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Karl-Johan Lindholm, Emil Sandström & Ann-Kristin Ekman 2013. The Archaeology of the Commons

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Kenneth Olwig, reviewer

Review: "The Archaeology of the Commons"

This journal has a rather innovative approach to peer reviewing which, in the name of transparency, makes the comments of the referees to the author(s) available on line. I think this is a wonderful idea, though I'm not so sure that it is a good idea to give up on anonymity. In the case of this particular manuscript, I am inclined to abandon the now "normal" "peer" reviewer's position of authority in favor of one in which I act more as an actual peer, and let the editors make the editorial decisions, as they should. I do not make private comments to the editors, so the following is to authors and editors.

I think this is basically an interesting and valuable article that could be published more or less as is. The English is good, with just a few glitches here and there. It is a bit long by normal journal standards, so perhaps the authors might want to tighten it? Articles nearly always benefit from tightening. Though I realize that the authors no doubt submitted their Ms. before the following book became available, I do think they should include it in their reflections and bibliography (it is available in an electronic form, that also can be shared, so it is quickly acquired) since it is highly relevant to their topic. The book is: *Cultural Severance and the Environment - The Ending of Traditional and Customary Practice on Commons and Landscapes Managed in Common*. Ian. D. Rotherham, ed. Dordrecht, Springer: 2013

I am largely in agreement with the authors, but I personally have a take on the commons that in some respects fits their arguments, and in some might go against them. Since my take on the subject goes against the grain of much received wisdom on the commons, as reflected in this ms., I do not wish to impose it on the authors. They might, however, want to consider my critique, because it might be useful to help strengthen their arguments, and thereby help tighten and focus the ms. As it is, the ms. is somewhat bifurcated between a theoretical section and an empirical section which could be made to inform each other in a more integrated way.

A key watershed in the analysis is, I think, the place where the authors write:

"If we project the commons that are registered in the property map it is possible to identify some patterns. The present day commons seem to have been punched out from the kernel densities and present fragments of the land-use system that existed before the land reform (Fig. 18)."

The land reform, essentially "enclosure," basically involved the enclosing of places within the space of the cadastral map, turning them into salable properties made up of square units of absolute, Euclidian space. What is important to recognize, I think, is that exactly the same commons, when enclosed within the space of such a map becomes something very different, because it suddenly has potentially become a form of property, the exchange value of which can be conceptualized in terms of the absolute, scalable, space of the map and its derivatives. The importance of the distinction is captured in the fact that it is normally still forbidden under English customary/common law, to fence a commons, and the fact that the recent English attempt to map the commons in order to protect commons, actually had the opposite effect. The problem is that even just the mental enclosure that occurs when a commons is reduced to mapped scalable cadastral space is able to transform the commons into a commodity conceptualized as property, existing at varying scales, which then can be possessed and owned individually or by a collectivity. This presents a problem if one is concerned to rediscover the pre-enclosure commons using the same cartographic, spatial, tools that enclosed the commons.

This is because there will then be an ever-present risk that the authors and readers inadvertently mentally enclose pre-enclosure commons that were not (and still are not) conceptualized in terms of this kind of space by the commoners who shaped, or continue to shape, the commons through use.

Some of the passages in this ms. that might suggest a mental form of cartographic enclosure are references to: "collective rights to property," tied to statements such as "Land ownership can be defined as the power to continuously dispose and make decisions over a distinct area (Myrdal 1989)"; "the social organizational principles that regulates the relations between people in terms of access to and exclusion from land"; and the idea of a commons as something that can be understood in terms of "different geographical scales of commons" (if you can't map it without changing its character, you can't scale it). In my experience intensively cultivated arable infields, even pre-enclosure infields, can be described as being made up of distinct areas of land because it is the nature of intensive cultivation to produce uniform crops within distinct bounded areas of tilled soils. The foundation of the commons, however, is not land control/ownership of distinct areas of land and this is why the boundaries of commons are indistinct. In England, for example, it is still normal that the owner (for example a landed estate) of a commons may have little or no use rights to the commons, whereas all sorts of other people, notably farmers, may have differing use rights to the commons. The foundation of the commons is thus not spatially distinct pieces of land that are owned, but rather complex bundles of customary use rights belonging to differing social groups and individuals who have use rights to differing phenomena ranging from differing forms of pasture, to differing forms of fuel, differing forms of building materials, to differing species of game and even to differing forms of recreation. There is thus nothing uniform about the space of land use on a commons, but it is rather an enfolded blend of overlapping resources with differing and indistinct boundaries. Since England, unlike Sweden, still has a legal system rooted in customary law, and since the enclosure of the remaining English commons is more uncertain than in the apparent case of the Swedish commons, it might be interesting for the authors to take a look at a book like: Rodgers, Christopher P., Eleanor A. Straughton, Angus J.L. Winchester, Margherita Pieraccini (2011). *Contested Common Land: Environmental Governance Past and Present*. London, Earthscan. I would suggest that the resource that lies hidden in the commons is the heritage of custom (a legal principle that has been suppressed by the Swedish state) and use rights which allows for a multi-functional and broadly based use of the physical landscape by a democratic polity making up the political landscape. This notion of the commons is arguably preserved to some degree in the Swedish notion of Allemansrätt, and this might explain its continued popularity.

For a more general understanding of the workings of custom in relation to older meanings of landscape as place (as with the Swedish landskap) and modern meanings of landscape as scenic space, as well as changing ideas of property, the authors also might want to take a look at: Thompson, E. P. (1993). *Customs in Common*. London, Penguin; Olwig, K. R. (2002). *Landscape, Nature and the Body Politic*, Madison, University of Wisconsin Press; Hastrup, K. (1985). *Culture and History in Medieval Iceland: An Anthropological Analysis of Structure and Change*. Oxford, Clarendon Press; Barrell, J. (1972). *The Idea of Landscape and the Sense of Place, 1730-1840: An Approach to the Poetry of John Clare*. Cambridge, Cambridge University Press.

For a revised idea of forest history in which grazing animals play a greater role than previously thought (suggesting a gradual transition to common grazing) see: Vera, F. W. M. (2000). *Grazing Ecology and Forest History*. New York, CABI Publishing.

Beyond the above general observations, I do have a few quibbles with particular parts of the text:

1) At one point the authors write that: "The place names on the other hand reflect livestock herding, an activity which in general leave few archaeological traces (Cribb 1991; Petersson 2006; Lindholm 2009)." I doubt this is true in all instances. It should be noted that the practice of grazing actually can produce a given type of physical environment. The turf or heath upon which grazing animals graze is thus a product of continuous controlled grazing, burning and clearing. This is why customary use rights depend upon the continued exercise of hefted rights in order to maintain the pasture in *hävd*. Grazing in Scandinavia often has thus often produced heathlands, which in turn produce an acidic peat that in turn can leach the soil of lime, creating characteristic podzolic soils. I would think that archaeologist should be able to detect traces of such soils, especially in boggy areas.

2) The authors write: "The structure of the present day property map reflects the structure of the reconstructed commons. The commons were the main resource areas which were divided and allocated during the land reforms in the 19th century." I'm not sure what "main" means here. The land reforms in question were also concerned with the enclosure of the commonly shared arable fields. An important driver for enclosure was the desire to increase the productivity of intensive arable agriculture, so in this sense the arable was a "main" resource. The pastoral commons, incidentally, could also be an important indirect and direct source of fertilizer for the arable.
3) The authors write:" The reason for an agricultural expansion into the forested inland region can probably not be sought for in the regions potential for crop cultivation, although it is possible to identify a range of localized micro-climates with capacity of sustaining crops. That barley was grown and that livestock was kept should probably only be seen as manifestation of the agricultural ideology. A farmer without livestock and fields cannot be considered a farmer and a proper feast required beer and oxen." At this time it was common for the promoters of enclosure to favor crop cultivation over other forms of land use, notably grazing (as with the enclosure of the Jutland heaths), even if it might seem "reasonable" today to suppose that the expansion of arable would not have been the reason for agricultural expansion into areas manifestly not suitable to such cultivation. The authorities behind enclosure based their ideas on "science," not the farmer's need to have beer at their feasts.

Ingela Bergman, reviewer

Archaeology of the commons
Review

I have read the manuscript with great pleasure and interest. It is a well-conducted study with a clear and explicit theoretical framework. The issues addressed are combined with relevant data and well-founded analyses. In every aspect, this study fulfils the standards of excellent scientific procedure and the manuscript definitely deserves publishing.

The topic is highly interesting and has not previously been fully considered from an archaeological perspective. The mode of procedure is well thought-out and it is elegantly combining archaeological data, historical records and local names. The statistical analyses are crucial to the credibility of the interpretations and arguments put forward. The results and interpretations are presented in a way easy to grasp. The text is well structured with a fluid language. In addition, the figures illuminate the discussions and are highly relevant (however, some illustration could be deleted if necessary for spatial reasons). The authors summarise results in a clear and concise way, also pointing out future fields of research, in turn underlining the actuality of their own study. Good.

I have only a few comments, as advice rather than criticism:

The text is quite extensive, as is the number of figures. Although I consider the extent motivated by the complexity of the study procedure, I nevertheless suggest some minor alterations in the text. For instance, the section “Discussion: A chronology of commons” could be somewhat shortened, specifically under the heading of “The Trade”. Furthermore, figures no 3 and 4 may be deleted, as may figures 13 and 14 (although the two latter are aesthetically pleasing). Figures 6, 7 and 8 feel a little bit “heavy”, and overload the information. It should be possible to combine figures 1 and 19 into one.

General remarks

Upon discussing usufruct and common law, there is a huge amount of literature related to reindeer herding. Perhaps the following references may be of interest to the authors:

Bjerkli, B. 2010. Landscape and resistance. The transformation of common land from dwelling landscape to political landscape. Acta Borealia 2010: 221-236.

Allard, Christina, Urminnes hävd som förklaringsmodell för uppkomst av samiska rättigheter och dess tillämpning i Brattström, Margareta, Strömgren, Peter, Forskningsutmaningar för fastighetsrätten, Iustus 2010.

Allard, Christina, Nordmalingsmålet: urminnes hävd överspelad för renskötselrätten? s. 117 – 128 i Juridisk Tidskrift, 2011.

Borchert, Nanna. 2001. Land is life: Traditional Sámi reindeer grazing threatened in northern Sweden. Nussbaum Medien. St. Leon Rot.

Specific remarks

Pages 13-14, section “Meadows and Pastures”: The ecosystem processes resulting in fertilization of alluvial meadows have recently been presented in a paper:

-DeLuca, T.H., Zackrisson, O., Bergman, I., Diéz, B.-H. & Bergman, B. 2013. Diazotrophy in alluvial meadows of subarctic river systems. PLOS ONE.

Page 25, 2nd section: the authors discuss the relation between a market for fur, skins and antler and the intensification of collective, large scale hunting and the specialisation of crafts. There are some assertions that the authors need to corroborate by references, for instance, "It was inevitable to work together in larger groups than the individual household…" Why is that?

Page 26. The field of research on the transition from reindeer hunting to herding/pastoralism is indeed a huge one. The reference to Ramqvist may not be the most relevant choice, since he has only briefly touched upon the subject, and only from the "external" perspective of agrarian economies, rather than an "internal" Sami perspective. I would suggest some of the following:

- Aronsson, Kjell-Åke. 1994. Pollen evidence of Saami settlement and reindeer herding in the boreal forest of northernmost Sweden – an example of modern pollen rain studies as an aid in the interpretation of marginal human interference from fossil pollen data. Review of Palaeobotany and Palynology 82: 37-45.

- Bergman, Ingela, Liedgren, Lars, Östlund, Lars and Zackrisson, Olle. 2008a. Kinship and settlements: Sami residence patterns in the Fennoscandian alpine areas around A.D. 1000. Arctic Anthropology 45(1): 97-110.

-Storli, Inger. 1993. Sami Viking Age pastoralism - or 'The fur-trade paradigm' reconsidered. Norwegian Archaeological Review 26: 1-20.

Finally, I would like to thank the editors for giving me the opportunity to review such an interesting paper as this one.

Authors' comments

We would like to begin by expressing our gratitude to the two referees for their positive and valuable comments. We perceive their contributions as important supplements to the paper.

Reviewer 1 expresses concern over the length of the article, pointing out that most articles benefit from being "tightened". In general, we agree with this view, but for this specific paper, based on a new and a rather multi-facetted approach, including archaeology, commons research, history, GIS etc. we still think it is necessary to be able to expand on the discussions and to develop the ideas in a greater detail than usually is the case. We conceive a readership that may be new to the subject matter of commons. Therefore, we thought it was important to provide a comprehensive introduction to the commons research and to discuss the possible links to an archaeological approach in detail. To be able to publish a longer contribution was one of the main reasons for submitting the manuscript to JAAH in the first place. By insisting on the length of the paper, we seek support from Reviewer 2 who expresses that its length is justified, but who points out some sections that could be shortened if editing is required. Consequently, we have gone through the manuscript to avoid unnecessary repetitions and to clarify the text according to the reviewers' comments.

Reviewer 1 views the paper as "somewhat bifurcated between a theoretical section and an empirical section which could be made to inform each other in a more integrated way". To overcome this split has been one of the more challenging tasks in writing this paper. However, we thought that the most effective way to present the study was to begin by reviewing the commons debate, to identify problems that would justify an archaeological approach to commons, introduce an archaeological approach and the principles for identifying commons in an archaeological record. Finally, the study was undertaken and implications of the study related to the current understanding of the historical developments of the inland region as well as commons. Nevertheless, in order to bridge the "bifurcation" we have attempted to repeat parts of the commons theory throughout the text.

We agree with reviewer 1 that there is a problem involved "if one is concerned to rediscover the pre-enclosure commons using the same cartographic, spatial, tools that enclosed the commons". This problem was one of the main reasons for modelling commons by kernel densities. The densities are unbounded spaces; they illustrate nodes or focal points and intensity in cooperatively undertaken activities in the landscape. In turn, these intensities can be conceived as reflecting groups of people and their collective action.

Moreover, we are describing fairly explicitly how the modelled commons contain a variety of different types of land-use activities, although we use the term multi-functional. Through the kernel densities and by projecting the property map on these unbounded areas we think we actually manage to clearly illustrate not only the enclosure of the commons in the 19th century, but also Reviewer 1's notion that the pre-enclosure commons were "an enfolded blend of overlapping resources with differing and indistinct boundaries". We also think that the "resource that lies hidden in the commons is the heritage of custom … and use rights which allows for a multi-functional and broadly based use of the physical landscape" and we emphasised this in the conclusion of the spatial analysis.

Concerning the final three notes beginning with the note on pastoral archaeology, the reference to "livestock herding leave few archaeological traces" was misleading and should not be understood as a general comment, but as a reference to the sources used for the present study. The reviewer is right in pointing out responses in vegetation and soils as a record for identifying pastoral land-use. For this reason, pastoral archaeology is strongly dependent on archaeologically non-conventional lines of evidence, for example vegetation structure and soil chemistry (Lindholm 2006), but for this paper, we have not been able to retrieve or use such data. Along the same lines of reasoning, Vera's (2000) hypothesis suggests that the natural forest vegetation in large areas of northern Europe was a shifting mosaic of open grassland, scrub and closed tree-cover. The forest structure was created and maintained by grazing animals and a gradual transition to common grazing in the forests. In Great Britain, an assessment of the Vera hypothesis states that the amount of data is still insufficient, although it is possible to presume that since the Mesolithic effects of grazing, fires and humans have resulted in forest mosaics (Hodder *et al.* 2005). To gain better insights into past contributions of grazing animals in the shaping of forest mosaics is crucial task for future research, especially in the forested regions of Scandinavia, which is severely lacking in research compared to other regions in Scandinavia. To estimate intensity and extents of past land-use and the drivers of the forest environments, it is necessary to undertake integrated research to the forests' current bio-cultural heritage. Such assessment should include archaeology, biodiversity and extensive sampling of environmental proxy data. In doing this, the kernel densities modelled in our paper can be used for predicting areas rich in bio-cultural heritage, since they are derived from material remains and place names associated with grazing, the use of fire, manipulation of drainage systems, etc. i.e. drivers in the shaping of forests mosaics.

Concerning Reviewer 1's comment on "The commons were the main resource areas which were divided and allocated during the land reforms in the 19th century". *Main* denotes our belief that commons extensively contributed to the household's economy. The conventional view surmises that commons were more or less used as supplementary resources, which may possibly have

been the case in some time-periods, e.g. when external markets were unavailable. However, the supplementary connotation of commons can also be the result of the land reforms of the 19th century. The archaeological long-term perspective presented in this paper provides a somewhat different view; the largest investments seem to have been associated with the commons, and for this reason we see them as the "main resource areas".

The "beer and oxen metaphor" is related to the early agricultural expansion into the forested region, which seems to have been taken place in the 3rd to the 7th centuries. By this expression, we wish to stress that an agricultural explanation is probably not the best way to understand the early colonisation. Rather, the people introducing the "field-and-meadow system" (Svensson 1998) into the forested region were attracted by forest resources, mainly game for producing hides, furs, antlers and bone. They also seem to have linked with the inter-regional trading systems. They still kept livestock and manured fields and the "beer and oxen" metaphor was only used to stress the social or ideological role of agriculture and livestock herding, in order to not overestimate its economic role. As we note in the paper, archaeological research in the forested inland region have largely constructed models based on the central agricultural regions with a strong reliance on later textual sources that enhance the role of agriculture.

We are grateful for the literature suggestions; we will include them in our continued research and some of them now appear in the bibliography of the present paper.

Reviewer 2 suggests revision of the Figures. Concerning Figures 3 & 4, we insist on them, since we think they fulfil an important task by illustrating the environmental setting, which may be valuable to a reader not familiar with the forested inland region of Scandinavia. Figures 13 and 15 are important for our main argument, i.e. that the archaeological sites reflect an ordered landscape organisation, which can be associated to the institutionalised use of commons. However, GIS can result in what practitioners may refer to as "God trick", i.e. everything is seen from a position of nowhere (Connolly & Lake 2006: 8), and by Figures 13-15 we complement the maps with an "on the ground" perspective of the ordered landscape. We think these illustrations contribute to a better understanding of the maps. From our point of view, the huge information-density of the point distributions (Figs. 4, 5 and 6) can be considered one of the main reasons for undertaking the kernel density analysis. The kernel densities provide a more generalised view of the structure of the point distributions and reveal a landscape organisation to some extent hidden in the point data. To provide the point distribution maps makes a good contrast to the models, and in addition, if we do not provide these maps it is a great risk that the study gains criticism for not providing the information about the data that was used for the GIS-analysis.

Reviewer 2 also expresses concern about the history of reindeer herding and by extension the history and the current situation of the Sámi population. We acknowledge that this issue is not thoroughly discussed in the paper. As the reviewer points out, a considerable amount of work has been done on Sámi history and it would have been an overwhelming task to engage in this discussion in detail, in addition to the others. Nevertheless, we think that our study convincingly shows that the industrial forestry - which currently can be said to have preferential right of interpretation in terms of forest use, in turn affecting present day reindeer and livestock herders - is a rather limited epoch of the forest land-use history. For a considerable time before the current land-use regime, the region has been characterised by heterogeneity and flexibility in terms of land use and we think this should also be considered in current policy. Archaeology provides a useful tool in arguing this, although it is necessary to carry out detailed studies outlining the past as well as informing future.

Some of the suggested references question the rather static inland-coast version of the fur-trade model, which we also do to some extent. We suggest that the establishment of the commons was part of an expansion of agricultural communities with livestock, taking place sometime in the Early or Middle Iron Age. The commons we perceive as collectively claimed resource areas and this can be considered an indication of a need to claim certain resource areas. Although not yet tested, such a perspective implies that the formation of the commons can also be understood as related to groups and identities developing in mutual contact rather than in isolation (*cf*. Hylland Eriksen 1993; Jones 1997). It can be presumed that some archaeological materials manifest identity/ethnicity, although it is still difficult to assess what identity/ethnicity that is expressed, and why. Our general view is that the land-use history of inland Scandinavia was dynamic and characterised by a multi-lingual setting, and that areas such as Ängersjö presumably have housed people speaking Sámi, Norwegian and Swedish. Such settings probably catered over-lapping land-use systems, alliances and crosscutting relations between families and households, presumably including levels of both cooperation and competition. The later colonisation processes and the evolving state resulted in firmer ethnic identities, specialisation and economic relations, structures that do not seem to be easily projected on the prehistory.

Concerning the note on the transition from hunting to reindeer herding in the Viking Age, we have revised the paragraph, extended the discussion as well as included the suggested references. We have added the reference DeLuca *et al*. 2013 as a recent contribution in explaining the fertilization processes of alluvial environments.

We are grateful for the bibliography, which is a valuable contribution to the future activities of the research project. Finally, the checking of the references in the text as well as in the reference list was very helpful, thank you very much!

Cited works:

Connoly, J. & M. Lake. 2006. *Geographical Information Systems in Archaeology. Cambridge Manuals in Archaeology*. Cambridge University Press, United Kingdom.

Hodder *et al*. 2005. K. H. Hodder, J. M. Bullock, P. C. Buckland & K. J. Kirb. Large herbivores in the wildwood and modern naturalistic grazing systems. *English Nature Research Reports* 648.

Hylland Eriksen, T. 1998. *Etnicitet och nationalism*. Nora: Nya Doxa.

Lindholm, K. 2006. *Wells of experience: a pastoral land-use history of Omaheke, Namibia*. Diss. Uppsala : Uppsala University.

Jones, S. 1997. *The archaeology of ethnicity: constructing identities in the past and present*. London: Routledge.

Svensson, E. 1998. *Människor i utmark*. [Lund Studies in Medieval Archaeology 21]. Lund: Lund University.

Vera, F. W. M. 2000. *Grazing ecology and forest history*. Wallingford: CABI Publ.