Controlling the commoners: Methods to prevent, detect, and punish free-riding on Dutch commons in the early modern period*

by René van Weeren and Tine De Moor

Abstract

The making of rules by institutions of collective action, such as commons, has been and still is an instrument to promote desired behaviour and to prevent free-riding and other individual actions that might affect the collective interest negatively. In this article, we use the historical *markeboeken* of four Dutch commons (*marken*) to study the way in which commoners sought to guarantee the resilience and longevity of the common, by analysing the design of regulations against unauthorized use, the interaction of those rules with internal and external developments, and the effects that various forms of penalty may have had on the behaviour of commoners.

Over the past few decades, the New Institutional Economics has had a major influence on a number of aspects of economic history.[1] Institutions have come to the forefront as the sort of mediators that are necessary in a society to keep it in balance, helping it withstand the many external influences that may lead to its demise: 'good' institutions deliver a resilient society.[2] More recently, one particular institution, the commons, has attracted a great deal of interest, both among social scientists – as a direct consequence of the award of the 2009 Nobel prize in Economics to Elinor Ostrom – and outside the academic world, as part of a larger movement, in particular within north-western Europe, to revive citizens' participation in many spheres of

* The research leading to these results has received funding from the European Research Council under the European Union's Seventh Framework Programme (FP7/2007–2013)/ERC Grant agreement no. 240928 as part of the project '"United we stand". The dynamics and consequences of institutions for collective action in pre-industrial Europe' and from The Netherlands Organisation for Scientific Research (NWO) Internationalisation Grant for the project '"Common Rules". The regulation of institutions for managing commons in Europe, 1100–1800'. For all further details on these projects: see www.collective-action.info.

[1] Since the publication by Douglas North of his *Institutions, institutional change and economic performance* (1990). There is even a *Journal of Institutional Economics*, which is devoted to the study of the nature, role, and evolutions of institutions in the economy, including firms, states, markets, money, households, and other vital institutions and organizations. For reviews of this debate, see F. Gagliardi, 'Institutions and economic change: a critical survey of the new institutional approaches and empirical evidence', *J. Socio-economics* 37 (2008), pp. 216–44.

[2] See D. Acemoglu, S. Johnson, and J. A. Robinson, 'Institutions as the fundamental cause of long-run growth', in P. Aghion and S. Durlauf (eds), *Handbook of economic growth* (2005), pp. 385–472; D. North, *Understanding the process of economic change* (2005).

society and economy. However, notwithstanding the many studies of present-day functioning of commons, our knowledge of how such institutions can – over the (very) long run – offer a meaningful contribution to economy and society is limited. It can only be enlarged by studying – in detail – the functioning of historical examples of collective resource management. Although the early modern context offers us many examples of commons that survived over centuries, the mechanisms that enabled commoners to overcome the social dilemmas they faced are still insufficiently understood. The many similarities in the ways resource use was restricted, how the daily management of the commons was organized, social control was encouraged, and participation was optimized in commons regulation throughout Europe suggest that there is a certain basic logic to how working together in the long-run can be facilitated. Comparing sets of regulations created by long-enduring commons throughout their existence could allow us to 'distil' the mechanisms that are used to overcome social dilemmas over very long periods of time. Such a 'distillation' has already been done by Ostrom in her seminal work *Governing the commons* (1990) but, as she indicated herself in later work, the timeframe within which her cases fitted was rather short, covering no more than a few decades. The real 'art of co-operation' lies in the capacity to build an institution that endures for many generations.

As all students of historical commons will understand, the systematic comparison of commons regulation over time is a cumbersome task, for which no clear methodology has yet been developed. So far as we know, commoners of one common did not communicate with those of another common about how to regulate the use and management of their respective commons, unless they were entangled in conflict over inter-commoning (where commons stretched over the borders of one or more villages). Nor is there any clear evidence of regulations being copied from one common to another; hence we can assume that the rules for the government of any single common are generated locally in reaction to the problems of that common. In this article we will develop a first step towards building a methodology to compare commons regulation, even across national boundaries, by focusing on one particular aspect of commons government, 'free-riding', which we define as people gaining profits by exercising rights to which they were not entitled or by entitled users exercising their rights in an unauthorized way.

The issue of control over the commoners' behaviour, *ex ante* or *ex post* the actual use of the resources, is vital to understanding how a self-governing institution manages to focus its commoners' minds on the long-term survival of their common rather than their individual short-term advantage. Although a third party will need to legitimate, adjudicate, and enforce the relevant rights,[3] the actual design of the rules was largely in the hands of the direct stakeholders: the commons are self-governing institutions, meaning that their stakeholders can define, amend, and even abolish the rules (which we shall call by-laws) that regulate access or usage of the common whenever required. Restraining the *homo economicus* in each of the commoners and promoting their compliance with the body of by-laws can be achieved through preventive measures, through social control, and through monitoring in combination with repressive measures. Prevention by setting ex ante restrictions on the use of the resources clearly is the cheapest solution, although the making of good, effective rules

[3] Compare with E. Ostrom, *Governing the commons. The evolution of institutions for collective action* (1990), p. 101.

for access, use, and governance also demands time and effort on the part of the commoners. However, such 'self-restrictions' may not be enough and somewhat more active mechanisms to detect infringements of the rules may be needed to enforce adherence to them. Social control – commoners controlling each other both actively and passively – is somewhat more time-consuming, but, as we will demonstrate, can also be beneficial for the 'social controller'; monitoring and activating repressive mechanisms are among the more time- and resource-intensive ways to prevent free-riding. As we will demonstrate, the role of the commoner in each of these methods is pivotal. It has been argued, by Elinor Ostrom among others, that a high degree of stakeholder participation is one of the factors that leads to high levels of resilience, and explains why many such institutions – from commons to irrigation systems – managed to survive for many centuries.[4] Whether the users of the institution are capable of dealing with crises – economic, social, or political – is dependent on whether and how they adjust their rules in response to these changes.

In this article we will use the example of the Dutch *markegenootschappen* in the eastern part of the modern Netherlands to explore how these three ways of control were put into practice. Our results are based on a meticulous analysis of the regulation of four commons. All four commons survived for over 200 years, during which timespan they adjusted their body of by-laws at least three times. This selection should allow us to capture change on the commons, and see how such change was dealt with in the regulations. Our analysis is based on a predefined database structure designed to process all the different aspects of governance that can be found in the rules regulating these commons, but which is nevertheless sufficiently specific to capture the many varieties of access, use, and management of the commons.[5] For the four selected commons, we have analysed 1137 original by-laws, i.e. rules that were mentioned as such as well as recorded decisions of the assembly of commoners that concerned the creation of a new rule or the revision of an existing one.[6]

With our systematic analysis, we also try to broaden the scope of methods used to prevent free-riding. With social dilemma games, prisoner games, and public good games, as well as variations on these, experimental sociologists and economists have repeatedly tested in a laboratory setting the willingness of individuals to co-operate, or to show altruism, and the conditions under which they do so.[7] This has led in recent years to a narrowing of the focus

[4] See, for example, Ostrom, *Governing the commons*, pp. 93–4.

[5] Over the past few years, we have composed a large database of *markegenootschappen* in the Netherlands, which currently contains detailed information on 839 cases mainly drawn from the eastern provinces of the Netherlands, based on an extensive survey carried out and published by A. A. Beekman (*Geschiedkundige atlas van Nederland* [1913–1938]). For a much smaller number of these we were able to trace the regulation over several centuries.

[6] Since some original by-laws actually existed of two separate rules contained in one sentence, these were split up into two or more individual by-laws: in the end, this resulted in 1588 individual by-laws out of the original 1137 original rules.

[7] This was not necessarily a computer lab. The work of Bowles and Gintis (see Joseph Henrich *et al.* (eds), *Foundations of human sociality: economic experiments and ethnographic evidence from fifteen small-scale societies* (2004), pp. 1–54) has been conducted in remote areas among tribes by using an alternative way of playing such games. One of the central questions underlying such research was whether co-operation between individuals is a 'natural' feature of human beings, or whether it has been 'nurtured'. The work by Bowles and Gintis has shown that the latter was more likely, and that one of the factors that induced co-operation was the individual's contacts with the market (via labour or the exchange of goods).

onto the punishments or sanctions which might be brought against those who placed their own interest above that of the collective. Other methods – such as social control – can be far cheaper and more efficient ways of discouraging free-riding, as will be demonstrated in this article. Historians have unearthed and identified the mechanisms for preventing free-riding on the commons in the past,[8] but this has (so far) not been done in a systematic and comparative way for (very) long-term cases. With a comprehensive comparison it may become clearer – not just to historians but to scholars of co-operation across many disciplines – that dealing with the threat of free-riding is not just a matter of punishment but of a subtle combination of mechanisms that adapt themselves to the changes in the environment – in its broadest sense of the word – and also to the availability of the resources. This article is a first step in unravelling what methods to control commoners' behaviour and, by extension, individual behaviour in any self-governing institution, are most appropriate.

We will start this article with a short account of the institutional aspects of commons such as the *marken* and the social, judicial, and environmental context within which the commoners had to operate (Section I). In the central part of the article, we will focus on the regulations of the selected commons and describe which control mechanisms the commoners used to promote the proper use of the common and to prevent free-riding (Section II). A conclusion follows.

I

In its origins, the term 'mark' (*marke*) seems to have referred to the marks made to define the boundaries of land owned by either individual owners or by a group of owners: in some cases boundary stones, in other cases (especially in wet or swampy areas, such as the peat bogs, where such heavy markers tended to sink and disappear) poles or other visual markers were used. This practice of determining the boundaries of the various marks is mentioned in the resolutions and regulations concerning the mark, usually registered in the so-called 'books of the mark' (*markeboeken*).

The 'mark' became synonymous with the organizational form of managing and governing the area that was destined for common use. According to Hoppenbrouwers, the term 'marks' was the 'customary general name both for corporations of people entitled to the use of specified common waste lands, and for such lands themselves'.[9] The organization itself, however, is generally referred to as '*markegenootschap*', the latter part of the word literally meaning 'association'. Since other terms (as *meenten*) were also used for the combination of land use and governance system, Hoppenbrouwers narrowed down the use of the term 'marks' to refer to 'user corporations that were set up and initially operated separately from general local government'. This kind of institution for collective action was the predominant form of common land governance in the areas of the current provinces of Gelderland and Overijssel;[10]

[8] There are a number of exceptions, see e.g. C. P. Rodgers (ed.), *Contested commons: environmental governance past and present* (2011).

[9] For what follows, P. Hoppenbrouwers, 'The use and management of commons in the Netherlands: an overview', in T. De Moor, P. Warde, and L. Shaw-Taylor (eds), *The management of common land in north west Europe, c.1500–1850* (2002), p. 92.

[10] A. A. Beekman, *Geschiedkundige atlas van Nederland* (1913–38), *passim*; B. H. Slicher van Bath, *Bijdragen tot de agrarische geschiedenis* (1978), p. 242; Hoppenbrouwers, 'Use and management', pp. 93–4.

in other parts of the northern Netherlands, the management of common and uncultivated land was often linked more closely to the local government and was usually referred to with the term *meent*.[11]

Given the lack of a uniform definition of the concept of the *mark(egenootschap)*, it is barely possible to pinpoint the period of origin of the marks.[12] The most decisive criterion would be the first appearance of the mark as an institution, usually the moment when the first (or at least the oldest preserved) set of rules that governed the access, use, and management of the common were drawn up. The oldest examples of such regulations often consist of a single document, written on parchment, to which the seal of the local authority was put, and date from the end of the thirteenth and the beginning of the fourteenth century. Such documents mostly developed into real *markeboeken*, which contained all further regulations and resolutions agreed upon at the general meetings, as well as more administrative business, such as the registration of shares or financial matters.

Many Dutch *markegenootschappen* have left behind extensive series of by-laws, often contained in the *markeboeken*. However, in order to study the long-term resilience and the dynamics of these regulations, we have selected only commons with a lifespan of at least two centuries. Although we are aware that longevity is just one way to measure institutional success, a lifespan of over two centuries at least indicates that the commoners were able to bridge several generations, whilst dealing with changing circumstances, both internally and externally. To study the dynamics within the institution of the commons, we narrowed our selection even further down to those commons that had amended their regulations at least three times over these two centuries. We do realize that this selection procedure involves some bias. On the one hand, there is the bias created by archival survival: by using the regulations of commons as our main source for analysis, we implicitly exclude those commons that may have been no less successful, but for which no records have been preserved. On the other hand, there is a theoretical possibility that our selection criteria excluded commons which had drawn up rules that were extremely resilient, in the sense that they were not amended more than once over 200 years: however, as we have not yet found any examples of this bias, this seems to be only a theoretical possibility.[13] For this article, we have selected four Dutch commons that complied with these criteria: the mark of Berkum (bef. 1300–1995), the mark of Raalterwoold (bef. 1445–1843), Dunsborger Hattemer mark (bef. 1553–*c*.1847), and the mark of Exel (1616–1852). In order to minimize the effect of different external factors (environmental, political, economic, etc.), we chose four commons that were located in the same region (see Figure 1). The distance from the most northern mark (the mark of Berkum) to the most southern (Dunsborger Hattemer mark) is no more than 55 kilometres as the crow flies. Secondary literature as well as the contents of the regulations indicate that the socio-economic and environmental conditions of the area were broadly similar for all four selected commons.[14] Given the nature of our main

[11] Hoppenbrouwers, 'Use and management', p. 92.

[12] See also the discussion in Hoppenbrouwers, 'Use and management', p. 93.

[13] For more information on this project, see http://www.collective-action.info/_PRO_NWO_Common Rules_Main.

[14] E.g. Hoppenbrouwers, 'Use and management', esp. pp. 87–90 and 104; J. L. van Zanden, 'Inequality in an inland province. Overijssel as a representative of the European pattern?', in L. Soltow and J. L. van Zanden (eds), *Income and wealth inequality in the Netherlands, 16th–20th Century* (1998), pp. 55–76.

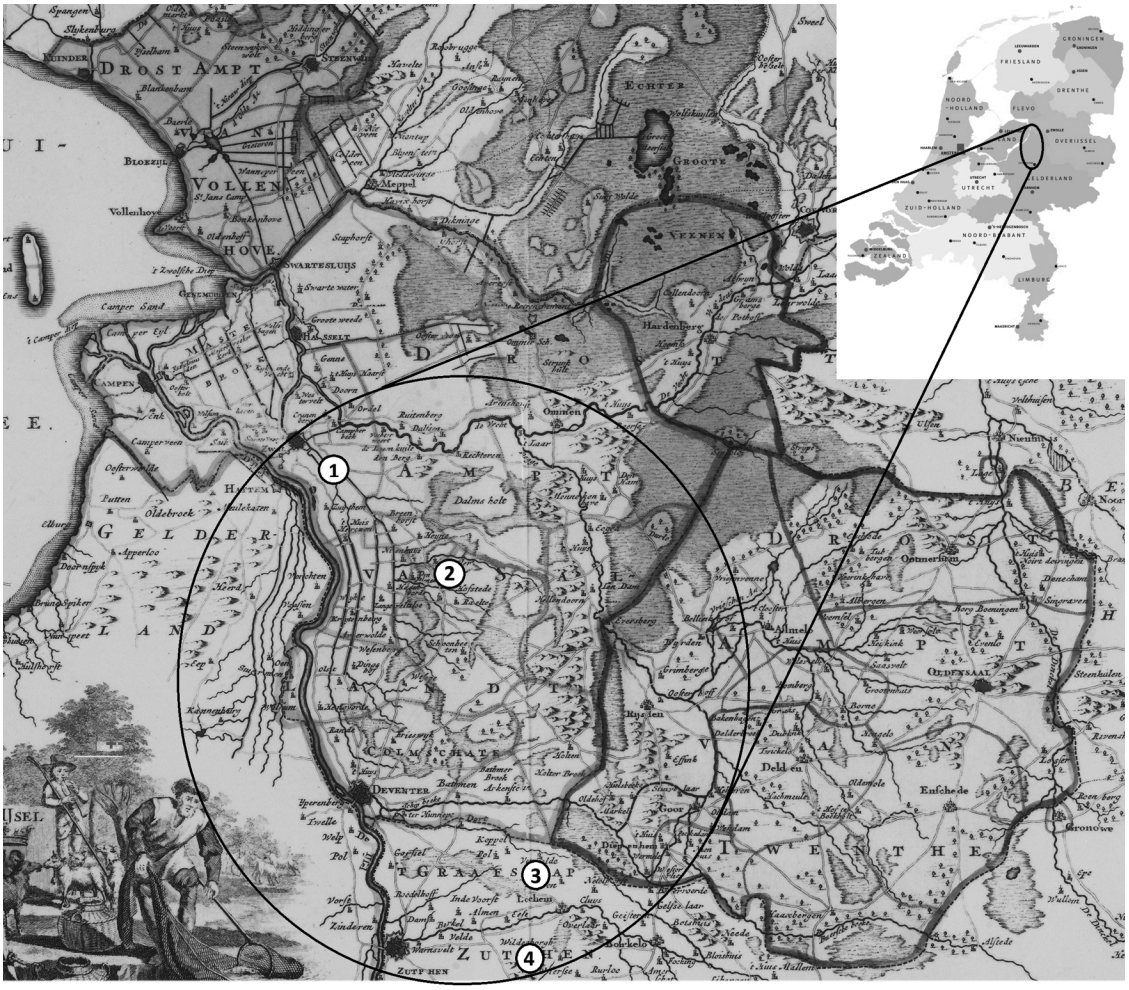

FIGURE 1. Map of the province of Overijssel by Isaac Tirion (1775).

Indicated are the location of this area on a present-day map of the Netherlands and the approximate locations of the respective commons selected for discussion in this article: (1) mark of Berkum, (2) mark of Raalterwoold, (3) mark of Exel, (4) Dunsborger Hattemermark.

research question, we will refrain from an extensive description of the four marks selected for examination: the appendix provides an overview of their main characteristics.

The majority of the marks in the Netherlands ceased to exist in the course of the nineteenth century, with a peak in dissolutions in the 1840s and 1850s. Three legislative measures formed the basis of this 'eventide' of the marks. First, the Royal Decree of 10 May 1810 placed a new financial burden on the marks: all lands had to be taxed, including the uncultivated – and previously untaxed – parts of the mark. An additional incentive for dissolution was the exemption from taxation for newly reclaimed land.[15] The self-governing status of the marks,

[15] Koninkrijk Holland, *Koninklijk besluit, houdende eenige bepalingen omtrent de uitvoering der wet van den*

however, remained intact: it was up to the assemblies of the marks themselves whether or not to decide to divide the common and uncultivated lands of the mark. As the survey undertaken by Demoed shows, this initial decree seems to have had little effect.[16] The contents of the regulations and resolutions of the assemblies of the marks, however, provide more nuance to these figures: although the number of complete and final dissolutions of marks remained relatively low between 1819 and 1839, the *markeboeken* reveal increasing concern among the members of the mark about its financial status, sometimes resulting in the decision to sell parts of the common in order to try to solve the debts owed by the mark.[17] The Royal Decree of 24 June 1837 brought the legislation of 1810 to the attention of the marks once more; the final implementation of tax exemption for reclaimed land that was formerly common and uncultivated, as mentioned in the corresponding Law of 1840, may have been decisive for most marks in their decision to divide and sell the remainder of the common land the mark owned, resulting in the final dissolution of the majority of the marks between 1840 and 1859.[18]

Although almost all marks had disappeared by the end of the nineteenth century, some marks still survived, either *de jure* or *de facto*. One of the case studies we used for this article, the mark of Berkum, managed to survive until the 1990s, after which the remaining assets of the mark were used to create a fund for the promotion of organizations for the advancement of regional heritage.[19]

The *markegenootschappen* were most numerous in the eastern part of the northern Netherlands: our inventory, based on archival sources and secondary literature, proves that, out of a total of 910 commons which existed at some time in the northern Netherlands, about 700 were located in the area of the current provinces of Drente, Gelderland, and Overijssel.[20] The four commons studied in this article were located on the sandy parts of the provinces of Overijssel (the marks of Raalterwoold and Berkum) and Gelderland (Dunsborger Hattemer mark and the mark of Exel) (see Figure 1). Until the first half of the thirteenth century, large areas of the eastern provinces of the northern Netherlands were covered by forests. The rapid population growth and, subsequently, the vast land reclamations which took place between

Note 15 continued
16den van grasmaand 1809 No. 7, betrekkelijk het bevorderen van de ontginning van woeste gronden. Gegeven den 10den van bloeimaand 1810 (1810).

[16] H. B. Demoed, *Mandegoed schandegoed: de markeverdelingen in Oost-Nederland in de 19e eeuw* (1987), p. 65 (Table 1).

[17] In the mark of Raalterwoold, for example, on 13 May 1828, the chairman of the assembly and the commissioned members proposed: '[i]n order to solve the deficit of the mark … to sell some locations, offering the current inhabitants the first privilege of buying, being the locations those that have been taxed before by experts, however being obliged to pay the commission as well as the due tenancy fees on July 25 forthcoming' (G. Hannink, *Markeboek van Raalterwoold* [1992], available online at http://grotenhuis.natuurlijk.nl/documents/Markeboek van Raalterwoold.pdf, p. 167).

[18] Demoed, *Mandegoed*, p. 65 (Table 1); the legislation that is referred to here is the Royal Decree of 24 June 1837, published in *Staatsblad* 17 (1837) and the 'Wet van 6 juni 1840 omtrent den vrijdom van lasten, terzake van landontginningen en landverbeteringen' [Law of 6 June 1840, concerning the exemption from taxes to the benefit of reclamations and improvement of the land].

[19] Web site Historisch Centrum Overijssel, Inventaris Archief Familie Sichterman, met marken Berkum en Streukel en Overijsselsche Kanalisatie Maatschappij (inv.nr. 1321): Inleiding. Available online at http://www.historischcentrumoverijssel.nl [Accessed 30 Mar. 2012].

[20] See database Markegenootschappen, available at https://www.dataverse.nl/dvn/dv/WebsiteICACommons/faces/study/StudyPage.xhtml?globalId=hdl:10411/10026 [Accessed 4 Oct. 2013].

1250 and 1350, in combination with extensive grazing, caused severe deforestation, degradation of the soil, and sand drifts.[21] All the available resources of the area of the selected commons are mentioned in the appendix.

The medieval and early modern socio-economic development of the area to which the selected commons belonged was quite different from the exceptional prosperous economic development of the maritime areas (*gewesten*) of Holland and Zeeland in the same period.[22] The degree of urbanization may at first glance seem to be similar to that of the western maritime *gewesten*, but was however limited to a handful of cities (e.g. Kampen, Zwolle, and Deventer), while the major part of the area had a (very) low population density. The socio-economic differences between the cities and the countryside also applied to the distribution of wealth with substantial inequality between the cities and the countryside. There was, however, less inequality between the farmers: although they had a relatively low income, data from early modern tax registers show relatively little difference between the individual farmers.[23]

In the area in which the commons considered in this article were situated, there was less possibility of extending the farmed area by reclamation than in the maritime areas. First, it was dominated by large manors owned by noblemen and religious institutions:[24] in the first half of the sixteenth century, for example, about half of the area of Salland was owned by either the nobility or the clergy whereas in the same period in Holland such parties owned only about one fifth of the land.[25] Furthermore, due to the absence of extensive nearby market facilities and a relatively low level of urbanization[26] the agricultural activities of farmers focused on local subsistence production.[27] About 95 per cent of the households had at least one cow, but herds remained relatively small, with 4 to 5 animals per household on average. By comparison, in Holland the average number of cows owned per farmer was considerably higher (about 12 to 15), but 75 per cent of the Holland farmers did not own any cattle. The inequality in Holland between farmers was therefore considerably larger than in the eastern regions, even though in the course of the early modern period the number of households in Holland owning cattle doubled.[28]

[21] M. De Moor, L. Shaw-Taylor, and P. Warde, 'Preliminary conclusions: the commons of northwestern Europe', in De Moor *et al.* (eds), *Management*, pp. 248–54; cf. also J. L. van Zanden, 'The paradox of the marks. The exploitation of commons in the eastern Netherlands, 1250–1850', *AgHR* 47 (1999), pp. 125–44, 128.

[22] See van Zanden, 'Inequality in an inland province', p. 55.

[23] The Gini coefficient for the countryside of Salland (where three of the commons used as case studies are located), based on the *Quotisatie* tax source of 1750 is 0.39; in comparison, this coefficient for the three major cities of Overijssel (Deventer, Kampen, and Zwolle) was 0.64, for the maritime *gewest* of Holland 0.71, and for the city of Amsterdam 0.69 (the latter two figures dating from the *Quotisatie* of 1742). Van Zanden, 'Inequality in an inland province', pp. 58–9.

[24] B. van Bavel, P. van Cruyningen, and E. Thoen, 'The Low Countries, 1000–1750', in B. van Bavel and R. W. Hoyle (eds), *Social relations: property and power. Rural economy and society in North-Western Europe* (2010), pp. 169–98, at p. 171; van Zanden, 'Inequality in an inland province', p. 56.

[25] B. J. P. van Bavel, 'Structures of landownership, mobility of land and farm sizes. Diverging developments in the northern part of the Low Countries, *c.*1300–1650', in B. J. P. van Bavel and P. Hoppenbrouwers (eds), *Landholding and land transfer in the North Sea area (late Middle Ages–19th century)* (2004), pp. 131–148, at p. 134, Table 6.1.

[26] Van Zanden, 'Inequality in an inland province', p. 55.

[27] Cf. van Bavel *et al.*, 'Low Countries', p. 181.

[28] Van Zanden, 'Inequality in an inland province', pp. 62–4, specifically Table 4.6.

Short leasehold, generally for 5 to 12 years, was in this area, as in most of the other areas in the northern Netherlands, introduced later than in Holland and Zeeland. The lease ratio in this however rose to over 90 per cent for the Salland region in the middle of the sixteenth century, whereas the overall lease ratio in Holland and Zeeland stayed relatively low.[29] A reason for the success of the short leasehold in the eastern Northern Netherlands may have been the dependence of both landowners and peasants in this area on this type of tenancy. Whereas landowners had a system of serfdom in the high Middle Ages, the dissolution of manorialism in the late Middle Ages and the monetarization of rents in kind forced them to search for new ways of tenancy, since unfree labour was no longer at their disposal.[30] At the same time, farmers had few opportunities to get hold of land themselves due to their limited resources, the absence of an active land market,[31] and the absence of opportunities to reclaim new land (as was the case in the maritime areas, where those who reclaimed new land became the de facto owners of the reclaimed area)[32] and therefore were dependent on obtaining a lease under the most favourable conditions. The combination of this competitive element (landowners searching for capable tenants, farmers looking for suitable land on good conditions), as well as relative low population pressure and ample supply of land to let, may have led to the highest lease ratio in the northern Netherlands, and in north-western Europe for that matter.[33] In the course of the early modern era, landownership in the eastern northern Netherlands changed, and large peasant freeholdings emerged, replacing both manorial landowners as well as a substantial part of the small peasant farms.[34]

Data from archival sources show the practically unchanged importance of agriculture as means of employment in the eastern provinces until well into the nineteenth century: in 1807, about 70 per cent of the rural population in both provinces of Overijssel and Gelderland owned cattle,[35] while at the end of the eighteenth century, some 46 per cent of the working population of Overijssel were still employed in agriculture.[36] In comparison, in the maritime *gewesten,* these

[29] B. J. P. van Bavel, 'The emergence and growth of short-term leasing in the Netherlands and other parts of Northwestern Europe (11th–16th centuries): a tentative investigation into its chronology and causes', in: B. J. P. van Bavel and P. Schofield (eds), *The development of leasehold in Northwestern Europe, 1200–1600* (2009), pp. 191, Figure 9.2; van Bavel, 'Structures', p. 141; cf. B. H. Slicher van Bath, *Een samenleving onder spanning. Geschiedenis van het platteland in Overijssel* (1957), pp. 613–14; also cf. van Bavel *et al*, 'Low Countries', pp. 174–76.

[30] Van Bavel *et al*., 'Low Countries', pp. 172–3.

[31] Ibid., p. 184.

[32] Ibid., pp. 169–98, 171–72, 194; van Bavel, 'Structures', p. 132; T. Soens, 'The social distribution of land and flood risk along the North Sea coast: Flanders, Holland, and Romney Marsh compared (*c*. 1200–1750)', in van Bavel and Thoen (eds), *Rural societies and environments at risk*, pp. 151–52.

[33] Van Bavel, 'Structures', p. 144.

[34] Van Zanden explains this change from the fact that the large landowners used to charge rent at fixed levels; the rise of product prices after 1770, in combination with the custom of farmers holding back rent for several years, lead to increasing wealth among farmers and decreasing income for the landowners. Van Zanden, 'Inequality in an inland province', p. 63. See also B. J. P. van Bavel, 'Elements in the transition of the rural economy: factors contributing to the emergence of large farms in the Dutch river area (15th–16th centuries)', in P. C. M. Hoppenbrouwers and J. L. van Zanden (eds), *From peasants to farmers? The transformation of rural economy and society in the Low Countries (Middle Ages – 19th century) in light of the Brenner debate* (2001), pp. 134–201, at p. 191.

[35] Van Zanden, 'Inequality in an inland province', p. 63, Table 4.5.

[36] B. H. Slicher van Bath, *Samenleving onder spanning*, p. 126.

percentages varied from about 26 per cent (southern part of Holland) to 36 per cent (province of Utrecht). The same figures however also prove the difference in farm size mentioned earlier: whereas the herds of the western farmers in average consisted of about 12 animals, the average size for herds in the eastern provinces was between four and five animals.[37] An indication of the distribution of wealth and the level of income is provided by the income tax records of the so-called *Quotisatie* of 1808: the data show that almost 80 per cent of all inhabitants of the rural village of Delden in the province of Overijssel belonged to the lowest four (of 41) tax categories.[38] The rural area of the eastern Low Countries therefore may be characterized as predominantly rural in character with relatively low income levels for the farmers.

In terms of the legal context, the major part of all land was in the possession of large landowners, many of whom belonged to the landed nobility of the inland *gewesten*. In the case of seigneuries, the position of chairman of the assembly of the common (*markerichter*) was usually connected to the ownership of the seigneurial estate: in those cases the lord of the manor therefore automatically gained the position of *erfmarkenrichter*. In other commons, the *markerichter* was elected by the commoners. Of the cases discussed in this article, both the mark of Exel and the mark of Raalterwoold had an *erfmarkerichter*, although the latter mark changed to elected *markerichters* at the end of the fourteenth century. The mark of Berkum and the Dunsborger Hattemer mark both only had elected *markerichters*. Although the regulations of our four cases do not explicitly mention either the requested qualifications of a (candidate) *markerichter*, nor describe the election procedures, from the rules stating the tasks of the *markerichter* that were copied into the new *markeboek* of Raalterwoold in 1615, we can derive that any candidate for the post of *markenrichter* should be literate, financially well-to-do, and have some accountancy skills. The elected *markerichters* therefore usually belonged to the upper social classes among the commoners.[39]

The *(erf)markerichter* was formally the highest official in the mark: being the representative of the mark in formal matters, he was also in charge of convening and presiding over the regular (annual) as well as the emergency meetings of the assembly of commoners. He was also the keeper of the *markeboek*. The formal status of the *markenboek* is shown in an injunction contained in the regulations of the mark of Raalterwoold of 1445, which stated that the

[37] Van Zanden, 'Inequality in an inland province', p. 63, Table 4.5.

[38] Ibid., p. 72, Table 4.8.

[39] Article 37 states that any *erfgenaam* who would be elected *markenrichter* unanimously at the assembly of the common, would be obliged to accept this function. On his refusal, he was to be fined a barrel of wine whilst remaining obliged to fulfill the task of *markenrichter*. If the fine was not paid by the elected *markenrichter*, it could be imposed on his tenants, who in their turn were allowed to deduct the imposed fine from the contribution they had to pay to their landlord. This latter clause implies that only the owners of large pieces of land in the common would be elected as *markenrichter*. Additionally, article 38 of the same regulation states that the *markenrichter* should annually draw up accounts, to be assessed by committed members of the assembly, therefore implying that the *markenrichter* should be literate and have basic accountancy skills. Literacy of the *markenrichter* is also implicitly presumed in article 39, which prescribes that all decisions made at the annual meeting of the common should be written down in the *markenboek* by the *markerichter*. Finally, articles 41 and 42 indicate that the elected *markenrichter* should have sufficient financial means, since he was held to guarantee that his successor would not be confronted with running debts from commoners incurred under his predecessor (art. 41) as well as to welcome any new entitled member of the common with 'a good drink' (art. 42). See: Hannink, *Markeboek Raalterwoold*, pp. 4–5.

markerichter always had to show this book at the meeting of the commoners. If he failed to do so, he would have to pay a *vierdeel* of wine.[40]

The jurisdiction in the area of our selected commons originally belonged to the bailiff (*drost*) of Salland (for the *marken* of Berkum and Raalterwoold) and the bailiff (*landdrost*) of the County of Zutphen (for the mark Exel and the Dunsborger Hattemer mark); each bailiwick was divided in several sheriff's dominions (in Overijssel called *schoutambten*, in Gelderland *rechter-* or *richterambten*). For the period concerned (from the late fifteenth century on) however, the *(land)drost* already had delegated the administration of justice in most civil and criminal cases to the sheriff (*schout*), who presided over the so-called 'parish courts' (*kerspelgerechten*); only capital offences still had to be brought before higher courts. The jurisdiction of the mark of Exel theoretically differed from the other three commons, since the lord of the estate of Amsen possessed the seigneurial right of administering justice within his seigniory; like most other seigneurial lords he however refrained of this right and referred most legal cases (in any case, all criminal cases) to the regular *kerspelgerechten*.

There is no explicit description of the legal standing of the by-laws made for the regulation of commons within the larger system of law. The texts of the by-laws themselves indicate that they were widely recognized as formal legislation and that the administration of justice in the commons was regarded as a regular form of justice: in several by-laws it is mentioned that the offender should be convicted 'according to the legislation of the mark' ('*naar markenregte*'). The earliest by-laws often also indicate that they were based on previous charters and/or existing customary rights.

Changes in the by-laws, like all other general decisions concerning the management of the mark, the appointment (or dismissal) of officials acting on behalf of the mark, and the access and use of the mark and its resources – including the sanctions on infractions – were mainly made at the regular general meetings of the assembly of the mark (*markevergadering*, in the most eastern parts of the area also known as *holting* or *holtink*) or, in case of very urgent matters, at emergency meetings (*nootholtinke*). Decisions at both annual and emergency meetings were taken by vote, provided that a certain quorum of all commoners would be present. All meetings were to be announced by or on behalf of the *markenrichter* in advance at church.[41]

III

Control of the commons was, as mentioned above, achieved – by and large – in three ways: through preventing the use of the commons' resources by non-entitled users and overuse or misuse by the entitled users; through encouraging social control; and through punishing

[40] Hannink, *Markeboek Raalterwoold*, p. 5. A *vierdeel* is an ancient Dutch measure of content (literally translated 'a quarter'), used for an amount of wine, beer, or grain.

[41] The number of regulations preserved, however, does not always provide an exact indication of the number of meetings held. Sometimes it was decided to replace an older set of previous resolutions and regulations by a completely new one; this new regulation would then only contain the rules and resolutions still in force at that moment. An example is the oldest preserved *markenboek* of the mark of Raalterwoold, dating from 1615, which contains rules still in force from regulations dating from 1445, 1541, 1560, 1598, 1604, 1608, 1609, 1610, 1611, and 1614 (Hannink, *Markeboek Raalterwoold*, pp. 1–21).

free-riders who had committed an offence. In our article we will focus on the latter two control mechanisms, as methods for the prevention of overuse or misuse, for instance stinting, have already received a great deal of attention in the literature. The type of penalties applied in case of the detection of free-riding, and the role commoners had to play in this themselves, through active or passive social control have, however, to our knowledge, received hardly any attention. We will start with a summary of the ways in which free-riding was detected. Next we will pay special attention to the methods of enhancing social control and then move on to an overview of the types and levels of sanctions and penalties that could used against offenders. These needed to be of an acceptable type and level for the offence committed: if monetary fines were too high, then there was a danger that offenders would not pay the sums imposed on them. If fines were too low, the offender might be willing to take the risk of getting caught, since the possible profits gained from his illegal behaviour would outweigh the eventual fine imposed. We will examine the risk of being caught while free-riding as a factor that was of influence on the effectiveness of a sanction. This aspect is hard to detect on the basis of regulation, as this would require a study of the financial records to see the revenues received from fines. However, as we will demonstrate, the by-laws sometimes referred to difficulties in securing the payment of fines.

The surveillance and detection of offences could be accomplished either by appointing officers or via mechanisms of social control, which were often incentivized by giving those who reported offences a share of the fines, or through the so-called liability clauses.

(a) Monitoring

The management of the common and the detection and punishment of offenders against its rules was usually delegated by the assembly of commoners to specific members. None of the regulations we studied actually defines the duties of the officers appointed to govern the common. This may be explained by the fact that the regulations were first and foremost intended for internal use by the commoners themselves, making an explicit job description for officials unnecessary. Management tasks (such as the taxation of land or representing the mark in formal or judicial matters) were usually delegated to the chairman of the assembly of the mark, and sometimes to one or more members authorized for the purpose, who were often drawn from the group of 'inheritors' (*erfgenamen* or *geërfden*). The officers responsible for detecting and punishing offences were obliged to accept this task – be it willingly or unwillingly. The principal task of the sworn members (*gezworenen*, *swaeren*) consisted of enforcing by-laws and fines for infringements, whereas the so-called *schutters* were responsible for impounding animals found grazing illegally (*schutten*), collecting imposed fines, and executing other kinds of penalties.[42] In marks other than those dealt with in this article, additional types of officials

[42] Some of the regulations, however, imply that the sworn members were also involved in the daily implementation of the rules and resolutions of the mark. The regulation of 1445 (transcribed 1615) of the mark of Raalterwoold provides an example in the 29th article, where it is stated that only the chairmen of the assembly of the mark as well as the sworn members were allowed to impound animals; the actual involvement of the sworn members in executing this sanction is also indicated by the additional permission granted to the regular members of the common to execute this sanction themselves in case the sworn members would refuse to execute the sanction at the indication of commoners (Hannink, *Markeboek Raalterwoold*, p. 4). See also Hoppenbrouwers, 'Use and management', pp. 95–6.

have been noticed, such as *vorster* (literally 'investigator', the officer in charge of guarding the proper use of common fields) or *woudgraaf* (best translated as 'forest keeper' or woodward). Although their function reflected local environmental circumstances and the resources of the individual mark, their tasks were broadly similar to those of the *schutters*.

From a reading of the by-laws and other records, we can conclude that this monitoring system was based on a system of rotation and that all members of the mark were obliged to take their turn.[43] Some of the rules clearly indicate that not every member wanted to fulfil his duty, and penalties were set for those who tried to refuse their appointment. Paying a fine could not be used by members as a way of evading this obligation:[44] instead, the rules explicitly state that, having paid his fine, the member nonetheless had to perform the office to which he had been appointed.[45] Many examples show that being a *schutter* was not a very popular job: at the meeting of 4 August 1696 of the Dunsborger Hattemer mark, it was recorded that, 'since year after year there have been many complaints about the current *schutters* … failing to fulfil their tasks, not functioning properly, and not executing the orders issued from time to time by the chairmen of the assembly of the mark and the inheritors', these *schutters* should be 'deported and dismissed, and replaced by other *schutters*'.[46] For some other functions a buy-off could be used; in Exel, for example, the time to be spent as secretary of the mark was provisionally set at two consecutive annual meetings. However, in case any of the farmers 'owning cart and horses' refused to fulfil this role, they would have to pay one *daalder* for each meeting.[47] To make the supervisory system even more watertight, *schutters* themselves could be penalized with various forms of fine, or even dismissal, for failing to report offences to the authorities of the mark.[48] At a meeting of the mark of Exel of 23 May 1695, it was ordered that a *schutter* who did not report an offence would have to pay the fine for the offence himself. At Raalterwoold,

[43] The appointment usually lasted for one or two years. Exceptions, however, have been mentioned in the regulations we studied. The exception could either be an extended duration of the appointment (in case the assembly of the mark saw this fit) or a shortened period of time, in case the appointed members fulfilled their tasks in an unsatisfactory way.

[44] Examples: regulation of the mark of Exel of 4 June 1661: fine of 10 *goudgulden* on transporting peat by farmers, 'these fines to be executed without any connivance'' (G. J. Beuzel, *Markeboek van de marke Exel* (1988), p. 17); regulation of the mark of Raalterwoold of 17 August 1686, fine of barrel of beer at value of *12 gulden*, 'these fines … to be executed without any connivance' (Hannink, *Markeboek van Raalterwoold*, p. 78); regulation of Dunsborgermark of 13 June 1609: fine for not paying proper contribution to war payment of grain [*sware garve*] of 50 *goudgulden*, imposed on both the inheritor and the tenant farmer, 'without any connivance' (A. Menkveld and J. Renema, *Markeboek van de Dunsborger en Hattemer Marke, 1553–1810* [1996], p. 10).

[45] Repeated negligence of these tasks in some cases even led to an early dismissal of the appointed members; we cannot know whether this negligence was only due to the character of the appointed member, or if neglecting his task would gain him more profit than fulfilling his tasks properly, even at the risk of losing his appointment. Nonetheless, punitive sanctions for the poor fulfillment of tasks did not appear to be effective in the end: e.g. almost every regulation issued in the Dunsborger Hattemer mark from 1686 on explicitly stated that the *schutters* should keep a close eye on the strict implementation of these rules; failing to perform this task properly would be sanctioned by their dismissal. Cf. also van Zanden, 'Paradox', pp. 133 and 135.

[46] Menkveld and Renema, *Markeboek Dunsborger Hattemer Marke*, pp. 63–4.

[47] Beuzel, *Markeboek Exel*, p. 17.

[48] See for example the regulation of 15 May 1679, from the mark of Exel, imposing the sanction of a payment of half a barrel of beer on *schutters* not reporting stated offences to the chairman of the assembly of the mark or the commissioned members (Beuzel, *Markeboek Exel*, p. 26).

an order of 1794 stated that a *schutter* could be dismissed from his post if two 'witnesses of irreproachable conduct' would testify that the *schutter* had knowingly allowed offenders to dig sods 'or do any other damage to the mark'.[49]

Notwithstanding the mandatory nature of the appointments, appointed members could also gain some benefit from their appointment. The records of some marks mention a salary for the appointed members (often only in the context of the existing wages being raised). The salary could also be used as a way to incentivize the correct fulfilment of tasks by the appointed members: in some cases, they received a part of the fines they collected. Some of the regulations also seem to suggest that when stray cattle were impounded, the owner not only had to pay the fine for allowing his animals to wander, but also had to pay a certain sum for the impoundment itself – probably to cover the expenses of the *schutters* for taking care of the penned-up animals.

In some cases, when the mark's officers appeared to neglect their duty, all members of the mark were authorized to exercise justice on offenders. In general, what was envisaged in these circumstances was primarily of a physical nature; for example, they might impound an offender's animals, unharness his horses, or immobilize his means of transport.[50] Regulations also stated that the person reporting the offence was allowed to collect the fine from the offender, on the condition that he would disclose his action to the chairman of the assembly of the mark. This measure was also used for situations in which the appointed officials were unable to levy a penalty on the offender themselves, namely those offences reported outside of the mark itself. In those cases, each member was allowed to act according to the law (*naar markerecht*) on behalf of the mark.[51]

(b) Social control

Commoners without an official function were also encouraged to report free-riders by being promised part of the fine if the culprit could be caught. In some cases this could generate a handsome extra income. On 26 May 1618, the first recorded appointment of cattle pounders (*schutters*) in Exel – who were not only in charge of penning up animals that ran astray, but also of imposing other kinds of sanctions imposed on offenders – mentions that they were entitled to half of the fines for the offences they discovered. The revenues of the fines laid

[49] Beuzel, *Markeboek Exel*, p. 33; Hannink, *Markeboek Raalterwoold*, p. 126.

[50] For example, the regulation of 11 Sept. 1761, states that, since 'the shutting in of sheep and geese on the meadows has currently been performed worse than it has ever been, notwithstanding the strict orders of the inheritors, also mentioned in the latest resolution of 1758, even having installed new inspectors in order to aid the old inspectors, the chairmen of the assembly of the mark and the commissioned inheritors have proposed to the assembly (in order to prevent additional costs and complaints) not to appoint any inspectors anymore, but to qualify all tenant farmers and peasants to pen up sheep and geese on the meadows and to be granted the usual fee for shutting in animals; and to order the chairman of the assembly of the mark and the commissioned inheritors (either together or separately) to lend a helping hand to anyone concerned and to proclaim this ruling at church'. Hannink, *Markeboek Raalterwoold*, p. 95.

[51] As mentioned in the regulation of the mark of Exel of 4 June 1661, referring to the new prohibition for all farmers and peasant farmers to transport any peat, and allowing all inheritors 'to apprehend the offender within the city of Zutphen, the city of Deventer, or elsewhere, and to unharness the offender's horses at that location, and to collect the fine, provided that the inheritor would account for his actions to the mark'. Beuzel, *Markeboek Exel*, p. 17.

on the improper digging of peat were to be divided equally among the poor of the mark, the inheritors of the mark, and the chairman of the assembly of the mark.[52] The earliest by-laws of Dunsborger Hattemer mark mention on several occasions that whoever reported an offence received a part of the fine imposed on the offender; given that the fines were set fairly high in this mark, a commoner could make a significant income by reporting offences to the authorities of the mark.[53] Occasionally, the collection of fines normally reserved for the appointed members became also the right of individual commoners if the former were dilatory in performing their tasks. For instance, the 29th article of the earliest laws of the mark of Raalterwoold (1445; transcribed in 1615) states:

> No one but the chairmen of the assembly of the mark with the sworn members are allowed to pen up stray cattle; unless it would be the case that two inhabitants had pointed out animals to be penned up to the sworn members and the sworn members would refuse to pen up these animals – in that case the neighbours were entitled to pen up these animals themselves and would obtain half of the fine imposed, this fine to be collected by the sworn members.[54]

However, this power was a double-edged sword: commoners were in many cases also held liable for punishment if they did not report an offence. Liability clauses which made commoners responsible for reporting free-riders are found in the mark regulations with varying levels of severity according to the commoners' degree of complicity in the committed crime.[55] First of all, when members of the mark were actively participating in breaking the rules, not only the offender himself would be fined, but also his accomplice from within the mark. By-laws containing a liability clause on being an active 'partner in crime' do not mention the penalty imposed on the offending non-commoner – it may be that the punishment of the offender from outside was sufficiently covered by other legislation – but only the penalty to be imposed on the commoner who abetted this offence. Almost all of these regulations of this sort refer to the keeping of livestock: commoners were prohibited from accepting animals from non-commoners in order to prevent free-riding.[56]

[52] 'Nobody will be allowed to dig … any more peat above the amount each one needs for his subsistence, offences to be sanctioned with a fine of five *goudgulden* per transport of peat out of the mark, one-third of this fine being to the benefit of the poor, one-third to the benefit of the inheritors, and one-third to the benefit of the chairman of the assembly of the mark.' Beuzel, *Markeboek Exel*, p. 1. The 'inheritors' (*erfgenamen*) were those members of the mark who had (full) use and access rights to the common based on the use shares (*waardelen*) that were connected to their farm or estate (*erf*).

[53] For example, in 1775, the fine for grazing animals on drifting sands – which had just been planted with lyme grass in order to stop them spreading further – was set at 10 *goudgulden*, of which half was to the benefit of the person reporting this offence. Menkveld and Renema, *Markeboek Dunsborger Hattemer Marke*, p. 139.

[54] Hannink, *Markeboek Raalterwoold*, p. 4.

[55] This type of sanction is not the same as a collective sanction whereby the whole group is punished for the wrongdoings of only one individual (as described by D. D. Heckathorn, 'Collective sanctions and the creation of prisoner's dilemma norms', *American J. Sociology* 94 (1988), pp. 535–62). Collective sanctions would anyhow be rather peculiar (and not effective) in a situation such as a common whereby the whole group sets a sanction.

[56] In most cases, the regulation sanctions the offence of accepting animals from outside of the common. In one particular case, the description of the participationis more extensive: in Raalterwoold in 1824, commoners who would have horses from outside the mark branded

In addition, members of the mark who passively allowed non-members to make unauthorized use of the common resources or who did not report to the officers offences they saw taking place would often be penalized. In most instances the use of a liability clause was, however, confined to appointed members not fulfilling their duties: 'passive' complicity of regular members of the common was mentioned in only two of the sets of by-laws from the marks we have studied so far. In the first case, the liability clause referred to the permission aldermen, employers, or tenant farmers may have given to their dependents (servants, maids, children) to commit an offence. It was decided in those cases not to fine the person committing the offence, but the person who allowed the offence to be committed. Possibly this clause was used to prevent these aldermen, employers, and tenant farmers from gaining illegal profit by instructing those living with them or working for them to dig on their behalf.[57] The other case of 'passive' complicity of regular members comes from 1806, when the assembly of the mark of Raalterwoold decided that commoners who allowed non-commoners to wash their sheep in the waters of the mark would have to pay 'the highest compensation possible' for the damage caused to the mark.[58]

In most cases, the regulation stipulated a fine that was more or less equal to the amount of damage caused by the offence. In some cases, however, the penalties laid down on officeholders held liable for offences was far more punitive than for other members, clearly exceeding the amount required for simply compensating for the damage done (or the profit gained). In the case of the mark of Raalterwoold, for example, the fine was not merely a compensation for the damage caused, but was clearly also meant as punishment; the fine for sworn members (office-holders) found to be guilty of connivance was set at four times the ordinary amount imposed on regular members committing the same offence.[59]

(c) Striking a good balance: the type of sanction and the level of the fine

How did commoners know which type of penalty would deter an illegal action? And if a financial payment was part of the sanction, how high then should that fine be in order to be effective? In only a few cases do the penalties instituted by the mark provide us insight into the way in which their severity was calculated or what penalties sought to achieve, but the way in which the penalties were constructed provides us with insights into the (dis)incentive structure underpinning the by-laws. The records show that in some cases adjusting the fines was subject to a phase of trial-and-error. In the case in Exel, the fine for the offence of transporting peat out of the mark was set fairly high at 20 guilders in 1628, of which 5 guilders would be to the benefit of the person who reported the offence to the officials of the mark. The notes of the

Note 56 continued
as if these were their own, in order to graze them on the common, were sanctioned with a fine of 3 guilders per horse and in addition had their right to use the common for grazing horses revoked for the duration of one year. Hannink, *Markeboek Raalterwoold*, p. 162.

[57] Hannink, *Markeboek Raalterwoold*, p. 81.

[58] '[There have been] proposed measures to prevent the dipping of sheep in the waters of this mark by people from outside of the mark, in order to prevent any damage. It will be prohibited to all those living outside of the mark to dip their sheep in the waters of this mark, offences to be fined at 2 *goudgulden*. The inhabitants of the mark are obliged to take care no harm will be done to the belongings of the mark or the belongings of anyone else, offences to be punished by the highest fines for compensating the damage caused'. Hannink, *Markeboek Raalterwoold*, pp. 138–9.

[59] Hannink, *Markeboek Raalterwoold*, p. 81.

annual meeting of 1642, 14 years later, reveal that this high penalty had not been effective in two ways. First, the notes mention that all but six inhabitants of the mark of Exel had broken this rule and should have been fined. Second, the mark's amendment to its earlier decision seems to indicate that the level of the fines set may have been a deterrent to the enforcement of the rule. It was then decided to lower the fines from 20 to 4½ guilders (those having used carts from outside the mark however being liable to pay double, i.e. 9 guilders).[60]

In the literature, it is not only the level of the fine, but the type of fine, and then mostly the use of 'graduated sanctioning' which has received a great deal of attention. It is identified by Ostrom as one of the principles underpinning the successful design of common-pool resources.[61] Graduated sanctioning refers to the way in which a penalty is increased for repeat offences committed by the same individual, the final and highest penalty being the forfeiture of use rights. However, the number of graduated sanctions found within the regulations of Dutch marks is quite small: from the 1137 by-laws analysed, graduated sanctioning is found in no more than 20 (1.8 per cent). From the content of the graduated sanctions it seems that there was a general consensus that the toleration of offenders only extended to two warnings. When offenders were caught committing the same offence for the third time, the penalty was designed to disable him from committing any future offences (by suspending his use rights). Alternately the penalty for the third consecutive offence was to be determined at the moment the offender was caught.

The status of the offender, the time or location the offence was committed, or some combination of these was more decisive in determining the penalty levied than the number of offences committed. Within the body of rules we can discern three types of differentiation. The most common was between members of the mark or non-members. Offences committed by non-members were usually penalized at double the members' rate; we may assume that this was meant to compensate for the relatively higher profit non-members gained from their offences, since the mark would not receive any countervailing income from them (such as a contribution to the general maintenance and functioning of the mark).

Whereas other marks tended to punish offenders from outside the mark with heavy, and sometimes graduated, sanctions (including the impounding of resources), the sanction in the Dunsborgermark for any offence that would damage the mark committed by a foreign offender was far more physical in nature: if the foreign offender was caught, the members of the mark, together with the chairman of the assembly of the mark, were allowed to 'break the keyholes [*lutsgaten*] of the axles of the cart, decapitate the livestock, and the driver of the cart would be at the mercy of the members of the mark and their chairman of the assembly of the mark'.[62] The remarkable severity of the aforementioned sanction does not seem to be exceptional for this mark. For instance, whereas the digging of sods within the mark of Exel in 1643 was sanctioned by imposing a fine of 5 *oude schilden* (equivalent to about 7½ guilders), the fine in 1637 for the same offence within the Dunsborger Hattemer mark had been set at 20 guilders. The harsh

[60] Beuzel, *Markeboek Exel*, p. 6.

[61] Users who violate the rules should be subject to graduated sanctions that are imposed by the users themselves or by officials accountable to them. See here Ostrom, *Governing the commons*, pp. 94–100.

[62] Menkveld and Renema, *Markeboek Dunsborger Hattemer Marke*, p. 3.

punishment of destroying equipment or animals was however only applied to offenders from outside of the common. A logical explanation for this would be that to damage the equipment of members of the mark for offences they committed would in the end damage the interests of the mark.

A second type of differentiation was related to the time of the day the offence was committed. For example, at the assembly meeting of the mark of Raalterwoold of 6 July 1654, the penalty for outsiders transporting turf out of the mark without prior notification given to and authorization by the sworn members, was set at the impounding of the turf only, whereas the penalty for the same infringement committed at night was not only the impounding of the collected turf, but also an additional fine of 10 golden guilders (goudgulden); the latter penalty, by the way, also applied to anyone from within the common caught transporting turf out of the mark at night.[63] This seems to indicate that the fine correlates with the risk of discovery and the subsequent maximum size of unjustified profit for the offender. It is obviously harder to detect offences committed at night, hence the potential amount of damage (and thus the potential gain by offenders operating at night) could be higher than that of offenders operating in the daytime; therefore, the compensation for the potential damage done to the market should be higher. The types of differentiation mentioned above could also be used in combination. For example, in Raalterwoold, in article 4 of the regulations of 26 August 1806, it states that the fines mentioned in article 3 of the same regulation (regarding the collection of manure and peat in prohibited areas of the mark) should be doubled when the offences were committed between sunset and sunrise by inhabitants of the mark, and quadrupled for offenders living outside the mark.

The third type of differentiation concerned the officeholders of the mark. Often, offences committed by them were to be punished at a penal rate. This might have been designed to emphasize the exemplary function these officers were supposed to fulfil. But from a financial point of view, the explanation could be that the sanctions for officials and appointed members needed to be higher to avoid temptation: their authority and the access they had to the resources of the mark might have made the temptation to free-ride greater, and thus the sanction needed to be higher as well (e.g., the by-laws promulgated at Raalterwoold in 1704 stated that appointed members who committed offences should be fined four times the amount that was imposed on regular members committing the same offence).[64]

The collection of fines appears to have posed a problem at all periods. Several by-laws either implicitly or explicitly suggest that the collection of fines was not performed as well as it should have been: from the content of the rules it can be concluded that some of the *schutters* overlooked their fellow commoners' fines. Even the chairman of the assembly of the mark was threatened with penalties if he did not secure the payment of all imposed fines before the end of his term: the by-laws set out that any deficit remaining at the end of his term was supposed to be satisfied by the chairman himself.[65]

[63] Hannink, *Markeboek Raalterwoold*, p. 60.

[64] Ibid., p. 81.

[65] In the first set of rules in the *markenboek* of Berkum, for example, the sworn member was explicitly forbidden to 'acquit anyone of this fines'. Historisch Centrum Overijssel, Archief Marken in de provincie Overijssel, no. 0157, inv. nr. 148, *Markeboek 1300–1656* (composed 1648), fos 6v–6r. The first set of rules of the mark of Raalterwoold of 22 August 1445 urges all chairmen that are to be appointed to deal with the non-imposed

This inability to enforce the by-laws made by the mark's assembly needs to be seen in the light of other resolutions referring to arrears of other payments to the mark that accumulated unpaid year after year. Although non-payment was mentioned time and time again at the annual meetings of the mark, the offenders remained in default, in some cases for up to 16 years.[66] The apparent incapacity of the mark to make debtors pay their ever-increasing fines created a problem of its own: fines accumulated to such an extent that it became clear that the debtors would never be able to pay off their debts without going bankrupt. Most of these cases were, therefore, in the end resolved by arranging a settlement with the debtor: the fine was heavily reduced, on the condition that this reduced fine was paid instantly and future payments should be paid promptly.[67] Although this enabled the mark to keep the members in default aboard, the minutes of the meetings show this was not an efficient formula, since some years later, the same debtors faced the same problem again. Surprisingly enough, the same debtors were also appointed as cattle pounders (*schutters*) themselves when it was their turn.[68]

The assembly of commoners could also decide to mitigate the sums imposed by fines or mandatory payments where individual commoners appeared to be unable to pay their dues because of illness, old age, or accidents. For instance, in Exel in 1662, some widows were allowed to stay in their cottages after the death of their husbands, and use the cottages and the surrounding gardens rent free for the rest of their lives (on the condition that the cottages would fall to the mark again after their deaths); in a case of 1802 from the mark of Raalterwoold, commoner Hendrik Woolthaar was acquitted not only of his overdue rents, but also exempted from future rent payments for a period because his house burnt down.[69] On the other hand, there are also examples of situations in which, where a fine was not paid, the penalty on the recalcitrant was even increased or his cattle were distrained – even sold – in order to satisfy his debts to the mark.

Note 65 continued
fines well before the moment of their abdication, 'in order to free the new chairmen of the assembly of the mark from the burden of collecting still unpaid fines'. Hannink, *Markeboek Raalterwoold*, p. 5.

[66] In the case of the estate of Ter Aest, for example, the owners were held to pay both a lamb and some money annually to the mark to be entitled to the use of their share. In 1650, however, the payments due by Ter Aest had accumulated to 100 guilders and five lambs over a period of 22 years (1628–50). Another example was the couple of hens that two users of the common, Prijser and Greve (their names may refer to a certain function they had within the mark, but this cannot be confirmed on the basis of the notes of the meetings), were held to pay annually at the meeting of the assembly of the mark. Although this debt was mentioned over and over again at every subsequent meeting and it also was mentioned several times that the outstanding debt should be collected by the officials in charge of collecting debts and fines on behalf of the mark, the debt increased year after year over a period of up to 14 years: Beuzel, *Markeboek Exel*, p. 15.

[67] E.g., the member Broeckman was held to pay a lamb each year for using his (contested) right to graze his sheep on the common. On 25 June 1660, the chairman of the assembly of the mark together with the inheritors decided to solve this recurring issue once and for all, deciding 'that Broeckman once and for all will honour the chairman of the assembly of the mark and the inheritors at the forthcoming annual meeting by presenting them a barrel of Haarlemmer beer and an anker of good wine; in return, Broeckman will be allowed to graze a herd of 50 sheep on the common and will be acquitted of the debt he has regarding the annual donation of lambs'. Beuzel, *Markeboek Exel*, p. 16.

[68] Prijser for example was appointed as *schutter* on 1 Aug. 1656: Beuzel, *Markeboek Exel*, p. 13. At that moment, however, he was already in debt for about a dozen couples of hens, as the resolutions of the annual meeting of 1659 show: ibid., p. 15.

[69] Respectively Beuzel, *Markeboek Exel*, p. 18 and Hannink, *Markeboek Raalterwoold*, p. 130.

III

The analysis of ways to control commoners' behaviour largely remains to be undertaken, but is much needed in order to understand how self-governance can be effectively organized through institutions for collective action. The debate on the quality of the functioning of institutions, which should be the next step in trying to understand the role of institutions in economy and society at large, would surely benefit from a better understanding of the mechanisms institutions use to achieve resilience, to survive generations, crises, wars, and so on. The four case studies presented here demonstrate the wide range of methods, other than simple punitive sanctions, that existed in the early modern period to control commoners' behaviour in order to prevent free-riding. Besides the regulation to limit the use of the common resources – which we have not discussed in this article – two main strategies to control behaviour were present: monitoring – amongst others through social control – and punishment of offences. What is most striking is the responsibility placed on the commoners themselves to detect and report the detection of the offences.

Although we have limited our analysis here to normative sources, and have not included other sources such as account books that could give an impression of the actual collection of monetary penalties, it has already been mentioned that little reference can be found in the *markeboeken* to the implementation of penalties. There are two potential explanations for this: either they were not properly imposed, or discipline and good conduct were so good that there was no need for the execution of the penalties. Although we also found references to difficulties in imposing and collecting fines in some cases, the combination of methods, and the many conditional factors included to tailor penalties to the severity of the offence and the background of the offender, do suggest that rather than imposing and executing flat rate penalties on all the transgressing commoners, the rules were very well-tuned to the local conditions and more directed towards preventing offences. Such sophisticated methods may have proven to be more effective in preventing free-riding than simply fining offenders and thus might turn out to be a more cost-effective and conflict-avoiding way towards achieving resilient commons management. That sophisticated strategies for the punishment of free-loading existed may help to explain why so many commons managed to survive over very long periods of time and have implications for other collective institutions.

Appendix
Main features of the cases selected for this article

	Mark of Berkum	*Mark of Raalterwoold*	*Dunsborger Hattemer mark*	*Mark of Exel*
Year of origin	1300	1445	1553	1616
Year of dissolution	1995	1840	First half of the nineteenth century	1852
Evolution of size	· 1630: lands of Broeck and Ooyte were divided among the owners of, in total, 838½ shares. · 1653: Berckmerbergen and Nemelervelden as well as the Berckmervelden near Dambrugge were divided among the owners of 390½ shares. · 1819: division of the mark of Berkum into a southern and a northern part, each part to be regarded as an individual entity. · From the middle of the nineteenth century up until 1994, some parts still remained as common land.	· Between 1445 and 1600, part of the original mark of Raalterwoold was split off and became the mark of Luttenberg; this split-off part was not recognized by the mark of Raalterwoold until 1722. · Number of users did increase slightly: in the sixteenth century 53½ shares over 67 farms, and 55½ shares over 71 farms in 1840.	· Commons of this mark decreased in size during first half of nineteenth century	· Stayed the same
User types	· Caretaker-farmers who *de facto* used the land on behalf of the inheritors of Berkum, the *de jure* owners of the shares · No peasant farmers mentioned	· Inhabitants of hamlets of Tije, Boethele, Raan, Luttenberg · Inhabitants of (church) village of Raalte (limited access) · Owners of farms surrounding common land of Raalterwoold · Peasant farmers · Inhabitants of adjacent marks, for as far as they had obtained *paalbuurrecht* (customary right of inhabitants of adjacent marks to use part of the mark along the common boundaries, in case this use was essential for taking care of their own animals)	· Members of mark · Peasant farmers · Specific inhabitants of lands of mark Ruurlo adjacent to mark (under strict conditions and limited in number)	· Lord of Ampsen · Owners of farms surrounding Ekselse Enk · Peasant farmers

	Mark of Berkum	*Mark of Raalterwoold*	*Dunsborger Hattemer mark*	*Mark of Exel*
Resource types	· Hay · Arable land	· Peat and peat topsoil · Sods · Hay · Heath · Arable land	· Peat · Wood · Arable land	· Peat · Sods
Animal types	· Sheep · Cows · Pigs · Geese · Horses · Fishing rights	· Sheep · Cows · Pigs · Geese · Horses	· Sheep · Pigs · Geese	· Sheep · Cows · Pigs · Geese · No horses
By laws applying to	· Everybody or unspecified: 68 (31.8 %) · Members: 135 (63.1 %) · Non-Members: 11 (5.1 %)	· Everybody or unspecified: 200 (27.0 %) · Members: 479 (64.7 %) · Non-Members: 61 (8.3 %)	· Everybody or unspecified: 13 (31.7 %)* · Members: 25 (61.0 %)* · Non-Members: 3 (7.3 %)*	· Everybody or unspecified: 109 (29.5 %) · Members: 242 (67.5 %) · Non-members: 11 (3.0 %)
Penalties applying to	· Everybody or unspecified: 39 (54.9 %) · Members: 31 (43.7 %) · Non-members: 1 (1.4 %)	· Everybody or unspecified: 64 (26.6 %) · Members: 130 (54.2 %) · Non-members: 46 (19.2 %)	· Everybody or unspecified: 5 (17.9 %) · Members: 20 (71.4 %) · Non-members: 3 (10.7 %)	· Everybody or unspecified: 81 (38.6 %) · Members: 124 (59.0 %) · Non-members: 5 (2.4 %)
Years for which regulations are available	1300; 1492; 1571; 1602–04; 1606; 1608–11; 1631–32; 1647; 1649; 1651; 1656; 1692; 1725; 1763; 1766; 1772; 1777; 1819; 1830	1445; 1541; 1560; 1604–05; 1608–11; 1614–16; 1618; 1620; 1623; 1625; 1627–28; 1631; 1633; 1635–36; 1639–40; 1642–45; 1647; 1649–50; 1653; 1654–55; 1657; 1660; 1662; 1664; 1670; 1676; 1681; 1686; 1696; 1704–05; 1707; 1710; 1713–14; 1719; 1725; 1731; 1738; 1755; 1758; 1760–61; 1763–64; 1767; 1770; 1775; 1789; 1791; 1793–94; 1797–98; 1800; 1802; 1804–06; 1809–16; 1819; 1824; 1827; 1829; 1831–32; 1834–35; 1839–43	1553; 1558; 1576–77; 1608–09; 1612; 1616–17; 1619; 1621–22; 1637; 1640; 1642–43; 1677; 1683–84; 1686–88; 1690–92; 1694–97; 1699; 1701; 1703–04; 1708; 1711; 1719; 1721–23; 1726–29; 1731–32; 1735–37; 1739; 1741; 1745; 1747–48; 1752–54; 1766–67; 1769–70; 1772; 1775; 1785; 1789; 1792; 1800–01	1616; 1618; 1628; 1634; 1636; 1642–43; 1645; 1647; 1650; 1656; 1659–63; 1667; 1671; 1677–79; 1681; 1684; 1686; 1691; 1695; 1697; 1700; 1703–04; 1706–07; 1714; 1734; 1737; 1740–41; 1745; 1747; 1749; 1751–52; 1768; 1772; 1810–11; 1829; 1835–37

* The data of the Dunsborger Hattemer mark have been analysed for the first period only, covering about one third of all the rules within the *markeboeken* of this mark