Occupying town plots on the early development of habitation in Norwegian medieval towns.

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Introduction

The first Norwegian towns came into being during the 11th C, according to the traditional view of Norwegian scholars. This is primarily based on Heimskringla, the Kings' sagas written by Snorri Sturlasson in the early 13th C (Heimskringla) and on other late narrative written sources (see Nielsen 1976, Christophersen 1992). During the last 50 years the results of archaeological investigations have played an increasing role in the debate.

The traditional debate amongst Norwegian scholars has been if the towns were established by the kings, as described in the sagas, or if they developed from earlier habitations, markets or trading places. Today's view is mostly in favour of Snorri's version although the dating is modified. The ground where the town was built seems to have been part of a farm or area owned by the king (Ersland 1994:44, Helle 1982:77-79). In Bergen, Oslo, Tønsberg and Trondheim, to mention the four largest and most well-known of the medieval Norwegian towns, there is solid archaeological evidence for farming prior to the urban development.

Plots, tenements and boundaries

In all these towns it seems that the ground has been divided into plots as the first act. Such a division of the ground is known from older Scandinavian settlements, such as Kaupang, Ribe, Haithabu and Birka. The tenements are elongated with the short side towards the street or towards the water. Here the width is between 4,5m and 8m. In the 11th C Norwegian towns the width is usually from 8 to 13m. In Trondheim in the most central part the width around 1000 was roughly 8m, whereas the area towards the river Nid had wider plots during the earliest period. These were later divided (Christophersen & Nordeide 1994: 127-129). In Bergen the plots seems to bee rather regular in the northern part of the area where later the German wharf was established, measuring around 11,5m along the shoreline, wider in a southern part, measuring around 16m (Hansen 2005: 139-144). In Oslo the width is more variable, between 11 and 15m in the oldest periods in the 11th C (Schia 1987:207, Molaug 2002). In Tønsberg there are indications of 8m as a standard width in the oldest period, but high medieval tenements seem to be around twice as wide, and the interpretations are rather uncertain (Lindh 1992:60).

The idea to divide the ground into plots as an initial act before taking an area in use is well known in northern Europe long before the 11th C. In Norway it is found in Kaupang in Vestfold, dated from 800 to the middle of the 10th C when the settlement was abandoned. Kaupang measured ca. 50.000m^2 at the most (Skre 2007:47). Of this area ca. 20.000m^2 had a subdivision into plots (Pilø in Skre 2007:172). The width of the plots varied between 6,5 and 8m in the excavated area. The length was however not very much longer, according to the excavators, the plot containing not more than one house, usually a habitation house where also handicraft production was carried out (Pilø in Skre 2007: 191, 195). Skre describes Kaupang as part of the first Scandinavian wave of urbanization, such as Ribe, Haithabu and Birka.

Elongated plots are also found in Scandinavian Iron Age villages. Such villages are not frequent in Norway, the single farm pattern dominating, but is the standard for instance in Denmark. The ownership of the ground to a village has been discussed. The possibility to use the width of the farm plots as a marking of the size of land rent, taxes etc. to the owner of the ground has been proposed by Erland Porsmose (Porsmose 1981:454).

The action to divide the ground of planned towns into plots or tenements is described in the Norse sagas. In Trondheim in 997 the procedure was as follows, according to Snorri Sturlasson: "He (king Olav Tryggvasson) gave people plots to build houses upon and then he let build the royal manor (*kongsgard*) .." (Heimskringla, Olav Trygvasson's saga Ch.70). The town of Borg (now Sarpsborg) is another example. It was probably founded by Olav Haraldsson in 1017 and the incident is described as follows: "There he let build a royal manor and a St. Mary's church and he let mark the sites (*tufter*) of other yards (*garder*) as well ….." (St. Olav's saga ch.61, Norw. expressions in brackets).

In Bergen in the 1020-ies or -30-ies there might have been an initiative to section an area belonging to the king in order to develop a town, according to archaeological evidence analysed by Gitte Hansen (Hansen 2005). In her opinion this initiative was not very successful, since many of the plots were staying vacant in this first phase (op.cit. 147). It is likely that the king was dependant of the interest and ability of the people who had been given plots to make the founding of a town a success. It might for instance be in his interest to start making trade with products from his own farms to get luxury products and to establish a stronghold with good possibilities to get supplies. On the other hand people who got the plots might have been felt as a pressure to develop them with houses and activity to please the king. One can assume that the king might use force if people were objecting to his offer or did not start some sort of activity on the plot. They might perhaps loose the plot if not developing it or, even worse, coming in disgrace. But this must have been depending of his possibility to control the progress and of the influence of the people who had been given the plots. It is likely that the developer was a bit in a hurry.

There is some physical evidence of early development of the plots. The boundaries themselves were of course important and could be marked in a way that has made it possible for archaeologists to find them today. The ditches in the boundaries between the plots in Ribe are well known. But they seem to have been filled in rather quickly (Feveile 2006). Therefore they could not be observed on the surface. But if necessary, one just had to dig a hole in the ground to spot it, and it could not bee removed. In Kaupang there are both ditches and stake holes from wattle fences in them (Pilø in Skre 2007:192-3). In Trondheim, on the Public library site relatively deep (60cm) straight ditches have been used for marking boundaries. It has turned out, however, that these ditches usually were not marking all the length of a boundary, but just a part of it. The ditches also have been dug at various times, although it seems that the boundary lines between the plots have been respected and thus have been the same during the initial period, from late 10th to early 11th C (Christophersen & Nordeide 1994:119). Also poles possibly functioning as boundary markers are found in Trondheim, and fences (see below) are rather common (ibid). In Oslo there are several examples of ditches as markers of boundaries between plots. As in Trondheim they are covering short stretches and have been dug at more occasions during the earliest period. They are not older than the oldest houses (see below), the date being around the middle of the 11th C (Schia 1987: 206). In Tønsberg there are examples of stones used as boundary markers in the virgin soil, probably late 11th C, (Lindh 1992:25-27) or earlier (Brendalsmo 1994:52ff.) as well as fences.

Fences are the obvious physical markers of tenements because they are clearly visible and also are effective hindrances against unwanted traffic, for instance of animals. In the Norwegian medieval towns there are several popular types, the *skigard* with sloping wooden sticks fastened between pairs of poles, the post and wattle fence and the palisade type of fence with slim poles placed close together. There are local traditions as to the types preferred. *Skigard* in Oslo in 11th and early 12th C., later on palisade fences, in Bergen palisade fences from the 11th C onwards (Hansen 2005:131-2), in Trondheim both palisade and wattle and daub fences are used in the earliest phases. There is only one example of å fence of *skigard* type (Christophersen and Nordeide 1994: 119, 122-5). In Tønsberg there is an example of a palisade fence used as boundary marker in the 11th and 12th C (Lindh 1992:25-27).

The occupation of the tenements

The typical development of the habitation inside a Norwegian medieval town yard during the first 250 or 300 years is the following, taking Oslo as an example:

The oldest period (Oslo 11th C): There are a few wooden houses of various building techniques, often small and only one storey high. The area covered with buildings was 15-20% or less. There are no large buildings along the street. All buildings are oriented parallel or at right angels to the street. There is no regular wooden plastering. Minor areas are fenced in and used for keeping animals. The border towards the neighbouring town yards and to the street has usually a fence or some other marker.

Early medieval pattern (Oslo 12th C): Wooden buildings are built along and parallel to the street, often two stories high. There is a passage from the street into the town yard. The plot is more densely habituated. Most buildings are standing in one or two rows along the borders towards the neighbouring townyards. These buildings have their gables towards the street. Cross-joint log technique (Norw. *laft*) is by far the most used building technique. Wooden plastering is common. There is less space for fenced-in areas. Fences towards the neighbour town-yards where needed.

High medieval pattern (Oslo 13th – 14th C): One or two large wooden buildings with two or three stories are standing along and parallel to the street, depending on the width of the plot. The passage from the street might be built over. The other buildings are built in one or two rows along the borders of the tenement, depending on the width of the plot. All of these buildings have their gables towards the street. Many of them are built together, having common gable walls. Most of the houses are built in *laft* technique. There is always a yard and an entrance area, usually paved with wooden planks and often with a wooden drain underneath. A garbage heap is in the rear end of the tenement. Seldom open areas for animals etc. have been found. 50 – 60% of the area has buildings. Usually just the eavesdrop between the rows of buildings mark the border between two neighbouring town-yards.

These three stages did not start at the same time in the four mentioned towns. This might have a connection with differences in the activity and pressure on land. Interesting questions are when the various types of houses and house building techniques, as well as structures inside the various tenement started in the four towns and also in different areas of the towns. In this article foremost the initial phase will be investigated. The very first habitation in all the towns is sparse, spread and does not usually appear to be planned, contrary to the layout of the plots themselves. The hypothesis is that the first constructions on a plot were raised rather quickly, often with little effort and planning. In order to build houses there were two possibilities. To dissemble a standing building somewhere and reconstruct it on the plot is one solution. The *laft* cross-joint technique is especially suitable for such reconstructions. In Trondheim there are examples of such reused timber dated to the late 10th C (Christophersen & Nordeide 1994: 162, 267). The other one is to build a house without putting too much effort into it.

Evidence for the initial use of the plots. Early house types and constructions
In the medieval towns mentioned above, Trondheim, Bergen, Oslo and Tønsberg, many sites have been excavated during last 50 years, some of them large scale with excellent stratigraphy and preservation condition.

Trondheim
The buildings from the earliest phase on the Public library site, excavated in the 1970-ies and 80-ies, are dated to the late 10th C until around the year 1000 or somewhat earlier. They are not very well preserved. Most of the remains are just postholes of various sizes. Some of these are clearly posts from storage houses at the water front, mostly one in each tenement (Christophersen & Nordeide 1994:267). It is likely that they have been built in stave construction technique. Other postholes might be from light sheds or constructions other than houses. There are various pits and also some ditches, often curved or bent. The ditches might have been used to drain the area of individual houses or working areas. Some of the fences and border ditches are from this earliest phase, but even on places where there are no clear border markings, houses, postholes and ditches respect boundaries of which physical remains are found of phase 2 and 3, from around 1000 to the middle of the 11th C.

Several logs have been found from houses in *laft* construction secondarily used in 11th C phases, but dated through dendrochronology to the 10th C. Five logs without sign of corner notches have been dated to between 935 and 996, another two are as old as from the 840-ies (Christophersen & Nordeide 2004:159, 267). It is likely that these are from buildings from outside the town, that they have been taken down, transported and then used in the town, either in the 10th C as re-erected buildings or just as building material, in the 10th or in the 11th C. The oldest primarily cut *laft* is from early phase 2, from around 1000, in a frame around an artificial terrace used as building ground in a wet area (Christophersen & Nordeide 1994:162). Phase two is also the first phase with permanent habitation, with ordinary *laft* houses of the *stue* type with corner fireplace, wooden floors and benches along some of the walls on these terasses. The best preserved house got an extension with a room with earthen floor and central fireplace. Both these *laft* houses and also the *laft* in the terrace frame are of a type of cross joint called *findalslaft* with cuts in cuts both in the overlying and underlying log in order to fit well (Berg 1989:36 ff.). It is an advanced type showing that timbering with this technique must have been well-known in the Trondheim region in the late 10th C. There are no thick cultural layers from phase 1. Neither there are any fireplaces observed. In phase 2, however there are thick cultural layers and all signs of permanent occupation.

In phase 3, dated to the first half of the 11th C and around 1050 the excavated plots are rather densely built. The first houses along the street are from this period. They are interpreted as booths (Christophersen 1991, Christophersen 1994:203-5).

Oslo
In Oslo also the oldest houses found during the excavations, are buildings with posts dug into the earth. They can be dated to around the middle of the 11th C or somewhat before. No whole house ground was found, just two instances of groups of postholes probably belonging to houses (Lidén 1977:56-57 ref.9,16, Schia 1987:162-63, Molaug 2007). These finds are from the sites "Mindets tomt" and "Søndre felt", central in the town and excavated in the 1970-ies.
From the same time are some oriented narrow and shallow ditches much of the same type as in Trondheim and some post holes, possibly from small storage buildings (Lidén 1977:56-58). The only remain of a possible domestic building is a fireplace of stone slabs with a hard stamped sand layer around, probably a floor layer (op. cit.: 58).

In a slightly younger phase, but still mid 11th C or the 3rd quarter of the century there were another central fireplace with earthen floor around, probably a house with log walls in *laft* construction. Also two other logs of such buildings were found in the same phase. The cut in the underlying log is very simple, just semicircular to fit its rounded surface (Norw. *vagenov*). From the same time are several square houses, probably sheds with four posts dug in the earth. Some have walls of wickerwork, probably wattle hurdles and not proper walls, the floor of the proper building being raised above the ground. Some have also a large pit in the middle, dug down into the natural ground. This was filled with manure and human faeces. All together this period is likely to have lasted 20 – 25 years or less.

In the next phase of the late 11th C there are several examples of *laft* buildings of the *stue* type with corner fireplace, wooden floor and wall benches (Schia 1987:159-160). This is the typical domestic building usually situated in the middle of the town-yards until of the end of the 13th C (Fett 1989: 82). There are some examples from the site "Mindets tomt"/"Søndre felt" of 11th buildings close to the street, but also examples of open space. Houses of the booth type close to and parallel to the street are frequent from the first half of the 12th C onwards.

The excavation site Oslogate 6 in the northern part of Oslo shows a similar pattern of development although it developed later, from the late 11th C onwards (Molaug 2000:59). Boundaries are marked with stretches of ditches in the initial phase. But very soon there are more examples of fences, both *skigard* and wattle fences. The first buildings are few and scattered with postholes as the only remains. Only one building is a domestic one with fireplace. This is probably of *laft* construction. The first houses with certain *laft* construction are from phase 2, around 1100. They have very simple corner notches. Slightly later is a building of *stue* type lying at some distance from the street. It has all the characteristics of the two room *stue* found on the other site, and the corner notches are the developed *findalslaft*. From the middle of the 12th C all buildings were situated in the regular pattern in along the boundary and with their gables towards the street. From that time on there were booth buildings along the street as front buildings of the tenements with just narrow passages leading in to the yards from the street. Both these and the passages were paved with planks.

Bergen
The oldest houses found during excavations in Bergen are scattered and of different types. According to Gitte Hansen a pit house north of Bryggen area, some posts near to the water at the Bryggen site excavated by A. Herteig and possibly also some posts south of the Bryggen area are the only ones that could be dated to the period before 1070 (Hansen 2005: 67-8, 145-6). From the periods between 1070 and 1100 and between 1100 and 1120 there are more houses identified. All of these are spread and are stave buildings. The oldest ordinary *laft* buildings are dated to the following period, between 1120 and 1170. At this stage the building pattern is well structured with paved yards and the buildings lying in rows along the boundaries to the neighbouring tenements, the gable towards the sea. The area of the Øvre strete, the main road parallel to the shoreline, is however not investigated, so that it is not possible to know when the first booth buildings were erected along this street. The *laft* buildings found in situ on the Bryggen site are all from the middle area. Where the type of *laft* could be identified, it is of the *findal* type, as in Trondheim (Olsen 2002:80, Reimers 2002:789).

Tønsberg
The oldest buildings found in the town of Tønsberg has much the same form and constructions as Viking age houses from the countryside. They have rounded gables, no inner posts, but posts in the wall trenches bearing the roof. The dating of the houses is uncertain and there are also questions as to whether they actually were a part of the town habitation or older (Eriksson1991). They are well

oriented as the later town houses. At another site there were few signs of occupation on the 8,5m wide plot, just 4 posts interpreted as part of the foundation from a minor house (Lindh 1992:25). The first log buildings with *laft* construction are as late as the late 12th C (Eriksson 1991:67). On the site Baglergaten 2 – 4 the first medieval constructions are dated to the last quarter of the 12th C or around 1200. The site is dominated by trenches, ditches, fences of both palisade and wattlework type and of some very few buildings with posts dug into the earth (Brendalsmo 1986:8-12, 34). The plots seem to have been defined from the beginning. One of the buildings seems to be in *laft* construction with two stories.

Conclusion
Although the examined towns started at different times, it seems evident that not only the principle of initial plots and marking of the boundaries were very much the same, but also the type of habitation, i. e. the types of buildings, structure, etc. This means that the circumstances and impetus probably were the same. Also the phases in the further development into a more and more dense and structured habitation have different dating. This cannot be explained through different time of acceptance of new trends. Rather must the pressure on land and the level of activity have been decisive for when a new period started in the various towns.

Discussion
The Medieval Norwegian towns seem to have originated as the result of the initiative of the owner of the ground, the king. This seems to bee in the tradition of the Viking age early towns in Scandinavia, as demonstrated in Kaupang, where the local chieftain had the initiative, probably in collaboration with the king, at that time the Danish king. The origin of the first Norwegian medieval towns is dated to around the 11th C, according to archaeological sources. Trondheim is somewhat older, from the late 10th C, Oslo is dated to the first half of the 11th C, probably around 1030, Bergen possibly around 1020 or 1030, at latest to 1070 and Tønsberg to sometime during the 11th C, perhaps the first part.

In all of these towns there is clear evidence for the partition of the ground in plots as the first act, and finds of ditches and fences used to mark the boundaries between the tenements are abundant. In Trondheim and Bergen the regularity of the width of the plots is the highest. Despite of the different time of origin, the type of the earliest structures inside the plots are much the same. There are few buildings and their construction is simple, with posts dug into the earth. The building techniques seem to have been the traditional ones used at the countryside. Much of the ground in a plot has been open, and there have been enclosures for animals. Many of the buildings seem to have been sheds, some perhaps for animals or with storage functions. Few buildings have been domestic. This is the same both for late 10th C Trondheim as for the 11th C Bergen and Oslo.

The artefacts point more at domestic functions, not of specialization, such as handicraft or trade (Hansen 2005:205, 220, Christophersen & Nordeide 1994:236-7, 259, 268, Andersson & al. 2007). It might be questioned if there has been a full year occupation of all the tenements with signs of habitation. And, as Gitte Hansen has pointed out for Bergen, there might have been plots staying vacant without activity for a long period after the sectioning of the ground into plots (Hansen 2005: 147).

The owners of the plots were native chieftains, high rank farmers and people of the king's personal company. They might have settled in the town, but it is more likely that they just visited the new town-yards and left to others, probably dependant farmers, artisans, tenants and slaves to do the actual work, such as trading and handicraft. These people were probably also responsible for the erecting of houses and other means of activity. In a period when living in a town was unusual, but many had seen towns abroad as well as had been doing trade there, it is quite logical that practical solutions were taken from the farm back home.

Sigtuna, Uppland, Sweden with its very regular pattern of plots of 8m might be the best Scandinavian example of a town founded by the king (Tesch 1990: 29 ff., Tesch 2002:727). From around 1000 they were occupied with mainly four building types, in the front part or the second position from the street were simple buildings, post and wattle or planks used for production, mostly handicraft and, in the second position for storage. In the middle part there were loghouses of the *stue,* (Germ. *Stube*) type with corner fireplace, benches along the walls, usually in cross-joint technique and interpreted as habitation houses. In the rear part of the plot were representative buildings of the hall type, although minor, with fire place inn the middle and wide benches of the "set" type, well-known from Icelandic

farms. The walls were usually of post and plank construction. In the initial phase from around 980, however there is evidence that there were only two houses, one house for storage and handicraft activity nearest to the street and one house with a central hearth. Both these house type were of simple construction of wattle and daub (Tesch 2002:727-29). In all the tenements excavated there are buildings of representative character with central hearth. According to Sten Tesch one of the main aims of the king was to summon the chiefs and big landowners, one or more times during the year (Tesch 2002:733). All the rest of the year the town farms were used by tenants, associates etc.

In the Danish town of Lund Peter Carelli has pointed out that the earliest sectioning in plots were very large plots, 2500-3000m2, arguing that the large plots were virtually countryside farms placed in the town (Carelli 2001: 107ff.). These plots were later in the 11th C subdivided. This is taken as a sign of the countryside farm just being transplanted into the emerging town, but also that some people were favoured through getting large plots from the king. Later in the 11th C these large plots were subdivided.

The first inhabitants of the Norwegian towns, as far as we know until now, seem to have moved from the countryside. The pressure by the king or his representative to start activities of trade and perhaps handicraft in the tenements must have been felt strongly by the new owners. There is no archaeological evidence that the towns were used by the king to summon the farmers or chieftains of an area, such as in Sigtuna. The *ting* assemblies were not summoned in the towns, according to the written sources. The Norwegian towns were situated in areas with good possibilities for supplies, making it possible for the king and his company and army to stay there for some time before moving on. This is put forward by Snorri Sturlasson as an explanation for Harald Hardrade's choice of Oslo as a town, probably in 1050. The type of hall-like buildings with central hearth found in every town yard in 11th C Sigtuna is also known in Norwegian towns, but is not at all so frequent. In Oslo there are two examples from the 12th C (Molaug 2002:769 fig.3), in Trondheim very few (Christophersen & Nordeide 1994:146) and some also in Tønsberg (Lindh 1992:48). Here the tradition from the countryside halls was continued in a modest way. The Bergen *Schötstue* buildings situated at the back of the Bryggen town yards and used for social gatherings and the preparation of food (*eldhus*) in the medieval and also post-medieval time might be a last reminiscence of tradition of the first owners of the town-yards.

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