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Agricultural progress in England and the North and Southern Netherlands during the Middle Ages: was the demand really so important?

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This article is a reply to Bruce Campbell's paper 'Constraint or constrained? Changing perspectives on medieval English agriculture'.¹

I was asked to deliver some subjects for discussion on the one hand and to compare Campbell's results with the Northern and Southern Netherlands on the other. I will combine both tasks in the form of a few remarks, which will, of course, insufficiently cover all the material of Bruce's rich paper. In my comparison, I will focus on Flanders which my own research has concentrated on and I will occasionally refer to other areas of the Netherlands. As the co-ordinator of a comparative research group on agricultural history of the North Sea Area, of which Bruce Campbell is one of the leading members, I shall have to touch on some aspects of comparative history. Yet, rural interregional and international comparative history is still in its infancy and there is always the danger of a caricatural statement.

First I want to comment on agricultural progress in England in the pre-plague period as described by Bruce and I shall compare it to the Netherlands and especially to Flanders. In the second part of this reply, I will make some objections to his proposed explanation and his emphasis on the demand factor of agriculture progress. The first consideration is: was English agriculture as progressive as Bruce Campbell presents/argues it to have been?

I fully agree that we should not have a 'gloomy and negative verdict' anymore on British agriculture and need to do justice to the achievements of that agriculture during the 250 years before the outbreak of the Black Death in 1348. Indeed, a glance at the overviews of Michael Postan and Georges Duby published about 20

1. See p.x in this volume.

years ago shows that researchers then were only aware of a very small number of farm systems which were then a slightly more progressive than a 2field or a 3field system.² Moreover, these 'islands' of intensification were located in the eastern part of the Midlands, which, as it turned out according to Campbell's results, were not the most progressive areas of England!

Comparisons with the continent, and especially with the Netherlands and within the Netherlands with Flanders may be useful to temper this optimism a little. Indeed, allow me to warn for an 'over-optimism' about British agriculture in the medieval period, even in the most 'progressive' areas such as eastern and south-eastern England (Kent, East Anglia) and the south-west of England.³ When I read his first articles about Norfolk, almost 15 years ago now, I was very impressed not only with the results and the rich documentation he presented: for the first time someone studying agricultural history really did know what agricultural practice in the past was, taking into account in an accurate way all the elements that influenced agricultural output and not just giving some superficial yield ratios as was done before by most of the 'rural' historians. He surprised us all with maps of farming systems for the whole of England.⁴ At that time I was writing my own PhD thesis on the Flemish agriculture and had done some similar investigations (with documentation which is nevertheless not so rich for Flanders as for England), which allowed me to look quite deeply into the structure of rural practice and the rural economy as a whole.⁵ Together with scholars as Verhulst for Flanders, Tits and Van Uytven for Brabant and Derville for Northern France (in the MA part of Flanders), we were discovering almost simultaneously that large parts of Flanders were even more progressive than P. Lindemans and B.H. Slicher Van Bath had pointed out in the early 60's.⁶ We also found that many 'agricultural inventions'

2. See for example G. Duby, *Rural economy and Country Life in the Medieval West* (London: Edward Arnold Publishers 1968) 341-345 and M.M. Postan, *The Medieval Economy and Society: An Economic History of Britain in the Middle Ages* (London, ;1976).

3. Compare the following considerations also with J.Langdon, 'Was England a technological backwater in the Middle Ages?' in: G.Astill and J.Langdon, eds. *Medieval Farming and Technology. The Impact of Agricultural Change in Northwest Europe* (Leiden-New York-Köln, 1997) 275-292.

4. See among many other publications: B.M.S. Campbell, 'Agricultural progress in medieval England: some evidence from eastern Norfolk' *Economic History Review* 41, 1983, 26-46; B.M.S.Cambell, 'The diffusion of vetches in medieval Enland', *Economic History Review* 41, 193-208; B.M.S.Campbell, 'Intensification of English Agriculture, 1086-1350', in: G.Astill and J. Langdon *Medieval Farming*, 225-250. See also his forthcoming book on demesne farming in England in the late Middle Ages.

5. E.Thoen, *Landbouweconomie en bevolking in Vlaanderen gedurende de late Middeleeuwen en het begin van de Moderne Tijden. Testregio: de kasselrijen van Oudenaarde en Aalst*, Centre Belge d'Histoire Rurale 90 (Gent, 1988) 2 vols.

6. For a state of the art about the study of agricultural technique in medieval Flanders, see: E. Thoen, 'The birth of Athe Flemish Husbandry@: agricultural technology in medie-

described by Slicher as 'inventions of the 14th century' needed to be placed earlier, at least in the (second half) of the 13th century.

Certainly, at that time we were too much influenced by the idea of Le Roy Ladurie's 'histoire immobile'⁷ and maybe overestimated the achievements of medieval agriculture, stressing too much - I think now - the importance of 'intensification' in the context of economic progress. Since I was interested in the study of agricultural development, I went on to research the 11th-12th centuries looking for the origins of that intensification and my findings were partly comparable to the situation of (east) England, as described by Bruce Campbell.⁸

Moreover, one can also wonder whether the medieval agricultural changes in England as well as in Flanders were so spectacular at all. Are practices such as reducing the fallow land or the use of more manure not very logical and simple? I was myself for a long time misled by the 'importance' of intensification. Is it, in the mind of a farmer, not more an achievement to continue the practice of extensive agriculture based on a greater amount of commercialisation and lesser costs? Or, to put it in another way, were the cost-saving 'inventions' Bruce Campbell describes not more in accordance with efforts to reduce the increasing costs caused by a loss of (possibilities for) extensive agriculture?

To investigate those problems a bit more, let's deal with the output (achievement) of England and the five sources Bruce Campbell sees as the sources of the success, and let us compare them with the situation in Flanders.

The first source of expansion Bruce sees for the success-story of British agriculture in the period studied was the expansion of the agricultural area with about 30 to 50 %. Although we have no statistical data, historical geographers pointed out that in the Netherlands during the Great Reclamation Period, the totality of newly cleared land was greater in many areas of the Netherlands than in England. In some areas the amount of cultivated land quadrupled. This happened in Flanders largely thanks to investments of the lords, especially in the coastal area.⁹

val Flanders' in: G.Astill and J. Langdon, eds., *Medieval Farming* 69-88.

7. According to E. Le Roy Ladurie, there was almost no increase in agricultural production and productivity between 1300 and 1800. See J. Goy-E. Le Roy Ladurie, *Les fluctuations du produit de la dîme* (Paris 1972). This opinion is now, also for France challenged by people such as PH. T. Hoffman, *Growth in a Traditional Society. The French Countryside 1450-1815* (Princeton: Princeton University Press, 1996).

8. E.Thoen, 'The count, the countryside and the economic development of the towns in Flanders from the eleventh to the thirteenth century. Some provisional remarks and hypotheses' in: E.Aerts, B.Henau, P. Janssens, R.van Uytven, eds., *Studia Historica Oeconomica. Liber amicorum Herman Van der Wee*, Universitaire Pers (Leuven, 1993), 259-278.

9. These investments were more carefully done in Flanders than in Holland -thanks to a greater central power and personal interest of the count of Flanders- so that an ecological disaster could partly be avoided in Flanders in the late Middle Ages (see : 'Turfwinning in

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A great impulse for reclamation was given in Flanders thanks to a real population policy of the lords in the sandy parts of the Netherlands leading to an annihilation of traditional property relations.¹⁰

Worth noting too is the likelihood that the population increase was much *greater* in Flanders and in many other areas of the Continent in the 12th and 13th centuries than in England. The urban population was also greater, and despite the praiseworthy and interesting efforts of Chris Dyer and many others to force up the number of townspeople and of non-agricultural people, many ‘towns’ of England were, by Flemish standards, not more than villages (except London and a few other towns). While in England maybe 15 % of the people lived in towns¹¹ , more than 30 % of the people lived in an urban environment in the Netherlands (if we are allowed to apply the data of the 15th century for the late 13th)¹². Nevertheless also, according to Bruce Campbell’s own calculations, England would have had about 4 million inhabitants in 1300.¹³ This is quite a low number compared to France, which had maybe 15 million inhabitants at that time and even to the small Netherlands with maybe had (in 1469) more than two and a half million inhabitants¹⁴(this is half the population of England!). By way of comparison¹⁵: Italy had about 10 million inhabitants, Germany 9, Spain and Portugal 8,75 . I have always wondered why the British population was so low in the middle ages. Was the agricultural output so restricted anyway? Or did different property relations play their part? We shall return to that problem.

Laag Nederland voor 1530' *Tijdschrift voor Waterstaatsgeschiedenis*, Themanummer; 5 (1997)2).

10. E.Thoen, ‘The count’. It must be said that archeologists now tend to demonstrate that the contradiction between reclaimed and unreclaimed land is less dignificant than thought before: a graet part of unreclaimed lands was during the early middle ages used in the context of extensive farming systems.

11. C.C.Dyer, ‘How Urbanised was Medieval England?’, in: E. Thoen, J.M. Duvosquel, eds., *Peasants and Townsmen in Medieval Europe. Studia in honorem Adriaan Verhulst* (Gent, 1995) 169-184.

12. W.P.Blockmans, G.Pieters, W.Prevenier, R.W.M. Van Schaik, ‘Tussen crisis en welvaart: sociale veranderingen 1300-1500’ *Algemene Geschiedenis der Nederlanden* (Haarlem, 1980) IV 42-86.

13. M.Overton and B.M.S. Campbell, ‘Production et productivité dans l’agriculture anglaise, 1086-1871’ *Histoire et mesure* (1996)XI, nE3/4 255-298, especially 290.

14. W.Blockmans and others ‘Tussen crisis en welvaart’.

15. See for example the numbers given by E.Aerts, W.Dupon, H. Van der Wee, *De economische ontwikkeling van Europa. Documenten deel 1 Middeleeuwen 950-1450* (Leuven, 1985) 54.

The second source was the increased labour and capital inputs. Also in this respect, the Netherlands were not inferior to England, on the contrary:¹⁶

- Servile labour was much less important in 1300 in the Netherlands than in England and had never existed in many parts.
- Capital inputs were large thanks to the erection of new farms, dikes canals etc... Probably Flanders had the best infrastructure system possible in the 12th century.
- Windmills were equally constructed since the late 12th century as a result of which areas could be reclaimed (for ‘Vergetreidung’) where it was not possible before. Around 1300, there was probably about one windmill per 1000 inhabitants.

I could enlarge this list of new ‘capital inputs’, but what is important is that many of these investments were stimulated by the lords whose numbers were growing constantly in the same period.¹⁷ Moreover, the lords were not restraining but stimulating agricultural progress. Anticipating what I shall write below, it seems that also in this respect not only the demand but also the property relations played their part in the agricultural development of the Netherlands.

The *third path* to progress according to Campbell were the changes in the composition of the production. Again the same phenomena sometimes happened in Flandres earlier and more drastically:¹⁸

- Draught horses replaced in many places already in the early 12th draught oxen
- Cattle breeding also replaced sheep breeding, to a large extent already in the 12th century.

The *fourth way* to progress was technological innovation. Again in this respect there is, as we noted already, parallelism with England. Nevertheless many authors seem to argue that in the Netherlands many ‘innovations’ first occurred, not on the large estates, but within the context of the small tenancies. Unfortunately, the first proofs of these ‘inventions’ are only available for the 13th century, a period during which a mayor change of the rural structures took place. Some elements of ‘change’ were:¹⁹

- The three-field rotation system was (partly) given up for more intensive rotations.
- Legumes were much more important than in England (on some manors they covered 40% of the cultivated area)

16. Compare for example for the Southern Netherlands: J. Mertens ‘De landbouwers in het Zuiden 1100-1300’ in: *Algemene Geschiedenis der Nederlanden* 2(Haarlem 1983) 105-123 and Thoen ‘The count’ with vols 2 and 3 in *Agricultural History of England and Wales* (Cambridge ;Cambridge University Press, 1988 en 1991).

17. Thoen, ‘The count’ 276.

18. Thoen, ‘The count’ 266 sq.

19. Thoen, ‘The birth’ and E.Thoen, ‘Technique agricole, cultures nouvelles et économie rurale en Flandre au bas Moyen Age’, *Douzièmes Journées Internationales d’Histoire*,

- Commercial crops such as dyes were very popular in the 13th.
- Convertible husbandry (up and down husbandry) was known already in the 12th century and played a large part in the conversion of marginal land into permanent arable land.

Most of these developments were attested in Flanders but also in the neighbourhood of Antwerp and in Belgian Limburg where you would hardly expect it. We have studied the agriculture of the last mentioned area in the late 13th and have found for that period many signs of intensification.²⁰ The same was already attested earlier for Limburg in the Netherlands.²¹ Even in the core of the micro-open-fields of Drente, progressive croprotation systems were attested by archaeologists (e.g. with an intensive use of summer corn).²² In these areas with still a great deal of common heath land, dod manuring took place, although maybe less than thought before. So also in areas away from the immediate influence of towns, forms of 'intensive agriculture' took place.

The results were: very high yields per acre for winter crops as well as for spring crops, certainly in Flanders but probably also in Holland as has been demonstrated recently by Peter Hoppenbrouwers and Bas Van Bavel.²³ These yields were certainly almost all higher than in England. Most significant are the differences of the yields of oats between England and the Netherlands. The much higher yields of oats in the Netherlands and especially in Flanders²⁴ were, in my opinion, the prove that this difference between England and this part of the Continent was caused mainly by a better manuring via stable feeding of cattle.

Bruce Campbell's fifth way to expansion was specialisation. Here we see some more differences with England. In many of his recent publications, Bruce Campbell

septembre 1990, Centre Culturel de Flaran 12 (Auch, 1992) 51-67.

20. Forthcoming study on the estates of the 'Commanderij Aldenbiezen' in the late 13th century.

21. P.C.M. Hoppenbrouwers *Een Middeleeuwse samenleving. Het land van Heusden (ca. 1360-ca. 1515)*. A.A.G. Bijdragen 32 (Wageningen 1992) 255-257.

22. Th. Spek, *Bodembkundige variatie op middeleeuwse akkercomplexen in pleistocene zandgebieden van Nederland* (Wageningen, 1988).

See also for the Flemish 'Campines', also an area of poor sandy soils: J. Bastiaens and C. Verbruggen, 'Fysisch en socio-economische achtergronden van het pluggenlandbouwsysteem in de Antwerpse Kempen', *Tijdschrift voor Ecologisch Geschiedenis* 1 (1996) 26-32.

23. Hoppenbrouwers, *ibidem*; B.J.P. Van Bavel, 'Evaluation of arable productivity in the central part of the Dutch river area c.1360- c.1570', in: E. Thoen and B.J.P. Van Bavel, eds. *Land productivity and agro-systems in the North Sea Area: elements for a comparative study* (Gent, 1998) CORN publication series.

focussed on the Von Thünen circle system, based on regional specialisation in function of the distance to the markets, to explain (especially) the agriculture in the neighbourhood of London.²⁵

According to certain authors such as Peter Hoppenbrouwers a 'Von Thünen' circle system, stimulated by the towns with regional specialised areas which were supplementary to each other, did not exist yet in the Northern Netherlands in the Late Middle Ages.²⁶

On the other hand, a regional specialisation system *did* come to existence in the county of Flanders as early as the 11th-12th century as we demonstrated, although it *did not* come to exist as a consequence of the urbanisation, as the Von Thünen theory suggests, but as a stimulus for urban development.²⁷

Nevertheless -contrary to the London area?- this system was in large part destroyed in the course of the 13th century. As explained in some recent publications it was, for a number of reasons, replaced by a mixed farming system which was only still partly based on commercialisation. Mainly this new typical 'Flemish' agro-system can be characterised as a '(commercial) survival-economy' and was based on very small farms. Maybe also in Holland the rural economy went (later) into a more or less comparative stage, as the publications of Jan Luiten Van Zanden seem to indicate.²⁸ Labour input was higher and there were more technical 'innovations' in these systems than in 13th century (East-) England for example.

So, to conclude, it is likely that, the agricultural output as well as the population were in ca 1300 probably much higher in the Netherlands than in England. Intensification was not to be compared, at least not with Flanders. Moreover, Campbell (and Overton)'s own comparisons between the population movement and the movement of the amount of arable land in the same period seem to give additional support to the fact that intensification, and consequently also declining labour productivity, were smaller in England than in the Flanders.²⁹ This can also be because Bruce focused his research exclusively on large farms, centres of demesnes. Let it be noted in passing that, if demesne farming was so successful in England in the 13th and following century, why then did the great landlords of the 14th century give up direct farming and divide their demesnes?

24. Compare the studies of Thoen and Campbell in E.Thoen, B. Van Bavel, eds. *Land productivity*. Yields of oats are reacting more easily than any cereal to manuring, even if it is the winterfield which is manured.

25. B.M.S.Campbell, 'Economic rent' 238.

26. P. Hoppenbrouwers, 'Agricultural production and technology in the Netherlands, C. 1000-1500', in: G. Astill-J.Langdon, *Medieval farming*, 89-114.

27. Thoen 'The birth' 71-74.

28. J.L. van Zanden, 'Op zoek naar de 'missing link'. Hypothesen over de opkomst van Holland in de late Middeleeuwen en de vroeg-moderne tijd' *Tijdschrift voor Sociale Geschiedenis* 14(1988)359-386.

29. M.Overton and B.M.S.Campbell 'Production' 266 sq.

In our next remarks I switch over to the more explanatory elements. In his explanation, Bruce Campbell focused on the role of the demand in the economic development of the English countryside. As a matter of fact, doing so, he is using the ‘classical’ ‘Smithian’ model for the Middle Ages. I think he is going too far in neglecting the economic structures of the medieval society. One cannot pass over the study of internal economic structures which were determining the ‘stimuli’ and the ‘constraints’ of the growth rates of the medieval agricultural supply as M.M. Postan, R. Hilton, E.A. Kosminsky, and many other famous ‘ruralists’ did, who studied the English peasants, but who unfortunately were less aware of the agricultural techniques. Elements such as the importance of demesne farming, the role of power structures in general, the study of many other impulses for dividing and engrossing farm sizes (the size of the farms determining in a large part the agrosystems), the role of survival strategies in the income formation (including the study of additional incomes via so-called proto-industrial ways), in sum elements which determine the so called ‘property relations’³⁰, deserve as well as the demand a place in the explanation of the evolution of agricultural development. This is even more clear in many areas of England than in the Netherlands, because the direct link between non-rural demand and agricultural progress is even less clear in England. So, it always strikes me that in the, in a technical-agricultural way, most progressive areas, seigniorial power was lighter than elsewhere.³¹ Wage labour was used on all the great estates in the east by the 13th century, while in other areas the use of customary labour services persisted. But even for the densely populated and urbanised areas there are other scenarios thinkable to explain the ‘intensive husbandry’ than the scenario in which the leading part is given to the urbanisation and therefore to the role of extra-rural demand. In the brief comparison between England and Flanders given above, some elements are already present which point to Flanders’ changing of ‘property structures’ in the process of growing agricultural output. For more details, we refer to our explanatory models about the origin of the exceptionally high crop yields and the intensive husbandry in Flanders since the 13th century, published elsewhere.³²

Nevertheless, and this is not a contradiction, I agree with Campbell that the demand side is important and that it has been somewhat neglected the last years.

30. See of course Robert Brenner’s most famous articles in *Past and Present* (1976) and (1982) as well as R. Brenner, ‘Property relations and the growth of agricultural productivity in late medieval and early modern Europe’, in: Amit Bhaduri and Rune Skarstein, eds., *Economic Development and Agricultural Productivity*, Edward Elgar, (Cheltenham and Lyme, 1997) 9-42, especially useful for its definition of property relations and their role in the economic development.

31. See f.ex. the restrained seigniorial power in the ‘progressive’ Norfolk: B.M.S. Campbell: ‘Agricultural progress in medieval England: some evidence from eastern Norfolk’ *Economic History Review* 41, 1983, 46.

32. Thoen ‘The birth’ and E. Thoen, ‘The medieval roots of capitalism in the former county

But I have the impression that the way Campbell argues his point, the demand side lived somewhat on its own and was completely separated from the supply side. There I do not agree. There is, in my opinion, a constant link between the supply and demand side, because we have to explain *why* and to what level demand grows (or decreases). This link is in a large part located in the evolution of property relations. The time that the history of towns and markets and that of the countryside were completely separated, is long past. He himself gives arguments for it, because he stresses the role of London as a centre of consumption as a result of the king and his court spending more and more time in London not least because of it being the financial centre for his administration. So it is likely that the king supported the demand as the count of Flanders did in the 11th and 12th century and as did many other lords. These lords with growing needs for cash money changed their domainial politics, asking more and more rents in money than in kind, stimulating in this way the circulation of money in the countryside, inciting a strategy of 'population stimulation' (in that sense I am a 'Malthusian') by encouraging a system of 'declining feudal levy', a greater supply of cheap labour, lower dues per man etc.. In that way there was much greater interaction between the economic structure of the country (the supply) and the towns (the demand) than Campbell suggest.³³ It was also the king of England who even earlier than the count of Flanders levied most of his incomes in money.³⁴ This is surprising because domain administration of the lords remained focused on direct exploitation longer than in Flanders. Therefore, it is worth I think to investigate the role of the domainial policy of the king in relation to the evolution of agriculture as I did for Flanders.

So, to put it in an other way, differences or changes in social property relations can not only stimulate differences in supply but also stimulate differences in demand structures especially in the pre-industrial period. Of course, this does not exclude that demand structures can be at the same time influenced by other external and internal elements.

Moreover, if we stress the role of the demand side, we must also include the demand of the peasants (determined by numbers, standard of living, and property relations...).

Let it be noted in passing that, if the demand side played the exclusive role, there must have been an enormous decline of agricultural intensification and an increase of extensification after the black death, England losing in the 14th century about 40 % of its population, if I am well informed. Was this the case?

of Flanders. Status questionis and Hypotheses' forthcoming in: J.L. Van Zanden and P. Hoppenbrouwers, eds., *The Netherlands in the Brenner-debate* (CORN publication series).

33. See also for example: R.H. Hilton, *English and French towns in feudal society. A comparative study*. (Cambridge University Press, 1992) (Past and Present Publications).

34. B. Lyon, A. Verhulst, *Medieval Finance: A Comparison of Financial Institutions in Northwest Europe* (Gent 1967).

To conclude, Bruce Campbell gave us a marvellous piece of study which sets us thinking. I have the impression that in the picture he has given us through his impressive list of publications and new results, he is a little overestimating the development of the English agriculture in several respects. In his explanations for this development, he seems to focus too much a classical modern economic explanation, underlining especially the role of the demand side and neglecting the particular economic structures of a feudal society in which demand and supply were much more linked to each other.