

How to define Borders between Private and Common Land in Norway?

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Introduction

Drawing upon the medieval legislation from the latter half of the 13th century, as well as the legal practice during Late Medieval and Early modern times, I will take as my point of departure the following definition of ‘common lands’ in Southern Norway:

Territories outside the precincts of the particular, individual farms or settlement communities, which were open to resource exploitation for a selected majority of the peasants on fiscal farm units. Compared to the outlying field areas with the same kind of resources which was part of the privately owned farmlands – and which could be possessed either separately by individual farms, or jointly by two or three farms together – the exploitation of resources from the common lands was subject to much stricter restrictions and confinements.

The aim of this article is to highlight the background and conditions for the establishment of such areas considered as common lands, by analysing the development of the agrarian landscape in two settlement communities in the central parts of Southern Norway. One main point of focus will lie with the processes leading up to the drawing of more clear cut boundaries between such areas with commonly accessible resources, and the lands pertaining to the individual farms, being subject to their exclusive use.

The structure of this article will be as follows:

1) First, I will outline some basic features characterizing the common lands of Southern Norway, including some inherent contradictions or oppositions within peasant community, relating to the use of common lands, and the possible acquisition of parts of the commons as separate property.

- 2) Secondly, I will present some main stages in the development of Norwegian medieval legislation pertaining to common lands, and
- 3) Thirdly, I will delve into two examples from the central, agrarian regions of South-Eastern Norway, in order to see what an analysis of settlement development might reveal about the institutionalization of a clear boundary between the common lands on the one hand, and private farm property on the other. Such analysis will necessarily have a retrospective perspective, by trying to highlight the delimitation processes taking place during the Iron Age.

The place of extensively exploited resources within the agrarian adaptation and the role of the 'common lands'

In the southern part of Norway, the common lands must be viewed as a necessary and integral element within a balanced agrarian system which comprised both agriculture and animal husbandry (cattle). Farming was done on individual lots (homesteads), that comprised both intensively cultivated parts of land, and more extensively exploited areas. The intensively cultivated parts – or ‘the in-fields’ – comprised both fields for grain growing and meadows for hay production. The extensively exploited area – also called ‘the outlying fields’ often consisted of woodland, stony areas and other impediments, as well as pastures, where the cattle belonging to the individual farm could graze. Those outlying fields which adhered to the particular farms, might either be owned completely individually or separately for each farm, or as ‘joint property’ (‘sameie’) for two-three farms together. Such a mode of subsistence had highly adaptational capabilities, vis-a-vis different stress factors, such as varying population pressure, tax pressure from the authorities and the like. In times of growing population pressure – like in the high Middle Ages – increasing weight might be laid on grain production, which allowed for a greater amount of consumable energy to be produced from the land, though it required a greater labour effort; while in times of lower population pressure, the priorities would shift back to animal husbandry, which required a lesser work amount, and was better suited to the dietary preferences among people. But the functioning of the system required that some elementary standards of balance were being met, and in such a context the common lands stood out as a necessary and highly appreciated element. They provided an extra, additional supply of potentially extensively exploitable resources, which stood at the disposal for the peasants on the officially recognized farmsteads.

The use, to which the common lands were primarily subjected within this agrarian context, was dictated by the need for additional, supplementary resources, as viewed from the individual peasant household or farmstead: To a great extent it concerned *additional supplies of fodder for the cattle*. Among other things, this was provided by moving the cattle in summer to certain ‘dairy farms’ in the commons – that is: clearly defined and individually disposed lots, around which the cattle could graze freely. At these places, the dairy produce could also be preserved and stored on a temporary basis, before transporting it and the cattle back to the farm in early autumn. Furthermore, the activities providing extra fodder for the cattle also comprised cutting the hay on outlying fields in the commons (in Norw. called ‘utslåtter’), and gathering leaves and bark for fodder purposes. Apart from this, the common lands also had great value for the individual peasant households on account of their wooden resources. The woods provided fuel and building material as well as material for fences. The processing of tar, on the basis of pine roots, was also common in many districts. Finally, the rights to fishing in the lakes and rivers, as well as to hunting, were also of great significance to the peasants concerned.

Limitations and restrictions to the resource exploitation in the 'common lands'

Contrary to what might be expected from the meaning of Norwegian term for common land – ‘almenning’, which literally designates something belonging to, available for ‘all men’ – the exploitation of resources in these areas was not completely free; so far as we might deduce from historical sources. This had two aspects, relating both to what was considered legitimate use of the resources in the common lands among those peasants who held rights to such exploitation, and the extent of the peasant collective who was regarded as legitimate users.

a) In the first place, resource exploitation in the common lands was subject to rather strict regulations and confinements, compared to how the peasants might utilize their ‘own outlying fields’, being part of their separate farmsteads. For instance, the outtake of wooden resources was allowed, only so far as it concerned legitimate *‘needs of one’s own household’*. In contrast, the exploitation of the forests for other purposes, such as commercial, was considered as another question, and not allowed.

The right to cut hay on outlying fields in the commons, was regulated on a year-to-year basis: The person ‘who first put his scythe into an outlying field’ could use the hay from the site that year, but the next year it was again free for other peasants. The practice of burning down some of the vegetation, and sowing grain in the ashes (in Norw.: ‘bråtebruk’) was originally forbidden in the commons, whereas one was allowed to do it in the outlying fields pertaining to the individual farms. In Early Modern times however, the peasants exercised an ever greater pressure to be allowed to do likewise in the commons.

b) Secondly, *concerning the extent of the peasant group holding rights to exploitation of common resources*: As far as we are able to deduce from the evidence of Early Modern times, the access to resource exploitation in the commons was never assigned the whole settlement community in its totality. On the contrary, the use rights were tied to farm units which were entered in the official land registers (cadasters, ‘matricules’), and which thereby were recognized by the state as primary tax objects or fiscal units: Such units were called ‘skattegårder’, that is ‘tax farms or ‘cadaster farms’. – In some regions even this was *not a sufficient condition*, as the rights of exploitation in the commons were still denied some farms which had been settled during the Viking Age, on stony and hilly areas with poorer soil, between the older settlement cores. As has been highlighted by Andreas Holmsen, the farms of the so called ‘stokklendinger’ in *Eidsvoll* parish, Romerike, were exempted from rights to the common lands.¹ – Though the right to take up ‘dairy farms’ in the commons was widely recognized, this was not necessarily practised by all peasants. For instance, within the parish of *Nannestad* in the south-east region studied here, only some 50 out of 134 farms having official status in the cadasters, used such dairy farms in the commons during the middle of the 18th century. However, 25-30 farms possessed dairy farms situated within their own, separate and privately held ‘outlying fields’.

¹ A. Holmsen, 1966. *Bygdesameie, almenning og “stokklendinger” i Eidsvoll*, in: *Gard – bygd – rike*, Festskrift i anledning Andreas Holmsens 60 års dag 5. juni 1966. Oslo–Bergen–Tromsø, pp. 37 – 53.

Structural oppositions within peasant community concerning the extension of the common lands

Under specific circumstances, the need may arise among certain segments of the peasants, of acquiring some part of the common for individual, exclusive exploitation on a permanent basis, and safeguarding this piece of the former common lands against the others, as their separate and exclusively accessible resources. In principle, such an acquisition of common land parts may be undertaken in two ways:

1) Either through *a successive movement of appropriation* from farmsteads already bordering to the common lands. This would amount to a sort of ‘direct’ – or may be ‘silent annexation’ so to speak, and take the form of an extension of the individual farmland proper into the common (*‘direct appropriation’*). – Ordinarily, such directly appropriated areas did not become enclosed, but their boundaries were fixed according to terrain formations, marks in cliffs and stones, etc.

2) The other way would be to *cultivate new farmland* in the commons, in the form of *new, separate settlements* or ‘clearances’ (in Norw.: ‘rydninger’). Such new, delimited clearances would not necessarily have common borders with any older agrarian entities or farmsteads, but might be surrounded on all sides by territory which still was considered as common land (‘expansion by clearances’).

The motivation for trying to appropriate parts of original commons as individually or jointly owned farm land, seems predominantly to stem from the limitations and restraints which were laid down for ordinary resource exploitation in the commons, held up against the needs and aims of the individual peasant household, as viewed from its particular perspective. From the individual household’s point of view, it might appear desirable to discard with the regulations and restraints, and implement a more thorough, intensive resource exploitation under individual control and without the restrictions laid down by the collective. Such a goal may of course be triggered by several circumstances: In a context dominated by agrarian-based, household economy, *increased population pressure* and *competition for the extensively exploitable resources* may of course lie behind. Specific external factors, like *increased market demand* for specific resources, which initiated innovations within the encompassing economic system, might have played a central role as well. That would appear to be the case

of the increased international demand for *timber and wooden resources*, which promoted Norwegian export of these resources during the 16th and 17th centuries. As the forests stood out with a new value - both in the eyes of the rising bourgeoisie and the peasants – many of the latter sought to acquire the neighbouring forest areas of many commons as private forests – either as individual private property, or as so called 'joint property' between two or three farms.

Such a drive for '*direct, silent annexation*' appears to have been present in very different periods, and in highly different contexts. Attempts of such appropriation might be undertaken from the oldest, well established, central farms in the communities, as well as from the ones in the middle stratum, and the from tiny clearances, just recently established during Christian medieval times. – Notwithstanding their ubiquity, such motivating forces in the direction of appropriation of course had to be mediated, balanced and checked out against other, counterbalancing and pre-disposing factors: *Distance* to the resource area originally considered as 'common', together with *ecological and topographic factors* will of course play a part, in determining the degree of *access* to these resources, and the degree to which some of the occupants of neighbouring farms will strive to appropriate land, or resist any newly established farm to hinder their passage, and cut off the access to the commons. But such topographical factors will of course have to undergo a *social mediation*. The real decisive factor in determining how far the appropriation of 'common land' shall be allowed, would appear to be the relative balance of social power between the peasant striving for appropriation, and the collective of those peasants who would see themselves as 'cut off' from the commons by this very appropriation. The peasants whose access to the commons was threatened by the expansion of private farm land, would naturally strive to halt back and check the movement of 'direct appropriation'. In other words, they would tend to put down a 'veto' against further direct expansion. This contradiction seems to be present at all times.

Thus, when it comes to the question of preserving the extension of the commons, and the assortment of resources held within, there exists at all times an inherent contradiction within the community of peasants adhering to a common: Between that minority of peasants who were residing on farms directly bordering to the common lands, and who therefore had the option of 'direct appropriation' – given specific circumstances and incentives – and the majority of peasants who were residing on farms which did not offer direct access to the common lands, and who therefore would oppose the reduction of available common

resources, due to such 'direct appropriation' by a minority. Such an opposition within peasant communities is reflected in countless court cases from Late Medieval times and the Early Modern period. In the appendix at the end of this article are rendered two examples highlighting how this contradiction might be expressed at various times; respectively from a case in the valley of Gudbrandsdalen in 1432, and from a survey over the commons in Nannestad in 1759.²

The medieval legislation concerning common lands

In most regions of Southern Norway, a conception of what areas that should be regarded as 'common lands', in contrast to territories defined as belonging to the separate farms, seem to have arisen at some point of time during the Iron Age or Early Medieval times. This development was probably called forth by the very structural opposition within peasant community as described above, and seems to have had two interconnected results: The establishment of a more definitive 'common boundary' and the explicit formulation of customary rules, aimed at securing and preserving the physical extension of the commons, as well as prescribing what kind of resource exploitation that should be allowed within these commonly held areas, as opposed to the 'outlying fields' and forests included in the separate farmlands.

The establishment of a 'common boundary' was probably due to the social pressure from those parts of the peasant community, who to an ever increasing degree saw themselves cut off from the access to the common resources, as the settlement expansion went on, and those peasants who were able, subjugated ever greater parts of the common resources and expanded their own farmland proper. Given that the group of peasants who experienced that their access to former common areas was denied or made difficult, was sufficient numerous or had the capabilities of rallying enough support, such a boundary may be established.³

² *Diplomatarium Norvegicum*, vol. III, no. 717, Bjølstad in Vågå 23 sept.1432; Appendix to missive from province governor Storm in Akershus province, May 9th, 1761; *Archive of Generalforstamtet, Norwegian National Archives* (see Appendix).

³ In the southern Norwegian provinces of Telemark and Agder this kind of social pressure or support does not appear to have been sufficiently effective to bring about any constitution of a 'common boundary'. In these regions, the semi-mountainous areas and 'outlying fields' in their totality were divided between the separate farms. This phenomenon may have been caused by the principal parity between the farms and peasants, which may go back to the earliest phases of the settlement. Almost all the land in these regions was owned by the peasants, reciprocally.

The other result of this resistance and pressure from the collective of the settlement community, vis-a-vis the perspective of an ever-increasing 'direct appropriation' of common lands, seems to have been the formulation of a *customary rule* to the effect that the 'commons should be preserved for the future in the shape (extension) they had (at the moment), and according to customary practice.' Such a customary rule was in fact included and confirmed in the oldest regional law books that are preserved, and which were codified separately for each of the traditional law provinces. The origins of these regional law codes go back to the 11th and 12th centuries, and the preserved editions are dated to the latter half of the 12th century and the first years of the 13th century, respectively. Alongside with other regional law books, which only have been partially preserved,⁴ they formed the state of law until a general nation-wide law code was introduced by royal legislation, during the reign of Magnus the lawmender in 1274.

Thus chapter 145 of *the Gulathing law book* – covering central parts of Western Norway – contains the following clause, as introduction to its exposition of rules concerning the common lands:

‘Every man shall enjoy water and wood in the common. His common shall every man have, in the way it has been ...’⁵

And likewise chapter XIV, 7 of *the Frostathing law book* – which was valid in the Trøndelag region of mid-Norway – also started with this general clause:

‘Thus shall the commons stay in the way they have been before, according to previous custom, both in the upper and exterior ...’⁶

And then it goes on to stipulate exact procedures for solving that very type of conflicts that may arise from alleged attempts of 'direct appropriation':

⁴ Unfortunately, those parts of the Eastern Norwegian regional law books that deals with secular matters of land management, have not been preserved.

⁵ ‘Hverr maðr skal neyta vatz oc viðar i almenningi. Sinn almenning skal hverr hava, sem at fyrnsku hever haft...’ (Gtl. 145, *Norges gamle Love indtil 1387 (NgL)*, vol. I, publ. by R. Keyser & P.A. Munch (Christiania: 1846), 58; *Gulatinglovi*, transl. by K. Robberstad (Oslo: 1969), 156; *Den eldre Gulatinglova*, publ. by B. Eithun, M. Rindal & T. Ulset (Oslo 1994), pp. 106-107).

⁶ ‘Svá sculu almenningar vera sem verit hafa fyrr at fornu fari bæði hit øfra oc hit ytra...’ (Ftl. XIV, 7., *NgL* vol. I, 250; *Frostatingslova*, transl. by J. R. Hagland & J. Sandnes (Oslo: 1994), p. 204).

‘... But if men disagree, and one calls it for himself, and another calls it common land, then he have it endorsed who claims it for himself, and rally subsequently the local court assembly ('thing'), irrespective of it being a county court assembly or a half-county court assembly, which stands at disposal for men to settle such a matter, ...’⁷

During the High Middle Ages the King's authority in legal matters grew, and his capacity as legislator increased substantially, insofar as his role of initiator was accepted by the local thing assemblies of the peasants. New measures and regulations – which were always given the appearance of being 'amendments' or 'improvements' ('rettarbøter') of the old law – necessarily had to be presented for, and accepted by the regional, representative court assemblies ('thing') of the peasants (Frostathing, Gulathing, Eidsivathing and Borgarthing).

During this process of legislation, the customary rule about preserving the commons, in the shape they had always been, and according to old customs and practice, got confirmed and was incorporated in the (authorized) regional law books. – But another clause was added, obviously on the initiative of the King. This clause concerned the land ownership status of potential settlers in the commons, who now were declared to be *tenants of the Crown*. Immediately after the clauses confirming the traditional status of the commons, the Gulathing law book states:

‘... But if settlement is made in the common, then it is owned by the King.’⁸

And the Frostathing law book (Chapt. XIV, 8) contains the following clause to the same effect:

‘The King may rent out common land to whom he may wish.’⁹

In view of the earlier discussion, these points of legislation may now be regarded as a measure to ease and improve the situation for the potential settlers, vis-à-vis the customarily established ‘veto’ against infringements on the commons.¹⁰ The Crown may have deemed it

⁷ ‘...En ef menn scill á, callar annar ser an annar callar almenning, þá festi sá lög fyrir er ser callar, oc kenni þing siðan, hvárt sem þar er fylkisþing eða hálfþing er menn eigu því máli at scipta...’ (Ftl. XIV, 7., *NgL* vol. I, 250-251; *Frostatingslova*, Hagland & Sandnes, pp. 204-205).

⁸ ‘... En ef byggð gerizt i almenningi, þá á konongr’ (Gtl. 145).

⁹ ‘Konungr má byggia almenning hvargi er hann vill’ (Ftl. XIV, 8).

¹⁰ O. Solnørðal, 1958. *Rettleiing i almenningsslæren*. Oslo.; G. Sandvik, 1978. ‘*Allmenning*’, in: *Pax-leksikon*, vol. I. Oslo, pp. 62 – 63.

convenient and advisable that some land was placed at the disposal for such settlers, even though it meant an intrusion to the established rights of the communities when it came to exploitation of extensively used resources. As long as the old, customary rule about the preservation of the commons was preserved, and fixed legal procedures were established for charges implying those kind of infringements, a clear cut priority was established as to what kind of infringements on the commons that might be tolerated; viz. clearances and farm settlements consisting of separately cultivated areas, with own grain production, which could contribute to the procurement of the ever-increasing population. 'Direct appropriation' which would imply the strengthening of the extensively exploitable resources for those already established, was still prohibited. – This policy of favouring new settlement to a certain extent, promoted at the same time the number of individual farmsteads in the country, which subsequently could be subject to the *Crown's taxation*.¹¹ Becoming a tenant on Crown land also implied that the new tenant in a certain sense came under the protection of the Crown, and thus this measure might also have loosened and weakened older, more traditional power structures within the communities, dating back to the times before the development of the central monarchy.

The taxation to the Crown had been institutionalized during the civil wars of the 12th century – when the traditional obligation for the peasants to provide boats, equipment, men and food for the popular conscripted forces during wartime (the 'leidang') had been partly transformed to an annual tax in peacetime. Thus the Crown's interest in tax objects cannot be much older than this arrangement, presumably dating from the middle of the 12th century. – On the other hand, the legislative position in these matters must have been clearly established in the southern parts of the country well before 1260. In this year, king Håkon Håkonsson referred explicitly to the state of law in southern Norway, when he introduced similar regulations to the Frostathing's jurisdiction area, as part of a law initiative for this region – his so called 'New law':

'About those possessions (farms) which are called 'outside the staves' [= outside the border markers] and are established in the common, then we want such law and

¹¹ As these measures were being implemented for Frostathing's law as late as in 1260, some scholars have further suggested that they represent a counter-measure to certain difficulties signalling a beginning agrarian crises already in the High Middle Ages: Slightly worsening climatic conditions shall allegedly have aggravated the situation for agriculture in the northern part of Norway already during the 13th century (see A. Holmsen. 'Nyrydning og ødegårder i Norge før Svartedauen', *Heimen* vol. XVI, pp. 481 – 490).

arrangement to stand between king and free men, as in the eastern or southern parts of the country, and they pay such obligation of the subjects here as there, according to the king's decree.¹²

These regulations prescribed in the last versions of the Frostathing's law, concerning the use of common lands, as well as the procedures for settling disputes about the delimitation of them, was further repeated and elaborated in the National Law Code of Magnus the lawmender, promulgated in 1274.¹³ Of particular interest is the regulation concerning disagreements or doubts about the boundaries between common lands and privately held farmland. First, the procedure prescribed in the Frostathing's law is copied. Then, chapter 61 of the National Law Code continues:

‘ 3. But if the king's commissioner [ombudsman] charges somebody for being the property possessor of such land that has been cleared in the commons without the king's permission, and the possessor answers like this: ‘This land have I, and those who have owned it before me, possessed for 60 winters or longer’, and if the king's commissioner raises doubt about this, then the property possessor shall produce his witnesses in the way that is stipulated above, concerning disputes about private property and common land.’

Concerning that part of the customary norms which enabled the peasants' communities to prevent new settlements in the form of clearances in the commons, the policy of the centralized monarchy must be said to have ‘cut through’, and established new legal conditions for potential settlers in the commons, provided they were accepted by the Crown's local representatives. But what has here been called ‘direct expansion’ and appropriation of pieces of common land by peasants on farms directly bordering to the commons, was still prohibited, throughout the Middle Ages, and well into Early Modern times.

¹² ‘Of eignir þær er utan stafs ero kallaðer oc i almenningen ero görvar, þá vilium ver at þær standi slíc lög oc scipan um meðal konungs oc karls sem austr eða suðr í landit, oc slíca þegnscyldu geri þeir her sem þær eptir konungs skipan.’ (Ftl. Introduction, 19, *NgL* vol. I, p. 125; *Frostatingslova*, Hagland & Sandnes, p. 9).

¹³ National Law Code of Magnus the Lawmender, Section VII (about land tenancy), chapters 61 and 62, *NgL* vol. II, publ. by R. Keyser & P.A. Munch (Christiania: 1846), 144-145; *Magnus Lagabøters Landslov*, transl. by A. Taranger (Oslo – Bergen: 1979 [1915]), pp. 155 – 157. (Cf. Appendix.)

When did the common lands in Southern Norway become institutionalised?

This presentation of the contending interests related to the use of the commons, as well as the various endeavours to acquire parts of them for separate farm land, may also serve as basis for a methodological approach in trying to determine more precisely when certain areas in Southern Norway came to be constituted or institutionalized as common lands pertaining to the various peasant communities.

The last part of this article will deal with two cases from the central agrarian districts of Eastern Norway, where it seems possible to trace reminiscences of the two kinds of common land appropriation through an analysis of the available sources. The main focus will lie with the possibility of relating the successive appropriation of former commonly held areas to the main stages in settlement development, trying to highlight the relative order of succession in which the particular farms were established and whether their farmland possibly underwent some expansion as time went by. The primary sources for determining the presumable age of farms consist of *archaeological evidence* and toponymic analysis of the *farm names*. But this material must be combined with an analysis of boundary patterns, both relating to the later documented boundary of the commons, and to the boundaries between separate farms, in order to disclose whether some of farms might have been established as offsprings from earlier settlement cores which had undergone a partitioning. In this connection, a retrospective analysis of the land ownership relations pertaining to the separate farms – as well as their relative size – is also highly relevant. In a similar retrospective manner, some information may also be deducted from later legal disputes concerning the extension of private farm lands as opposed to common land areas.

The two selected areas of investigation are *Nannestad* and *Ullensaker*, which are situated in one of the most central agricultural regions in the Eastern part of Southern Norway, called *Romerike* (fig. 1). In fact the inhabitants of this region, *the Raumaricii*, are mentioned as early as in Jordanes' work *Getica*.¹⁴ For Norwegian standards, this region offers some of the most favourable conditions for cereal production, while at the same time they dispose of woodland and outlying field areas suitable for cattle pastures and the exploitation of other,

¹⁴ *The Gothic history of Jordanes*, 1915, in English version, with an introduction and a commentary by Charles Mierow, *Speculum Historiale*. Cambridge.

supplementary resources. The development of settlement and agrarian practices in this region – including processes related to the common lands – has been studied for many years by several scholars, such as *Andreas Holmsen*, *Birger Kirkeby*, and more recently by *Dagfinn Skre*, who in particular has focused on the transformation of social structures and local authority in a time-span from the older Iron Age and through the Middle Ages (A.D. 200 – 1350).¹⁵ From Early Modern times there exists a comprehensive source material highlighting legal conflicts and administrative procedures relating to the use of the common lands, as well as disputes about the delimitation between the common land areas and the separately held farmlands. The region is also well covered by medieval and early modern land cadasters, which give ample options for reconstructing older property relations, and thus describing ‘the geography of land ownership’ from a historical perspective.

¹⁵ Holmsen. ‘Bygdesameie, almenning og “stokklendinger” i Eidsvoll’; B. Kirkeby. ‘Almenning og sameieskog i Nannestad sokn’, in: *Nannestad bygdebok I*, Gardshistorie for Nannestad sokn (1962), idem, ‘Almenning og sameieskog i Holter sokn’, in: *Nannestad bygdebok II*, Gardshistorie for Holter sokn (1964), pp. 12 – 36, idem, ‘Almenning og sameieskog i Bjørke sokn’, in: *Nannestad bygdebok III*, Gardshistorie for Bjørke sokn (1966), pp. 12 – 22; and D. Skre, 1998. *Herredømmet: Bosetning og besittelse på Romerike 200 – 1350 e.Kr.* Oslo: Acta Humaniora, Det historisk-filosofiske fakultet, Universitetet i Oslo, vol. 32.

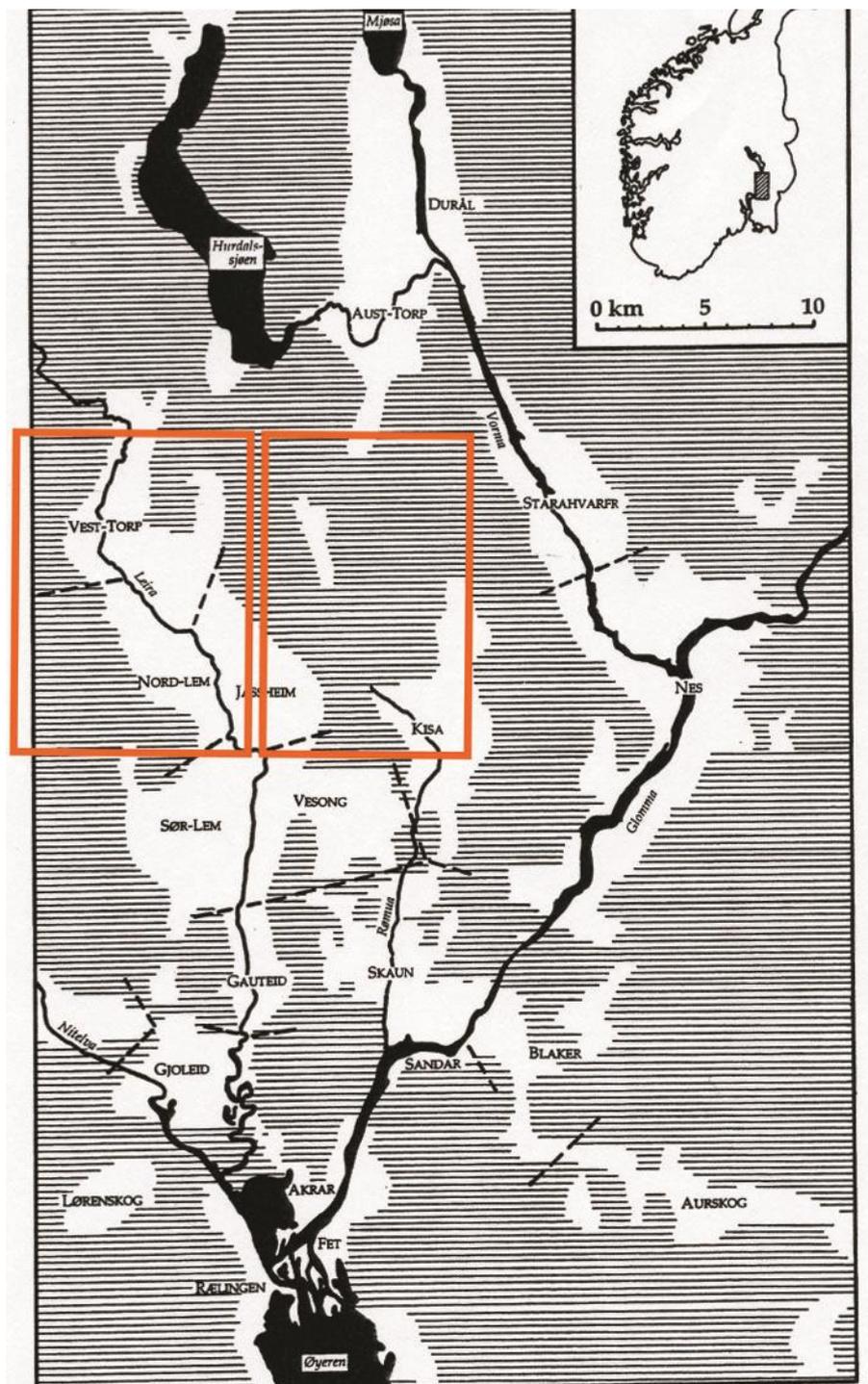


Fig. 1. The region of Romerike, with the location of the municipalities Nannestad and Ullensaker (map basis reproduced from D. Skre 1998).

In recent times, Nannestad and Ullensaker make out two separate municipalities, having about the same limits as the parishes bearing the same names and which were established by the

church during the Middle Ages. But an interesting fact is that the oldest written sources also document an *older, pre-christian territorial organization*, which *not* coincided with this medieval parish organization. Several medieval charters refer to these pre-christian communities, displaying quite other names than the later parishes.¹⁶

In fact, the commons of Romerike appear to have been structured systematically according to this *pre-christian territorial organization*. This gives a distinct time-depth to the institutionalization of the common lands, and a *terminus ante quem* for their organization. An overview over the correspondence between the pre-christian communities and which parts of the later established parishes which they covered, is given below.

Pre-Christian communities	Medieval parish annexes	Modern municipality
<i>Vesong</i> (to the West)	Ullensaker	} Ullensaker
<i>Kisa</i> (to the East)	Ullensaker	
<i>Jasseimr</i> (to the South)	Hovin	

Pre-Christian communities	Medieval parish annexes	Modern municipality
<i>Vestþorp</i>	Nannestad (Bjørke)	} Nannestad
<i>North Læm</i>	Holter	
<i>South Læm</i>	Heni	Gjerdrum

¹⁶ A. Steinnes, 1932. 'Økonomisk og administrativ historie', in: Romerike, vol. I, *Norske bygder*. Bergen, pp. 80-82; E. Bull, 1922. 'Politiske inndelinger på Oplandene i gammel tid', in: *Bygd og bonde. Tidsskrift for historie og folkeminne*. Publ. by Oplands historielag, Gudbrandsdalens historielag, Solør-Odals historielag og Østerdalens historielag, p. 51ff.; idem, 'Politisk og administrativ historie inntil ca. 1600', *Bidrag til Ullensaker bygdebok* (ed. H. Nesten), vol. I (Oslo: 1927); Holmsen, 'Bygdesameie, almenning og "stokklendinger"', p. 37; as well as B. Kirkeby. 'Almenning og sameieskog i Nannestad sokn', 'Almenning og sameieskog i Holter sokn', and 'Almenning og sameieskog i Bjørke sokn'.

From a topographical perspective, the common land areas of Romerike are generally situated above the 200m contour line, which makes out the marine limit in this region.¹⁷

In the municipality of Ullensaker, the common consists of forests, hills, and outlying fields bordering to three of the pre-christian communities: The community of *Kisa*, stretching from the east and westwards into the commonly accessible area, the community of *Jasseimr*, situated in the south and southwest of the common, and the community of *Vesong*, bordering to the northwestern parts of the common (fig. 2.).

In the municipality of Nannestad, the common is in its entirety situated west of the core settlement, in the ridgy area called *Romeriksåsene*, stretching westwards from the wide valley formed by the river *Leira*. This hilly region makes out the border area towards the neighbouring river valley to the west, with the settlements of *Hakadal* and *Nittedal* (fig. 3.).

The common land area of Nannestad was even more strictly organized according to the old circuits of the pre-christian settlement communities, also during Medieval and Early Modern times. That is, the different parts of the outlying areas situated in the hillside west of the settlement along the Leira river, were commonly accessible only from those farms which originally had belonged to one of the particular pre-christian communities. In this way, the northernmost part of the common was used by peasants on farms which had belonged to ‘*Vestþorp*’ in pre-christian times and later became identified as *Bjørke* parish, the middle section was used from farms adhering to the pre-christian community ‘*North Læm*’ (corresponding to the later parish annex *Holter*), while the southernmost parts were used by occupants on farms originally belonging to ‘*South Læm*’, which later became the parish of *Heni* within *Gjerdrum* municipality.

¹⁷ A. Sømme, 1954. *Jordbrukets geografi i Norge*, Skrifter fra Norges Handelshøyskole i rekken Geografiske avhandlinger, vol. 3. Bergen, p. 91; O. Holtedahl, 1970. *Hvordan landet vårt ble til: En oversikt over Norges geologi* (3. rev. edition). Oslo, pp. 171 – 175, 192; J. Gjessing (ed.), 1978. *Norges landformer*. Oslo – Bergen – Tromsø, p. 94.

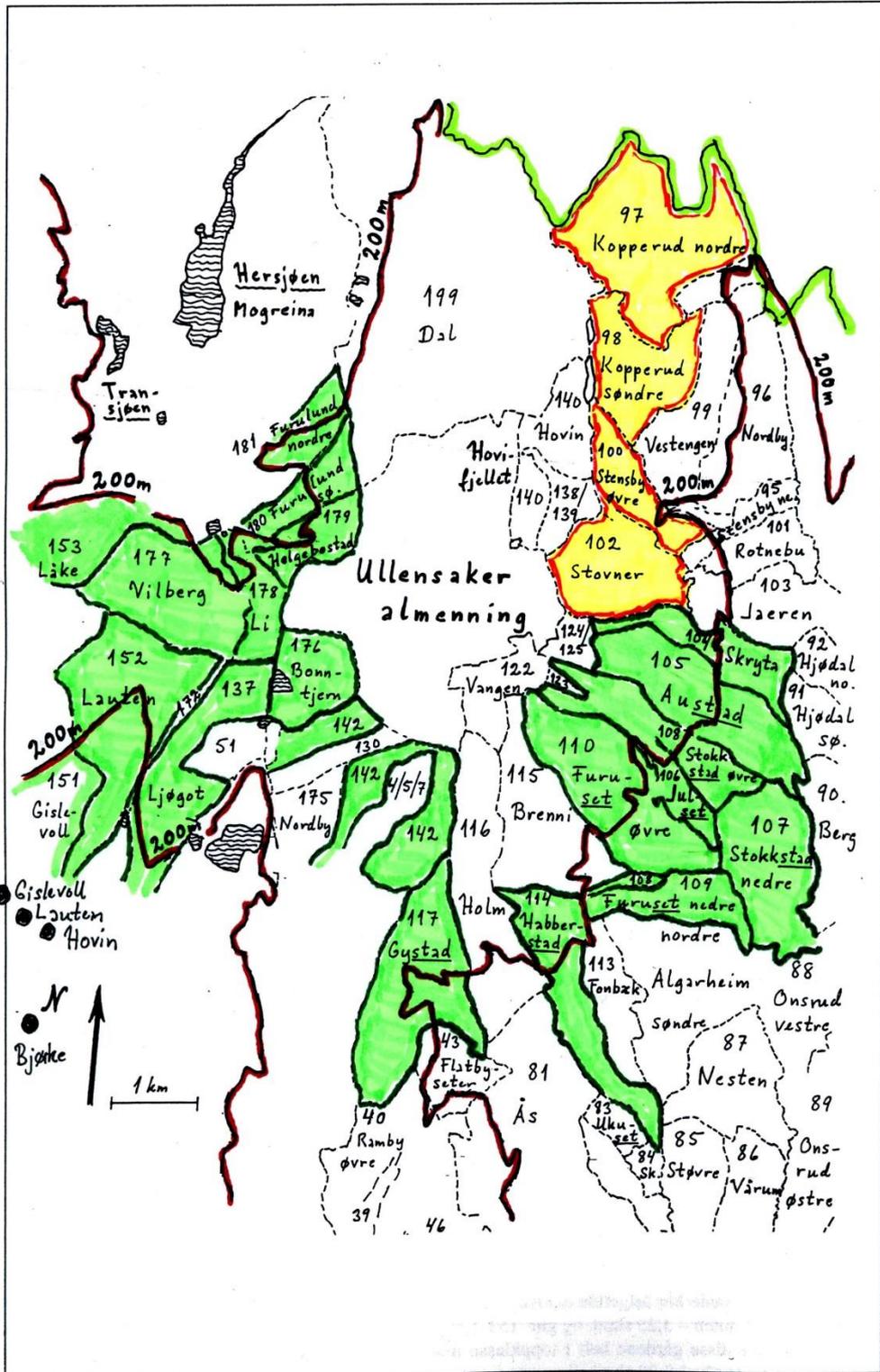


Fig. 2. The common land of Ullensaker with surrounding farms. Areas probably subject to 'direct appropriation' of previous common land marked with green colour; areas with separate clearings in previous common land marked with yellow colour.

The common of Ullensaker:

- Expansion from the south-western side, from the parts of the pre-christian community ‘Jasseimr’:

A sort of ‘direct appropriation’ – in the form of expansion into districts bordering to the common land as it was later defined – seems to have taken place with point of departure in some great, central farms, like *Låke*, *Lauten*, *Ljøgot* and *Bjørke*. These farms were presumably of high age and were assessed for great amounts of rent (‘landskyld’) during High Medieval times. According to early modern cadasters, they were in average assessed for 3 skippounds of grain, ranging from 1,25 to 4 skippounds.¹⁸ Together with the exceptionally great farm complex of *Hovin* (with four farm units together assessed for 12 skippounds, the probably represented great manor complexes in early historical times (D. Skre).

- Expansion from the south-eastern and eastern side, from the southern parts of the pre-christian community ‘Kisa’:

Here, a sort of ‘direct appropriation’ is also traceable, but in this case related to expansion from a set of farms which were *not* among the presumably oldest and more central. The expansion seems to have been undertaken from a set of farms which were secondary to the oldest and most central ones, probably representing later separated offsprings from them. A general indication is that nearly all of them have composite names, compound with the elements ‘-set’ or ‘-stadir’, which generally are thought to designate later settlement units, split off from an earlier settlement core. That this group of farms represented younger and more peripheral settlements than the core of manors in southwest, seems corroborated by their rent assessments as they are recorded in the later cadasters. In average, they were assessed for 1,33 skippounds of grain, ranging from 0,6 to 2,5 skippounds. The few farms which do not display such name elements, bear names which might reflect particular activities in outlying fields, like for instance *Brenni* (‘burning’, ‘slash-and-burn field’), *Holm* (possibly ‘patch of

¹⁸ *Skattematrikkelen 1647*, publ. by Norsk Lokalhistorisk Institutt, vol. II, Akershus fylke (Oslo 1969); 1 skip-pound corresponding to 185,15 kg; *Norsk historisk leksikon*, ed. by S. Imsen & H. Winge), 2. ed. (Oslo: 1999), p. 381.

grassland’, ‘uncut meadow’) and *Vangen* (‘grassland’, possibly referring to a dairy farm site).¹⁹

- Expansion from the north-eastern side, from the northern parts of ‘Kisa’:

Some examples of ‘new clearings’ or individually established settlements in former commonly held areas, seem detectable. This goes for the farms *Kopperud*, *Vestengen*, *Stensby*, *Rotnebu* and *Stovner*. The compound element ‘-rud’ as in *Kopperud* literally means ‘clearing’ (Norw.: ‘rydning’, cf. German: ‘Rodung’), and is generally considered to have been productive in early medieval times. Several of the other names also seem to indicate places taken up as habitation units in a later phase, like the elements ‘-bu’ (‘booth’, ‘shed’) and ‘-by’ (‘farm’, ‘dwelling place’). The original name of the farm *Vestengen* was ‘*Hedeby*’, where the compound element ‘-by’ had been combined with ‘*heiðr*’, meaning ‘unsettled, treeless and plain area’.²⁰ The rent assessment of this group of farms seems to indicate that they had been established as separate, settled farm units at an even later point of time than the ‘secondary stratum’ further south. In average, these presumed clearings in the northeast were registered with an average rent of half a skippond grain in early modern cadasters, ranging from one quarter to three quarters of a skippond.

The commons of Nannestad:

- The middler section, related to the parish of *Holter*, and the corresponding pre-christian settlement community of ‘*North Læm*’:

In this area, one can observe a number of farms displaying the name element ‘-staðir’, which by their establishment had acquired a favourable position for possible direct expansion into the common areas. This goes for the farm *Harstad*, a part of *Trugstad* and for *Ramstad*. Together with the other ‘-staðir’-farms, like *Erpestad* and *Austad*, these clearly make out a set of settlement units that was secondary to the most central farms, situated along the riverside and partly east of *Leira*. However, judging from the rent assessment these ‘-staðir’-farms in

¹⁹ O. Rygh, 1898 (1966). *Norske Gaardnavne, Forord og Indledning*. Kristiania, pp. 45, 56 & 84.

²⁰ O. Rygh. *Norske Gaardnavne, Forord og Indledning*. pp. 46, 47 & 53.

Holter parish must have disposed richer resources than their counterparts in Ullensaker, since they in average were estimated for a rent of ca. 2 skippounds, ranging from 1,25 to 3 skippounds. Nevertheless, some of them occupied a position which presumably had enabled them to expand somewhat into the outlying field area situated above the marine border. But such an expansion had obviously also taken place from similarly situated farms with name elements that might relate to activities in outlying areas. Among others, this concerns the farms *Knevelsrud* (with the compound ‘-rud’ meaning ‘clearing’), *Fevik* (‘cattle cove’) and *Slattum* (literally meaning ‘hayfield home’). The average rent of these farms was 1,2 skippounds.

In part, the pattern observed in the middler section of Nannestad may thus be a result of processes analogous to those unfolded on the south-eastern side of Ullensaker common, from the farms belonging to the southern part of Kisa.

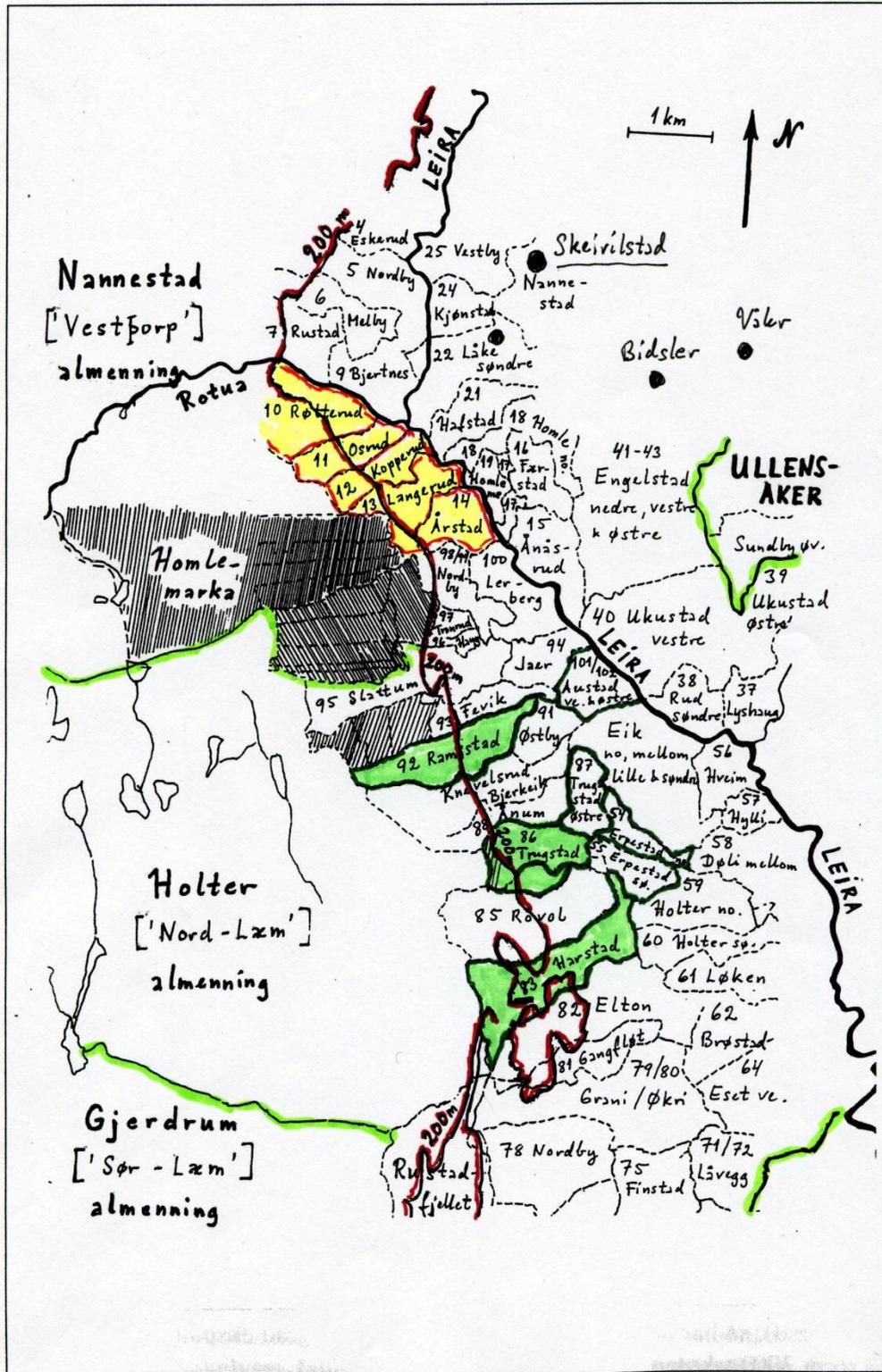


Fig. 3. The common land of Nannestad with surrounding farms. Areas probably subject to 'direct appropriation' of previous common land shown marked with green colour; areas with separate clearings in previous common land marked with yellow colour.

- The northern section, related to the parishes *Nannestad* and *Bjørke*, and the corresponding pre-Christian settlement community of ‘*Vestþorp*’:

In this district we find the highest concentration of farms with names composed with the element ‘-rud’, indicating that they were rather late clearings, like *Langerud*, *Kopperud*, *Osrud* and *Røtterud*. And in a majority of them, the first component consists of pre-Christian forenames, suggesting that they probably were established before the Christianization process in the early middle ages. However, these farms should most probably not be considered as clearings taken up within the common land area, but rather seem to have been established within an outlying field area pertaining to and exploited by the great central farm *Homle*, situated to the east of the Leira river. West and south of these ‘-rud’-clearings, stretches a wide ‘joint property’ area, which has the name ‘Homlemarka’, meaning ‘the outlying fields of Homle’, and which probably was established as an influence sphere dominated by Homle at an early date. Several of the clearings do also possess parts in this joint property area. Furthermore, a court suit from 1686 indicate that the boundaries between this joint property area and the common were disputed already in the beginning of the 14th century, as it is referred to a royal letter from about 1332.²¹ – In other words, the boundary patterns and the joint property relations seem to indicate that there has been no direct annexation of common land areas on part of these clearings, but that the appropriation of the outlying areas where the clearings were established, had been undertaken from Homle at an earlier date. In other words, the boundary between what was considered as the separate outlying fields of the central farms, and what was considered as common land, seems to have been constituted before the establishment of these separate clearings.

Conclusion

Returning to the central question, concerning a more precise fixation of the time when a boundary was constituted between the common lands and the separate farm properties, the evidence presented above seems to indicate both an earliest possible starting point (‘*terminus post quem*’) and a latest point of completion (‘*terminus ante quem*’) for this process.

²¹ B. Kirkeby. *Almenning og sameieskog i Nannestad sokn*. p. 50.

Judging from the boundary patterns observed in both parishes, the delimitation between the outlying fields pertaining to the separate farms and the area considered as common land seems to have been constituted *after* the establishment of farms with the compound elements ‘-set’ and ‘staðir’. This would have been the case both in the middle section of Nannestad, corresponding to Holter annex parish or the prechristian community of ‘North Læm’, and in the south-eastern part of Ullensaker common, with farms belonging to the southern part of the prechristian community Kisa.

While the name elements ‘-set’ and ‘-staðir’ traditionally were regarded as having come into use and been particularly productive during the Viking Age and first part of the Middle Ages, a series of archaeological investigations from later years have proven that they might be considerably older, and at the same time productive over a long time-span. Based upon an investigation of the archaeological evidence, *Lars Stenvik* concluded that “... a relatively great part of the ‘staðir’-farms must be traced back to the older Iron age. It seems that the name element ‘-staðir’/‘-staðr’ has gained foothold in this country at the end of the Roman Iron Age, and has won particular popularity during the Migration Period”.²² For the area under investigation, this picture has been confirmed by Dagfinn Skre’s comprehensive investigation of settlement and regional structures of authority in Romerike during the period A.D. 200 – 1350. While many of the farms bearing compound names with ‘-set’ and ‘-staðir’ display remains related to the younger Iron Age and Viking Period, a substantial proportion of them also show archaeological evidence which indicates settlement, activity and resource exploitation during older periods, stretching back to the younger Roman Iron Age and Migration Period (single burials, grave fields, cooking pits and even house structures).²³ – When using the time of establishment of the ‘-set’ and ‘-staðir’ farms in order to determine the ‘terminus post quem’ for the institutionalization of the common land boundaries, we should therefore realize that the archaeological evidence places this earliest possible starting point for the process back in the Roman Iron Age, or from the period A.D. 200 – 370 given in calendar years.

Relating to the farms with names composed with the elements ‘-rud’, the situation appears more complex. On the Kisa side of Ullensaker parish there is a rather clearcut demarcation

²² L. Stenvik, 1978. *Stadgårder: Et forsøk på arkeologisk datering av en navneklasse*. Bergen: Major thesis in archaeology, University of Bergen, p. 158; - author’s translation.

²³ D. Skre. *Herredømmet: Bosetning og besittelse på Romerike*. In particular p. 128 – 184.

among the farms bordering to the common. Farms bearing names ending with the elements 'set' and 'staðir' are dominating in the south, while the farms further north seem to represent later established settlement units and possibly clearings in areas which previously were regarded as common land. As such, this north-south demarcation between farms representing different phases in the settlement development, may reflect an older boundary to a commonly area in the north.

In Nannestad municipality as well, there are several '-rud'-farms in the northern part, within the area belonging to Nannestad main parish and Bjørke annex parish. But these seem to have been established as separate farmsteads within an area previously held to be separate outlying fields of an older, central farm further to east. Thus the boundary between these separately held outlying fields and the common exploitable area would seem to have been established at an earlier point of time, before the '-rud'-clearings were taken up.

In this way, the time of establishment of the '-rud'-farms seems to indicate a 'terminus ante quem' for the constitution of the common boundary. The fact that a majority of these farms were constructed with pre-christian forenames, might serve as an indication that this process of delimitation would have been completed before Christianity gained a strong foothold in these inner parts of Eastern Norway, something which is commonly thought to have happened at the middle of the 11th century. However, as the use of prechristian forenames continued for a long time after the Christianization period, as well as through the following centuries, this indication would seem rather weak. But the fact that the commons of Romerike were structured systematically according to the *old, pre-christian territorial organization*, stands for itself. On the basis of this analysis, the fixation of the mid-11th century as a *terminus ante quem* for the constitution of the commons in central parts of Eastern Norway, therefore stands out as fairly well substantiated conclusion.

Based upon an analysis of the probable settlement development and the resulting boundary patterns, combined with the archaeological evidence and toponymic material, this investigation therefore indicates that the boundaries between common accessible areas and farmland proper must have established sometimes between the later part of the Roman Iron Age and the first part of the Middle Ages, as defined in Scandinavia. However, this does not necessarily imply that the process of delimiting the common lands must be considered as a continued, uniform and protracted process stretching over a time-span of about 900 years.

Within these time limits, the concrete appropriation of different parts of the outlying field land into areas considered as individual farmland may have taken place at different times in various parts, displaying great variation, according to specific conditions of settlement expansion and possession, resulting in a differentiated demand for appropriation.

Appendix:

- *Excerpts from The National law code for Norway, established by king Magnus the Lawmender, 1274:*
Section VII, about Land tenancy.

Chapter 61: “If people dispute about common land”

"1. Thus shall the commons stay in the way they have been from olden times, both in the upper and exterior. 2. But if people disagree, and one calls it his own, what another one calls common land, then the one who calls it for himself, shall take it to court and summon ‘thing’ to that place, where the matter shall be settled, and he must issue the summons within five days; but if he does not do it this way, then his action is not valid for this time. But at the ‘thing’ shall 12 haulds (= allodial peasants ?) – or 12 of the best peasants, if there are no haulds – 6 appointed by each part from that court circuit, and two of the twelve shall bring testimony, swear an oath as to whether it is peasant property or common land. But on the ‘thing’ shall the one who calls the land his property, within 5 days’ notice summon a court meeting at the place in question, and there produce those witnesses that were appointed at the ‘thing’ assembly. ...

3. But if the king’s commissioner charges somebody for being the property possessor of such land that has been cleared in the commons without the king’s permission, and the possessor answers like this: “This land have I, and those who have owned it before me, possessed for 60 winters or longer”, and if the king’s commissioner raises doubt about this, then the property possessor shall produce his witnesses in the way that is stipulated above, concerning disputes about private property and common land.

Chapter 62: “How one shall have one’s use of the common lands”

1. The King may lease out common land to whom he may wish. But the one who leases, shall fence it in – with the throws of a sickle in all directions from the settlement [that is: defining the extension of the land pertaining to the new clearing by the distance which he is able to throw a sickle], and later he is not allowed to move the fences. 2. The right to hayfields shall be disposed for 12 months by the one who first uses the scythe in them. 3. Dairy farms may everyone who wishes, establish in the commons, and stay there in

summer. **4.** But if someone takes up sowing [of grain] in the commons, and have not leased [the land] from the king's commissioner, then the king owns both grain and hay, if hay has been cut. ...

7. Everybody is equally entitled to all fishing lakes in the commons. **8.** Timber and boards [which has been cut] may, if necessary, be stored for as long as 12 months in common land. But of everything else, only so much may be cut, as can be freighted away before evening; in other respects, everybody is equally entitled. But if any wood that according to previous stipulations is allowed to be stored, is taken before 12 months have lapsed, then the one who took it, is obliged to pay 6 'øre' in silver to the king, but the owner shall have compensated the value and enmity fine according to legal verdict."

(English translation by Lars Ivar Hansen.)

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- **Letter issued at the farm Bjölstad in Vågå parish, Gudbrandsdalen valley, 23.09.1432. Published in Diplomatarium Norvegicum, vol. III, no. 717.**

To all men, those who may see or hear this letter, do we **Ogmund Nikulasson, Tore Hugleiksson** and **Jon Pálsson**, county court jurors in (the parish of) *Vågå*, send the greetings of God and ourselves, announcing that we and several other good men were present at the farm **Bjölstad**, which lies in the valley of Gudbrandsdalen, on the tuesday following the Imbre [= Emmeran ?] sunday of autumn, in the 44th year of the reign of our dignified lord, Hr. Erik, by the grace of God king of Norway.

There we listened to **Andres Jonsson**, who on behalf of the peasants of *Vågå* brought charges before the King's representative in the northern half of Gudbrandsdalen, that they (the peasants) mistrusted **Eirik Björnsson**, who claimed to have 'home-area' [= individual farmland proper] stretching into the King's common, for a longer distance than he rightfully ought to. – Thereafter we stretched 'home-area-rope' from the ring of his store house, north of the pool called *Sindrehölen* which lies in *Midlunne*, and we put marking sticks at the place where 'home-area-rope' ended; with the consent of all us being present, and in the presence of

the King's representative. – Then spoke **Andres Jonsson**: "Now we know your home-area, and if anyone does you harm within this mentioned home-area, and in your fishing, it seems to me as though he has taken it from your store house."

For the sake of truth did **Pál Halvarsson**, the above mentioned representative of the King and present, put his seal – and we our seals – under this document, which was issued at the day and in the year previously stated.

(English translation by Lars Ivar Hansen.)

- **Testimonies about the commons of Holter, Nannestad and Bjørke parishes, recorded June 6th, 1759. (Appendix to missive from province governor Storm in Akershus province, May 9th, 1761; Archive of Generalforstamtet, Norwegian National Archives.)**

"...The occupants of the farms laying farthest away in Holter parish (in Nannestad) did most humbly plead that those among the peasants on farms bordering closely to the common, who were not able to produce any legal title to their enclosures of the so called home-forests, must either be ordered to tear down the same enclosures, or else must the other ones also be allowed to have the same freedom to fence in that land which is situated most suitably to them; if not, they would have no use of the common."

(English translation by Lars Ivar Hansen.)

References

- Bull, Edvard, 1922. 'Politiske inndelinger på Oplandene i gammel tid', in: *Bygd og bonde. Tidsskrift for historie og folkeminne*, publ. by Oplands historielag, Gudbrandsdalens historielag, Solør-Odals historielag og Østerdalens historielag, pp. 49-71.
- Bull, Edvard, 1927. *Politisk og administrativ historie inntil ca. 1600*, Bidrag til *Ullensaker bygdebok* (ed. H. Nesten), vol. I, Oslo.
- Diplomatarium Norvegicum*, vol. I – XXIII, Christiania/Oslo 1874 – 2011.
- Frostatingslova*, transl. by Jan Ragnar Hagland og Jørn Sandnes, Oslo 1994.
- Gjessing, Just (ed.), 1978. *Norges landformer*, Oslo – Bergen – Tromsø.
- The Gothic history of Jordanes*, in English version, with an introduction and a commentary by Charles Mierow, *Speculum Historiale*, Cambridge 1915.
- Gulatinglovi*, translated from old Norwegian by Knut Robberstad, *Norrøne bokverk nr. 33*, Oslo 1969.
- Den eldre Gulatinglova*, publ. by Bjørn Eithun, Magnus Rindal, Tor Ulset, Riksarkivet, *Norrøne tekster nr. 6*, Oslo 1994.
- Holmsen, Andreas, 1966. 'Bygdesameie, almenning og 'stokklendinger' i Eidsvoll', in: *Gard – bygd – rike*, Festskrift i anledning Andreas Holmsens 60 års dag 5. juni 1966, Oslo–Bergen–Tromsø, pp. 37 – 53.
- Holmsen, Andreas, 1975. *Nyrydning og ødegårder i Norge før Svartedauen*, *Heimen* vol. XVI, pp. 481 – 490.
- Holtedahl, Olaf, 1970. *Hvordan landet vårt ble til. En oversikt over Norges geologi* (3. rev. edition), Oslo.
- Kirkeby, Birger, 1962. 'Almenning og sameieskog i Nannestad sokn', in: *Nannestad bygdebok I*, Gardshistorie for Nannestad sokn.
- Kirkeby, Birger, 1963. 'Gjerdrum almenning', in: *Gjerdrum bygdebok II*, pp. 449 – 468.
- Kirkeby, Birger, 1964. 'Almenning og sameieskog i Holter sokn', in: *Nannestad bygdebok II*, Gardshistorie for Holter sokn, pp. 12 – 36.
- Kirkeby, Birger, 1966. 'Almenning og sameieskog i Bjørke sokn', in: *Nannestad bygdebok III*, Gardshistorie for Bjørke sokn, pp. 12 – 22.
- Kirkeby, Birger, 1971. *Nannestad bygdebok IV*, Bygdehistorie.
- Magnus Lagabøters Landslov*, translated by Absalon Taranger, Oslo – Bergen 1979 [1915].
- Nesten, H. (ed.), 1927. *Ullensaker bygdebok*, vol. I, Oslo.

NgL = *Norges gamle Love indtil 1387*, Vol. I – V, 1846 – 95, published by R. Keyser, P.A. Munch, G. Storm & E. Hertzberg, Christiania.

NHL = *Norsk historisk leksikon* (ed. by Steinar Imsen and Harald Winge), 2. edition, Oslo 1999.

Rygh, Oluf, 1898 [repr. 1966]. *Norske Gaardnavne, Forord og Indledning*, Kristiania.

Sandvik, Gudmund, 1978. ‘Allmenning’, in: *Pax-leksikon*, vol. I, s. 62 – 63.

Skattematrikkelen 1647, publ. by Norsk Lokalhistorisk Institutt, vol. II, Akershus fylke, Oslo 1969.

Skre, Dagfinn, 1998. *Herredømmet: Bosetning og besittelse på Romerike 200 – 1350 e.Kr.*, Oslo: Acta Humaniora, Det historisk-filosofiske fakultet, Universitetet i Oslo, vol. 32.

Solnørddal, O., 1958. *Rettleiing i almenningsslæren*, Oslo.

Steinnes, Asgaut, 1932. ‘Økonomisk og administrativ historie’, in: *Romerike*, vol. I, *Norske bygder*, Bergen.

Stenvik, Lars F., 1978. *Stadgårder: Et forsøk på arkeologisk datering av en navneklasse*, (Major thesis in archaeology, University of Bergen), Bergen.

Sømme, Axel, 1954. *Jordbrukets geografi i Norge*, Skrifter fra Norges Handelshøyskole i rekken Geografiske avhandlinger, vol. 3 A, J.W. Eides forlag, Bergen.