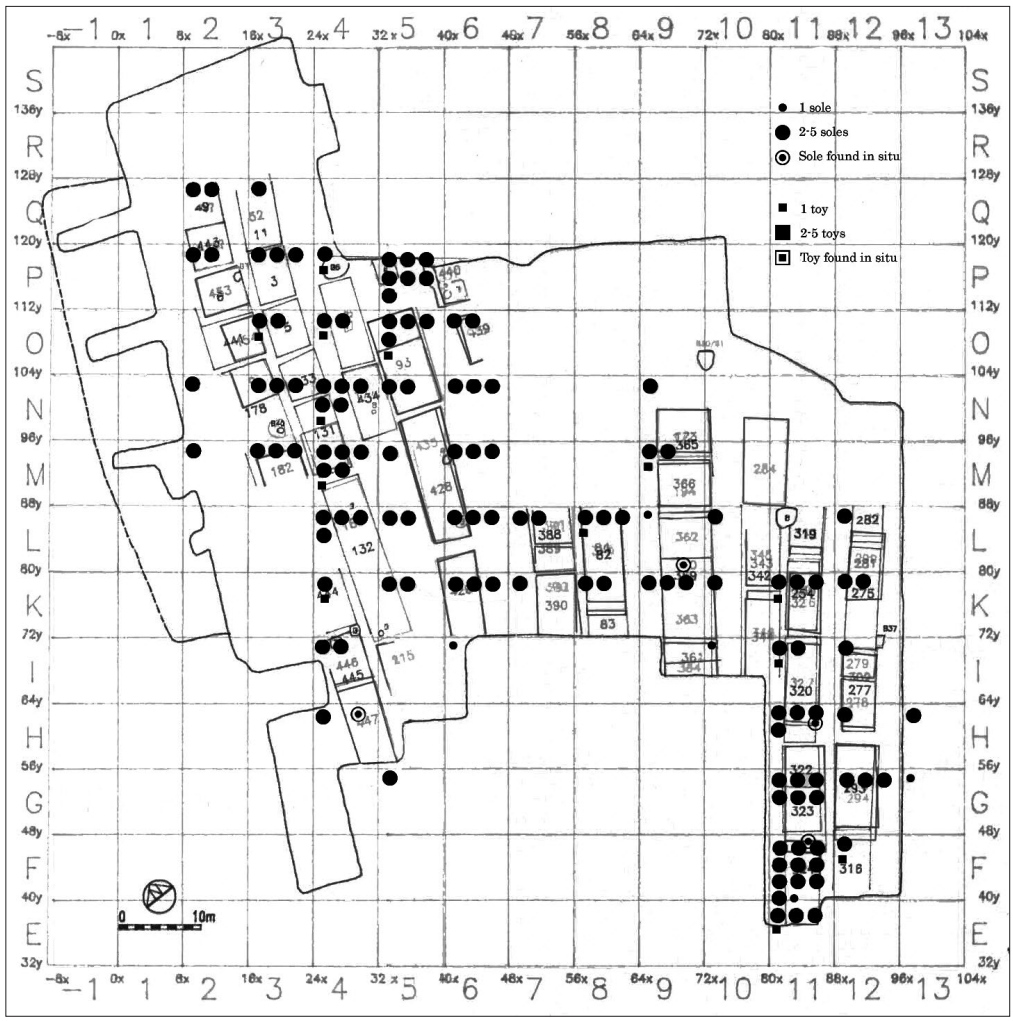

Figure 5.7 *Distribution map, Bryggen (BRM 0), period 6 (1332–1413). Based on Egill Reimers and Elin Jensen 1997–1998.*

toys (16 items) and 26 per cent of the soles (134 items) can generally be linked to caissons. The difference between soles and toys connected with fillings is evidently smaller.

Considering the soles, the smallest sizes constitute five per cent of the soles with measurable sizes (24 soles). The proportion of the medium-sized soles has been further reduced, down to 23 per cent (94 soles), while the soles with the largest sizes now constitute 72 per cent (248 soles). Age wise the soles reflect children in the older age group. Also when toys are concerned, the pattern from the previous period seems to be repeated, and even enhanced in some areas. The toys are again dominated by balls, which now constitute 62 per cent of the toy material in this period (43 items). Additionally, some toy boats and boat parts are represented, plus a few miniature pots, arrows, skates and humming tops/tops. A yo-yo, a ceramic horse, a human figure and a rattle have also been found. Male toys and sports toys are dominant, but the toys are for the most part unconfirmed.

It is interesting to note that in the Gullskoen area there are almost exclusively balls in the toy material – a total of 83 per cent of the toys originating from this area (20 out of 24). In the rear parts, the dominance of the balls is even greater. Many balls are also found in other parts of the site, but there the artefacts are more varied. In

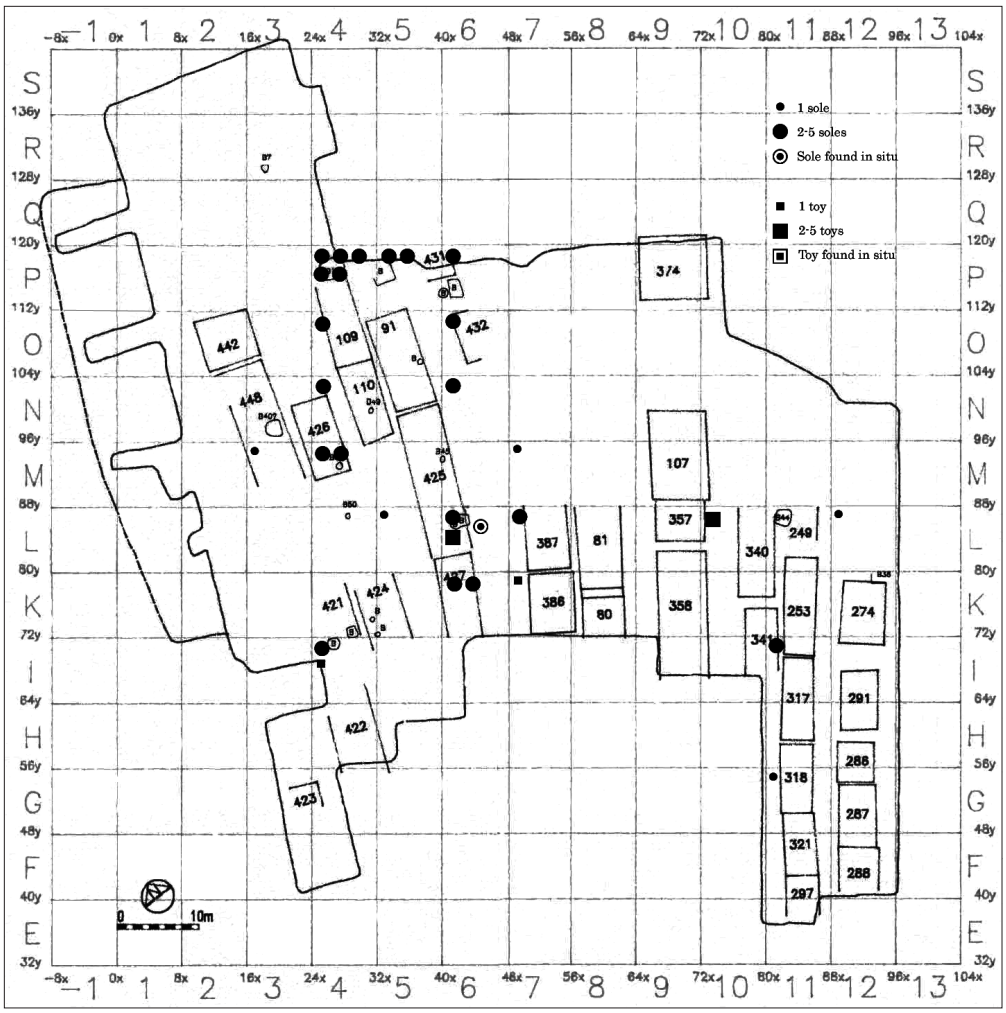

Figure 5.8 *Distribution map, Bryggen (BRM 0), period 7 (1413–1476). Based on Egill Reimers and Elin Jensen 1997–1998.*

other tenement areas than the Gullskoen area the finds are more varied, and are generally marked by more confirmed child-related artefacts.

Period 7 (1413–1476)

In period 7 (1413–1476) the number of child-related artefacts drops drastically, to only 92 items, i.e. six per cent of the dated child-related artefacts from this excavation, representing only 1.5 finds per year (fig. 5.8). Seven of the artefacts (seven per cent) are toys – of which two are confirmed, three are probable and two are possible child-related artefacts – while 85 are soles (93 per cent). The trend from previous periods, i.e. a continuous lower proportion of toys to soles, is evident in the material also in this period. Two soles have been found in situ in a common passage.

The material is too small to demonstrate any clear distribution patterns, but most of the child-related artefacts seem to be located in the rear parts of the Gullskoen area. Only a very small number of the artefacts are found east of this area. The toys are few and with an unconfirmed identification, and few are found in the forward parts of the site, while the soles have a wider distribution, albeit with the largest number in the rear parts of the Gullskoen area.

The share of the smallest soles stays at five per cent – four of the 77 measurable soles from this period are of the smallest sizes. The share of the

medium-sized soles has been further reduced – from 23 per cent to 17 per cent (14 out of 77 soles) – while the share of the largest soles has increased to 77 per cent (59 items). Looking at the toys, however, the picture has changed considerably from period 6. While balls made up over 60 per cent of the toy material in period 6, no balls are represented in period 7. Nor are there any boats or boat parts, and the toy material consists of only a bone buzzer, a toy sword, a miniature pot, a human figure and two horse figures.

Period 8 (1476–1702)

In period 8 the number of child-related artefacts drops further, to 45 items, of which eight (18 per cent) are toys and 37 (82 per cent) soles (fig. 5.9). There are no confirmed toys in this period, and only three probable. The remaining five are classified as possible toys. As we can see, there is a change in the proportional distribution of children's soles versus toys in this period, by a small increase in the number of toys. Three percent of all dated child-related artefacts from the Bryggen excavation originate in this period, and the number of artefacts found per year is down to 0.2.

Twelve of the artefacts have been found in situ in the Bugården tenement – one small rolling pin in building no. 315, eight soles in layers over building no. 248, and a marble and a miniature pot above buildings nos. 284 and 289, respectively. Additionally, one sole has been found in a passageway – also in the same area. This matches the general distribution pattern of artefacts in this period, where the artefacts are spread out, but are mainly found in the area around Bugården in the eastern part of the excavation site. As opposed to in earlier periods, the Gullskoen area is less prominent in this period with regard to child-related artefacts.

In this period the share of children's soles in the medium sizes is halved, from 18 per cent to nine per cent (three soles), while the share of children's soles in the smallest sizes has more than doubled, from five per cent to 11 per cent (four soles). The share of soles of the largest sizes is, however, at its greatest in the entire survey, and constitutes 80 per cent of the measurable soles in this period (35 soles). The toy material consists of one bone buzzer, one ocarina, one small rolling pin, two marbles, two miniature pots and a dragon-like figure. The material is small, and the majority of the toys are unconfirmed as children's artefacts.

The Bryggen excavation (BRM 0) – an evaluation

To sum up, there is a gradual increase in the number of child-related artefacts at the extensive Bryggen site up to and including period 6 (1332–1413), followed by a marked decline up to the end of the survey period. A somewhat larger proportion of the soles than the toys seem to be connected to fillings, but the differences are small. Only a few artefacts have been found in situ in fire layers, and even fewer are linked to buildings. Furthermore, there are no clear patterns or differences with regard to the distribution of toys and soles in the various areas, forward and rear. In period 3 (1170/71–1198), however, the proportional share of toys is greater than the share of soles in the rear zone. In periods 4–5 (1198–1332) and 7 (1413–1476) this relationship is reversed. There are, however, no obvious explanations for this change. The Gullskoen area is generally the area with most finds.

An ever increasing share of the soles represents the largest sizes, while the share of medium and small soles decreases. This may indicate an increasing number of older children in the area. The share of small soles remains low and relatively constant. As for the temporal and spatial distribution of different toy categories, there are few clear patterns. The number of unconfirmed toys has, however, a marked increase from the mid thirteenth century. After c. 1410, the proportion of toys is very small, and a minimal number is confirmed. Toys more or less linked to boys dominate in all periods, and to some extent in the rear parts of the site – mainly balls, boats and skates. This is particularly the case in periods 5 and 6 (1248–1413).

Other excavations at Bryggen

In addition to BRM 0, a number of other excavations have taken place in the Bryggen area. In the northern, central and southern areas of Bryggen, five (BRM 4, BRM 83 and BRM 237), two (BRM 76 and BRM 90) and three (BRM 104, BRM 110 and BRM 342) excavations respectively have yielded child-related artefacts.

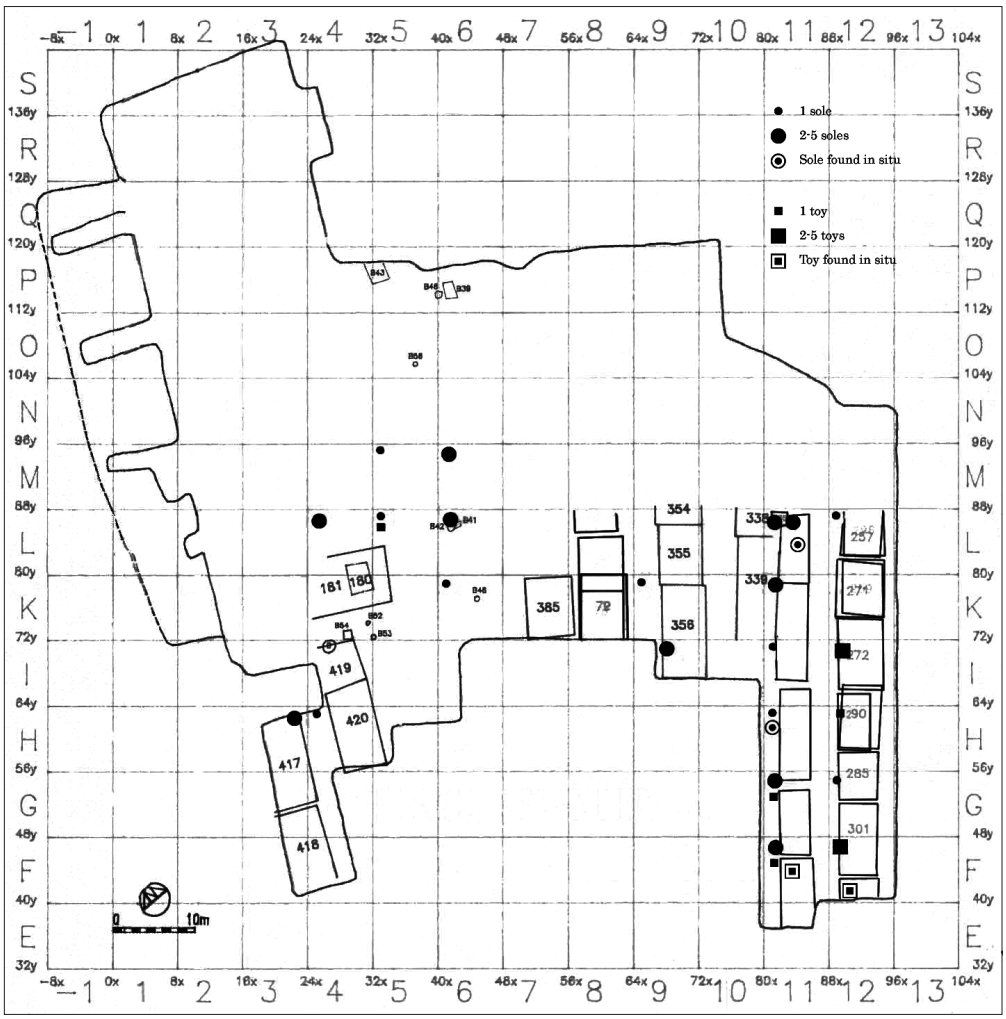

Figure 5.9 *Distribution map, Bryggen (BRM 0), period 8 (1476–1702). Based on Egill Reimers and Elin Jensen 1997–1998.*

The northern part of the Bryggen area: Dreggsallmenningen (BRM 4, BRM 83 and BRM 237)

Three excavations have been carried out at Dreggsallmenningen (Dreggsallmenningen 20/BRM 4, by Radisson SAS Hotel Norge/BRM 83 (fig. 5.10) and Dreggsallmenningen 14–16/Øvre Dreggsallmenningen 2–4/BRM 237) (Larsen 1967b; Long and Marstrander 1980; Golembnik 1994a), the common passage next to the site of the Bryggen site (BRM 0). A total of 1,658 sq metres has been excavated, and altogether the excavations have yielded 218 child-related artefacts. Of these, 200 are soles (92 per cent) and 18 (8 per cent) are toys – 37 of the artefacts (17 per cent) are undated.

No clear patterns in the temporal distribution can be identified in the child-related artefacts from the area of Dreggsallmenningen. The main bulk is from BRM 4, where a total of 116 of the 126 dated artefacts have been dated to after 1200. Only ten are older than 1200. From BRM 237 there are ten child-related artefacts, of which four can be dated – two at between 1225 and approximately 1350, and two post-reformation (post 1536).

The 59 artefacts from BRM 83 have been dated in relation to the fire layer chronology at Bry-

ggen. There are between one and four artefacts in most periods, with the exception of period 5, with a total of 35 artefacts, comprising 69 per cent of all dated artefacts from this excavation. The artefacts thus indicate that there have been children in the area in both the twelfth and thirteenth centuries, but that the traces of children in the material decrease from the fourteenth century. It seems as if the same trends as in the material from the Bryggen site are repeated.

Figure 5.10 *From the excavation at Radisson SAS Hotel Norge (BRM 83). Photo: Bergen Museum.*

As in the sole material from the Bryggen site, the sole material from Dreggsallmenningen is also dominated by the largest sizes. Eleven per cent of the measurable soles are of the smallest sizes (16 soles), 22 per cent are for the medium ones (31 soles), and a total of 67 per cent are among the largest (96 soles). A clear majority of the soles in the category of large soles are again in the three largest sizes, 31–33. No pattern can be pointed out with regard to the distribution between the age categories, but among the soles from BRM 83 it is largely only in period 5 (1248–1332) that there are soles with sizes smaller than 29.

The 18 recorded toys are divided between all three excavations, of which eight of the twelve datable toys stem from the thirteenth century. Though the toys in this area are few, they are varied with regard to categories: horse figures of wood and ceramics, a doll and a human figure, toy boats and toy weapons, a small plane, a ball, skates, a miniature pot and four marbles are the toys that are represented here. Both with regard to the artefacts found and their distribution in time the results from Dreggsallmenningen largely coincide with those from the Bryggen excavation.

Kroken (BRM 344) and Sandbrugaten 5 (BRM 3)

From the northern part of Bryggen, child-related artefacts have been found in two further excavations, at Sandbrugaten 5 (BRM 3) (Larsen 1967a), a 480 m² site, and a group of relatively small surveys at Kroken (BRM 344). A total of 23 artefacts have been found here – three toys and 20 soles; of which ten artefacts are undated.

The few artefacts found in these sites are all younger than 1200, mainly from the fourteenth century. Only one is post-reformation (1536). In this area, the main bulk of the soles are linked to the largest children's sizes: 12 of the 18 measurable soles are size 28 or larger (67 per cent), while there are only three from each of the medium and smaller categories (16.5 per cent). The toys are comprised of a doll (fig. 5.11), a ball and a marble.

The central Bryggen area: Rosenkrantzgate 4 (BRM 76) and Stallen/the tenement Svensgården (BRM 90)

In the central Bryggen area, two excavations have yielded child-related artefacts. The excavation at Rosenkrantzgate 4 (BRM 76), which was conducted in two campaigns, comprised an area of altogether 450 sq metres (Lindh 1979; Ekroll 1981). A total of 141 child-related artefacts come from this site – 17 toys and 124 soles. Of the toys, seven were interpreted as confirmed, one as probable, and nine as possible toys. Twenty-four of the artefacts (17 per cent) could not be dated. A total of 75 m² was excavated at the survey of Stallen/Svensgården (BRM 90) (Dunlop 1984a), where only four child-related artefacts were found – one confirmed toy and three soles.

Figure 5.11 *Doll from Kroken (3/497). Drawn by Ellinor Hoff, Bergen Museum.*

Approximately half of the dated artefacts from Rosenkrantzgaten stem from period 4 (1198–1248). In addition, 28 per cent of the dated artefacts comes from the period between 1248 and c. 1350, while about 20 per cent of the artefacts are younger than 1350. The four artefacts from the Stallen/Svensgården site are dated to between 1225/30 and the latter half of the sixteenth century. Most of the child-related artefacts are thus dated to period 4 (1198–1248), with a decline in the period between 1248 and 1350 and later in the late Middle Ages.

With regard to the size categories in the sole material, there are no great anomalies when comparing with the pattern elsewhere at Bryggen. Also in this area, the majority of the soles are of the largest sizes (62 per cent). The medium-sized soles make up almost a third of the measurable soles, while less than a tenth is of the smallest sizes. As far as the central Bryggen area is concerned, we see a fairly even distribution of the age groups, albeit with an overweight of children in the middle age group. The toys from this area comprised of a marble, a humming top, one ceramic and one wooden horse, one small ceramic figure, two rattles and two miniature pots, two balls, a toy boat and six skates. A majority of the toys from here are thus uncertain in relation to children.

The southern Bryggen area: The tenement Finnegården (BRM 104 and BRM 110) and Vetrlidsallmenningen (BRM 342)

The southern part of the Bryggen area is here represented with two excavations of a total of 130 sq metres, both in the area of the tenement Finnegården (BRM 104 and BRM 110) (Dunlop 1982b; Golembnik 1993). In addition, a few minor excavations have been carried out in Vetrlidsallmenningen (BRM 342). BRM 104 is represented with 27 artefacts, of which five are toys (19 per cent) and 22 soles (81 per cent). The artefacts included only one confirmed, one probable and three possible toys. At BRM 110, 79 artefacts were found, of which nine were toys (11 per cent) and 70 soles (89 per cent). Of the toys, two were interpreted as confirmed, three as probable and four as possible. Finally, two marbles come from BRM 342, both interpreted as possible toys.

When looking at the artefacts together, there are few artefacts from the time between approximately 1120 and 1225 – only six of the around 108 artefacts are from this period (6 per cent). After this, the number rises to around a fourth in the period between 1225/30–1248, and again to two thirds in the period between 1248 and approximately 1400. Only five artefacts have been dated as younger than 1400. All in all it looks as if the second half of the thirteenth century and the fourteenth century are represented with the most artefacts – a pattern which matches the one we find for child-related artefacts at Bryggen in general.

The soles from Finnegården also follow the pattern for the Bryggen site, with a clear dominance of soles used by older children, but also smaller children are represented: 71 per cent of the measurable soles (55 items) are of the largest sizes, while 21 per cent and eight per cent are

Figure 5.12 *A top, c. 13 cm long (0/27043), balls, diameter c. 7 cm (0/10913 and 0/50582) and marbles, diameter c. 1–2 cm (4/9678, 237/10301 and 0/13605) from Bryggen. Photo: Svein Skare, Bergen Museum.*

of the medium (16 soles) and smallest (six soles), respectively. The pattern thus fits well into the general pattern for Bryggen. Of the toy material, which consists of three bone buzzers, two skates, four balls, a toy boat, two toy weapons, a yoyo and an animal figure, only one artefact is younger than 1400.

The Bryggen area – an overall evaluation

All in all, it seems that the artefacts from the various parts of the Bryggen area follow approximately the same pattern with regard to general temporal distribution, the proportional distribution in the various size groups for soles, and toy types (fig. 5.12). The northern parts of Bryggen have been more thoroughly examined through the extensive excavations at the Bryggen site (1955–1968), and by far the largest share of artefacts originates here. Generally, the material indicates an increasing number of child-related finds, from the earliest in period 2 (1120s–1170/71) up to period 6 (1332–1413). After period 6, there is a decline in such artefacts. With regard to children's toys, the largest representation is before c. 1330. The element of unconfirmed toys has a marked increase after around 1250. Only the material from the middle and southern parts of Bryggen deviates somewhat from this pattern, with period 4 (1198–1248) having the most finds. The toy material is varied, and the same categories of artefacts are found all over the Bryggen area. All age groups are represented, but the older age categories among children are the best represented.

Øvregaten/Stretet (BRM 11 and BRM 94)

The few excavations that have taken place in Øvregaten/Stretet have resulted in a correspondingly low number of child-related artefacts. Only six artefacts from two excavations (BRM 11 and BRM 94) fall into this category (Reimers 1972a; Dunlop 1982a). No toys have been found in this area, only soles, with sizes ranging from 29 to 33. They are dated to the period between 1225/30 and 1332.

		C. 14th century	C. 15th century	C. 16th century	C. 17th century	C. 18th century	Not dated	*Sum*
Children's soles	Sizes 0–21	6 14%	2 5%	2 15%			2	***12*** *9%*
	Sizes 22–27	11 26%	8 19%	6 46%	5 25%	1 100%	4	***35*** *26%*
	Sizes 28–33	26 60%	33 76%	5 49%	15 75%		11	***90*** *65%*
	No measurement	5	8		1		9	***23***
Sum		***48*** *100%*	***51*** *100%*	***13*** *100%*	***21*** *100%*	***1*** *100%*	***26*** *100%*	***160*** *100%*
Toys		2	2	3	3		2	***12***
Sum		***50***	***53***	***16***	***24***	***1***	***28***	***172***

Table 5.1 *Child-related artefacts from Vågsbotn. N=172.*

Vågsbotn (BRM 20, BRM 25, BRM 106, BRM 200, BRM 245, BRM 274, BRM 333, BRM 346, BRM 462 and BRM 544)

The artefacts from Vågsbotn originate from ten excavations, but only artefacts from seven of these will be mentioned, as the other have no dated artefacts (BRM 106 (Reimers 1972b), BRM 200 (Dunlop 1984b), BRM 245 (Dunlop *et al*. 1994), BRM 333 (Dunlop 1991), BRM 346 (Golembnik 1994b), BRM 462 (Dunlop 1993) and BRM 544 (Dunlop 1998b)). A total of 172 artefacts come from this zone, which constitutes around seven per cent of all the child-related artefacts from medieval Bergen (table 5.1). A total of 28 (16 per cent) of the artefacts from this area are undated. 160 of the artefacts are soles, while 12 are toys – of which two confirmed, two probable and eight possible.

The child-related artefacts from Vågsbotn are here only tentatively related to century as the dating methodologies differ from that of the extensive Bryggen excavation. There are no artefacts older than 1200/1300, and most artefacts stem from the fourteenth and fifteenth centuries. However, there are few confirmed toys. In the following centuries, only few have been found, but at the same time the number of child-related artefacts has been relatively constant. As for the Bryggen area, the 1300s are relatively well represented by child-related artefacts, but while the following century sees a marked drop in the number of such artefacts at Bryggen, Vågsbotn is represented by a different pattern.

As for the distribution of soles across the size groups, this also seems to be diverging somewhat from that of Bryggen. In general, the larger sizes dominate in all periods. The share of soles in the smaller sizes is, however, somewhat larger than at Bryggen, and the proportion of the medium-sized soles to the larger ones is not as stable. The toys comprise marbles and miniature pots, balls, a boat, a skate, a doll, a wooden horse and a small rolling pin. This means that toys for boys and girls are represented, in addition to it being coloured by a possible relation to adults.

Strandsiden (BRM 7)

Also at Strandsiden there have been few archaeological excavations. Child-related artefacts from here come from one single excavation – BRM 7, Nordnesparken near the Bergen Aquarium (Reimers 1960). None of the three artefacts from here could be dated. One of the artefacts is a possible doll; the other two are children's soles. One of the soles could not be measured, while the other

belongs in the smallest sizes. Thus, this area provides us with few clues regarding children in medieval Bergen.

Child-related artefacts in Bergen – an overall evaluation

Bryggen

Child-related artefacts in Bergen in the period between c. 1120 and 1700 are found in all socio-economic zones, with the exception of Holmen. A total of 90 per cent of the child-related artefacts from Bergen stem from Bryggen, of which 78 per cent were found during the extensive Bryggen excavation in the northern part of the area (fig 5.13).

In general, it seems that the number of child-related artefacts at Bryggen increases up to period 6 (1332–1413), and then shows a marked decline in periods 7– 8 (1413–1702). This applies in particular to children's toys, which are hardly represented after the fire in 1413. The toys also show a different temporal distribution pattern than the shoe material, the centre of gravity being before 1250. The middle and southern parts of Bryggen have a somewhat diverging pattern, with most finds in period 4 (1198–1248). Looking at the number of child-related artefacts in general per year at Bryggen, this also shows a general increase to period 6 (1332–1413). When seen in relation to the distribution of e.g. soapstone vessels, fishing tackle and textile equipment from Bryggen – which have been found in the greatest numbers per year in period 3 (1170/71–1198), and thereafter in decreasing numbers throughout the survey period (Øye 1988: 141–142; Vangstad 2003: 114; O. M. Olsen 2004: 73–74) – the distribution of child-related artefacts display a somewhat divergent pattern. There are, however, common traits with regard to the distribution of toys, especially when the least likely category is taken out. The distribution of jewelry and clothing equipment, however, shows a similar pattern as for the child-

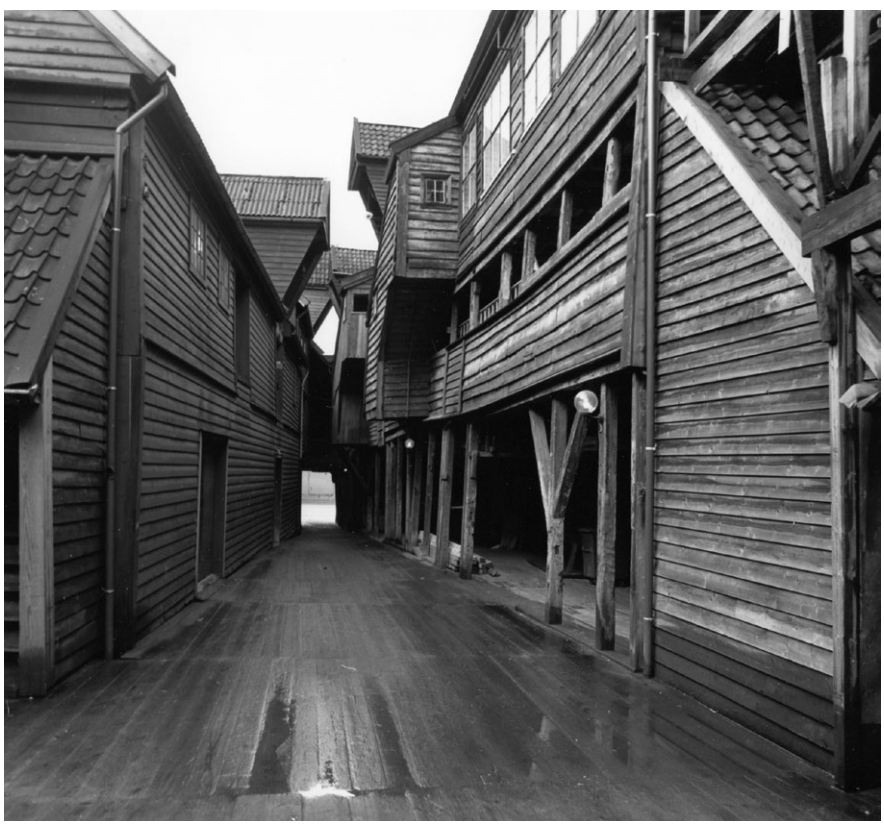

Figure 5.13 *From the tenement Bellgården at Bryggen. Photo: Bergen Museum.*

related artefacts in general, in the form of an increase up to and including period 6 (1332–1413) (Molaug 1998: 110–111). Sonja Molaug sees this in connection with increased activity at Bryggen resulting from the establishment of The German Kontor, and she suggests that many of the artefacts may have been used by men (*ibid*). It may look as if the distribution of child-related artefacts simultaneously both diverges somewhat from and partly coincides with the distribution of other categories of artefacts at Bryggen.

The children's soles and toys seen separately give a more nuanced picture. In chapter 3, a peak in the number of toys per year was indicated in period 3 (1170/71–1198), followed by a decline in the following periods – hence the same distribution in time as the textile equipment, fishing tackle and soapstone vessels. The soles on the other hand, have a somewhat different distribution pattern, with a clear increase in the number of soles per year up to period 6 (1332–1413). It is thus mainly the distribution of the soles which diverges with regard to the general distribution of child-related artefacts from the Bryggen excavation. The opposing distribution of toys and children's soles is further enhanced by the fact that the proportion of larger children's soles increases and the share of toys is reduced greatly throughout the survey period. This picture is strengthened when taking into account that so many toys have an uncertain identification.

The toys may thus indicate a decrease in the representation of children at Bryggen after period 3, from the start of the thirteenth century, while the soles indicate an increasing presence throughout period 6 (1332–1413), but then mainly of older children, and boys, judged on the toys. The survey of the proportional relationship between children's soles and adult soles from the Gullskoen area at the Bryggen site also shows a conspicuous increase in the number of children's soles, relatively speaking. From the second half of the thirteenth century and into the fourteenth century the proportion of children's soles comes to around 40 per cent – an increase of around 25 per cent with regard to previous periods. The causes are uncertain. The sole material from Bryggen in general from this period, however, consists to an increasing degree of soles form the oldest age group, where a majority are soles of the largest sizes (31–33). This may be an indication of older children, connected to young boys working in the area. As such shoes are present into the 1400s, it may indicate that they were now also in service to the German Hansa – preferably as so-called "Stavenjungen", who cleaned, cooked and kept living-rooms, sleeping-quarters etc. in order (Helle 1982: 741).

With regard to the distribution of child-related artefacts at Bryggen in the various periods, a small number of artefacts have been found in situ in fire layers, and in addition few can be linked to buildings. In period 5 (1248–1332) there are, however, some artefacts related to buildings interpreted as dwellings. In addition, there are no clear patterns with regard to the proportional distribution of artefacts in the forward and rear parts of the excavated area. It does, however, seem like the Gullskoen area is well represented by finds in most of the periods, and mainly in the rear, easternmost part. The tenement Bugården is also represented with many finds, especially in periods 6 (1332–1413) and 8 (1476–1702). When child-related artefacts are more rarely connected with the tenements Engelgården and Søstergården, this may be due to large parts of this area having been excavated with machine down to fire number V (1248).

For the distribution of toys and soles in the other parts of the Bryggen excavation in Bergen, there are no clear patterns. It should, however, be pointed out that period 3 (1170/71–1198) is represented by a larger proportion of toys than soles in the rear zone, while the opposite is the case in periods 4–5 (1198–1332) and 7 (1413–1476). Toys that to a greater or lesser degree can be linked to boys dominate in all periods, mainly balls (not least in periods 5–6 (1248–1413)), boats and skates. In periods 5–6 (1248–1413) there is almost exclusively this kind of toys found in the rear parts of Bryggen – in particular in period 6 (1332–1413). Previously, balls have mainly been linked to adults, but they may also have been used by older children. The skates can also be interpreted in this direction. The increasing element of large-sized soles and male and more adult-related toys may indicate a habitation pattern where the older children dominate. They may have been employed there, and not necessarily have been a part of family-

based households. At least, this corresponds to the fact that women and children gradually were displaced by the male colony that The German Kontor represented.

On a more detailed level, only a few artefacts from the extensive Bryggen excavations have been found in situ in fire layers, and even fewer are linked to buildings. To a greater extent the material is connected to fillings. It has thus been difficult to document possible residential buildings with children. This is in contrast to medieval Trondheim, where 95 of the 97 toys are related to buildings, passages or other areas outside the buildings (Fahre 1998: 67–90). Yet, none of the so-called socializing toys from Trondheim are found in typical dwellings or buildings with fireplaces (*ibid*: 91–110, 112–113). In the early phases (c. 970–1050) the toys are mainly linked to areas outside the buildings, and in the later phases, which are richer in finds (1225–1325), to buildings (*ibid*). Fahre links this to a change in waste treatment in the thirteenth century, but the distribution of toys can also be interpreted as a possible sign that children have played mainly in the middle or rear parts of a tenement – which was also in this medieval town interpreted as the main area for dwellings and storage (Fahre 1998: 93–94). Fahre has in her survey not made use of the shoe material, which might have resulted in a different pattern than for the toys alone.

Bergen in general

Multiple categories of artefacts, like soapstone vessels and fishing tackle, exhibit a decline in the material after period 3 (1170/71–1198), and this has been attributed to amongst others a gradual move of the settlement from and further expansion beyond Bryggen, especially in the late Middle Ages, as the Hansa Kontor took over the area. The distribution of the toy material fits into this picture. An ever increasing number of soles in the same period does not necessarily contradict this, as the soles to an increasing degree may be linked to older children.

If we look at Bryggen in relation to the medieval town of Bergen as a whole, this impression is enhanced. From the few excavations at Holmen there are no finds of child-related artefacts, while Øvregaten/Stretet is represented with only a very few artefacts, dated to the 1200s. The artefacts from Strandsiden have not been dated, and, like the artefacts from Øvregaten/Stretet, can tell us little apart from the likelihood that there have been children here. In Vågsbotn, however, the first child-related artefacts emerge in the 1300s, and the number rises in the next century. The child-related artefacts from this area are thus dated to a time when the decline in toys (but not children's soles) is especially marked in the Bryggen area. The marked decline in the number of artefacts in the 1400s at Bryggen may be a result of changed waste disposal methods, but as the tendency towards an ever increasing share of toys is evident already from period 3 (1170/71–1198), it is likely that the material is representative here. Throughout the rest of the survey period, the number of child-related artefacts in Vågsbotn is, like that at Bryggen, low.

With regard to the toy and shoe material, there are, however, no large differences in the material from Bergen in general when seen in contrast to that at Bryggen. The larger soles dominate, if to a somewhat more varying degree, and no particular toy categories that are represented, can be pointed out. Based on the toy material a small majority of the confirmed toys may indicate more girls here than at Bryggen. The material is, however, too small to give any clear indication of gender and age in other areas than at Bryggen.

6 CONCLUSIONS

"(…) children contribute to the archaeological material whether or not we are competent to recognize them"
(Chamberlain 1997: 249).

In this study of children in medieval Bergen more than 2,500 complete or fragmented artefacts that may have been used by children have been examined – 425 toys and 2,088 shoe soles, related to both boys and girls of varying ages. The group of toys was made up of a wide variety of objects – altogether 20 types, covering musical objects or noisemakers and toys connected to role-playing, in addition to toys related to board games and sports/physical activities. The toys were evaluated according to the degree of certain identification – there were 75 confirmed toys, 79 probable and 271 possible toys. The children's soles were also a large and varied group, and based on shape, the classified soles from the Gullskoen area were divided in eight types.

Together, toys and soles formed the basis for illuminating questions concerning children in Bergen in the period between approximately 1120 and 1700. Important themes were related to childhood as a separate stage in life, and how archaeological artefacts may be interpreted to shed light on children's everyday life and presence in the medieval town of Bergen. I wanted to examine whether or not notions of children may be disclosed by and reflected in material culture – through toys and equipment like shoes, in casu soles. In addition, focus was on the town as an area of settlement in relation to the presence of children, as well as on activities mirrored in the material. Here, an important question was related to social and demographic structure, and concerned gender make-up and household patterns – and thus also children. A closer study of Bryggen has been central, an area where population structure underwent great changes in the course of the examination period. This is also the area in which most of the children's objects were found. With regard to Bryggen, this question is particularly interesting, as the members of the Hanseatic League established their Kontor here in the middle of the fourteenth century, and thus turned the area into a predominantly male society. What effects did this have on social structure in the town and on the presence of children? Further, is it right to say that archaeological artefacts represent nothing but "pathetic fragments" (Dyrvik 1980: 8) with regard to examining medieval children, or can they actually help us shed light on the questions posed above? In the following, the main results of this study are summed up.

Where the presence of children in the town is concerned, the quantitatively extensive material proves that there are traces of children in most of the archaeological contexts where such has been collected by the archaeologists. The fact that objects attributed to children were not in evidence at all at Holmen – and to a very small degree in Øvregaten/Stretet and on Strandsiden – probably reflects archaeological methods and degree of examination rather than a possible absence of children. The majority of the artefacts originate from Bryggen, where archaeological excavations have been the most extensive – about 90 per cent of the evaluated material was found here. Both toys and children's soles were also present in all periods of examination. However, after around year 1200, toys were found at Bryggen to a smaller degree, whereas in Vågsbotn this material was not recorded before 1300, and particularly from 1400. There are reasons to relate this to a general move away of the "ordinary" settlement at Bryggen in this period.

The majority of the 2,088 shoe soles were concentrated at Bryggen, and the remaining soles scattered over the entire town. Yet, the shoe material was somewhat differently distributed in time than the toys, characterized by both a relative and absolute increase of finds up to and including period 6 (1332–1413), followed by a distinct decrease. This was particularly obvious with regard to finds per year. At the same time there was an increasing number of large-sized soles, possibly related to children in the oldest age group, seven to twelve years. The number of middle-sized soles was reduced in the same period, whereas the small share of the smallest soles was constant at about five per cent. Also the youngest children may thus have been a natural group in the Bryggen area, particularly in the earlier parts of the examination period. There are few small-sized

soles in the following periods. As a whole, the children's and adults' soles from the Gullskoen area indicate a ratio between children and adults of about 1:3. This relationship varies over time. Up to the middle of the thirteenth century, the share of children's soles is distinctly smaller than in the following 150 years, rising from 13–16 per cent to 40–37 per cent. If this distribution is a more or less representative expression of the age structure in the area, it deviates somehow from population structure known from more recent times. According to this study, children may be underrepresented in the earliest period of examination, whereas later, from about 1250 to 1400, the group of older children is overrepresented. This indicates the presence of a somewhat different household structure than a family based one (although it may also reflect attitudes toward children, that they were dressed and equipped differently at different ages) – possibly related to the Hanseatic society at Bryggen.

The decreasing number of children's soles from about 1410 at the latest, may result from the German male colony taking over Bryggen in the second half of the fourteenth century. Still, changing methods of waste disposal may also have contributed to distinctly fewer finds than in previous periods. The fact that the largest element of soles was found between c. 1330 and 1410 can perhaps be interpreted to the effect that that this transition did not take place suddenly, which the distribution of textile equipment – reflecting the presence of women – may also indicate. The distribution of soles corresponded to a high degree to the distribution of these female objects, and may indicate a household pattern including both women and children – particularly in the two to three earliest centuries in the history of Bergen, but also after the introduction of foreign winter residents and members of the Hanseatic League. The toys indicate that this household pattern was most characteristic until the middle of the thirteenth century.

Neither the toys nor the soles may to any particular degree point to specific areas of settlements including children in the Bryggen area. Only a very few objects were found in situ in fire layers, and even fewer in relation to buildings. In period 5 (1248–1332), however, a few artefacts were found in relation to buildings with residential functions. Neither were there any clear patterns with regard to relationship with the forward or rear parts of the tenements. This applied to the children's object in general, as well as to the two categories of artefacts separately. A slightly larger share of soles than toys was proved in the rear parts in periods 4–5 (1198–1332) and period 7 (1413–1476), but generally there were small differences – toys and soles were more or less equally distributed in the area. Although the area of Gullskoen is represented with most finds in the majority of periods, the development here seemed to apply to the entire area of Bryggen as well.

To what extent have the artefacts shed light on the broader question concerning whether or not medieval children had what we today consider a childhood? The toys indicate that play must have been an important part of childhood also in the Middle Ages. They vary in type, covering physical activities and games, as well as musical objects and toys related to role-playing – e.g. balls, marbles, skates, bone buzzers, possible rattles, dolls, toy boats, animal figures, miniature tools and toy weapons. Several types of toys were present at an early stage, and the variation in types also extended over time. The majority of the toys related to role-playing reflect adult activities and doings both inside and outside the households. In addition, games and sports/physical activities must have played an important role, although toys related to these activities are more uncertain in relation to children. As is the case today, the social context made its impact on children's games – a high number of toy weapons in troubled periods, as well as many toy boats in periods dominated by trading and shipping may be interpreted this way, as it has been done for the same toys in Trondheim. Most of the confirmed and probable toys were related to children in the oldest age group, children between the ages of seven and twelve – preferably boys. This means that there is less evidence of the youngest children in the material. Whether this is due to their equipment being sparser, that they were treated differently concerning dressing and equipment or that they were less present is difficult to decide.

The overrepresentation of large children's soles may also reflect older children. A growing number of large children's shoes makes it rele-

vant to ask whether the older children also were a part of the workforce in the town, as it is possible that their presence reflects the youngest male servants at Bryggen. A generally small number of the smallest soles, however, does not necessarily mean that there were far less small children, and/or that older children entered the town as servants only. This may just as well be an expression of attitudes toward children – that not until they reached a certain age did they wear shoes to any degree, an age when they became useful in a working context.

The children's soles were of the same types as the adults' soles – all in all eight types. That the former appear in a variety of shapes and sizes, and that they also are similar to adults' soles, may indicate that children both were seen as the same as adults, and at the same time as a separate group, different from adults. It may also seem like children to a larger degree than adults wore shoes preferably with soles that more or less corresponded to a normal foot. That even the youngest children wore shoes may be taken as a sign of care and consideration and of norms that included children's equipment. In addition, we have seen that while the youngest children wore shoes that fitted their feet, children between the ages of about seven and twelve more often wore shoes similar to the ones adults wore. This may be interpreted as a material expression of children entering adult life. Based on the sole material, it thus seems as if children were also regarded as a group differentiated according to age. It is perhaps symptomatic for these attitudes that particularly children in the oldest age group are represented in the archaeological material.

All in all, these seemingly insignificant fragments of an everyday life underline the fact that childhood was a stage in life that was acknowledged also in a medieval town – in play, but probably also in work. The range of toys and games displays a striking resemblance to toys used in more recent times, which indicates a long-standing tradition. That even infants wore shoes also points to care and consideration that contradicts Aries' interpretation of a somehow cynical notion of children in the Middle Ages. Although it may appear as "pathetic fragments", the archaeological material can also shed new light on children's life in a medieval town. It may for instance in the form of a small children's shoe be to us the embodiment of medieval everyday life.

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The Bryggen Papers present results based on the archaeological material from the excavations at Bryggen and other medieval and early sites in the town of Bergen. Known as an Episcopal see and regional royal administrative and residential centre, Bergen developed in the twelfth and thirteenth centuries into the first truly international trading centre of Scandinavia and one of the most important ports of northern Europe, at the same time becoming the first capital of the Norwegian kingdom. The Hanseatic League established one of its four main trading stations or *Kontor* in Bergen around 1360, lasting into the latter part of the eighteenth century.

This volume of the Main Series of the Bryggen Papers concerns children and how child-related objects from archaeological contexts can illuminate children's presence and everyday life in medieval Bergen. By analysing physical remains reflecting children's games, behaviour and clothing, the author has been able to provide new information and shed new light on the everyday life of children in a medieval town, and thereby indirectly also on the demographic and social organisation. The study also relates to the wider discussion of how childhood was perceived in the Middle Ages and how children at different stages of childhood were treated.

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