

Survival without sanctioning

The relationship between institutional resilience and methods of dealing with free-riding on early modern Dutch commons¹

Introduction

Institutions for collective action – as small, self-governing and self-regulating organisations – were important players in the daily life of villagers in early modern northwest Europe. Urban organisations such as guilds and fraternities dominated economic organisation in the cities; commons – in various forms and sizes – were in many parts of Europe indispensable for agricultural production. Organisations such as guilds and commons were self-regulating: During their frequent meetings rules were devised to avoid the overuse of resources by members, to prevent non-members from encroaching upon the collective resources, to coordinate the daily functioning of the organisation and to make sure that the daily activities within these organisations were monitored and that detected wrongdoers were punished. Many of these organisations managed to survive for centuries, though most did not overcome the effects of the fierce governmental actions to abolish these self-governing institutions towards the end of the eighteenth century and during most of the nineteenth century. Of course, initiatives that lasted only for a short period are less likely to have been documented, but the amazing longevity of these institutions and their capacity to govern resources sustainably have nevertheless, over the past decades, attracted many scholars in various disciplines who are looking for the ‘holy grail’ of institutional resilience. Much of their attention has been going to ways to maintain control over free-riding, in the first place by designing sanctions to frighten off potential free-riders and, if this does not work, by punishing them severely in the hope of preventing further misbehaviour. In the literature on the use and management of institutions for collective action it is generally accepted that there is a need for an appropriate sanctioning system to accompany regulation, in order to prevent free-riding or to avoid its repetition and to steer the whole group of users towards a satisfactory level of cooperation. It is also generally agreed that sanctioning can be expensive, both for the individual and for the group. Members of the common pool institution need to invest time and effort into designing appropriate sanctions, detecting free-riding, implementing the sanctions themselves and, if all of this fails, taking the defector to court. However, more recent literature also points towards potential negative effects of sanctioning as a tool. Sanctioning may affect the level of trust within a group and create a hostile environment.² Generally, there is thus a consensus about the need for sanctioning, but also a belief that it should be applied with care as both designing and implementing sanctions may lead to costs for the organisation.

Many experimental studies have furthermore tried to establish what an effective and efficient sanctioning system should look like by trying to determine the ‘right’ level of a fine, to what extent people are willing to punish each other, what the structure of a fine should be

(pool punishment or not; the choice between ‘carrots’ or ‘sticks’) and to what extent external enforcement can be efficiently used to implement sanctions in an effective way. Meanwhile, field research has also demonstrated that human beings in real life, too, are not afraid of determining sanctions and executing punishments in cases of free-riding, and it has been suggested by Elinor Ostrom among others that specific types of sanctioning – such as graduated sanctioning – can have a preventive effect as they also serve as a warning to current defectors of ‘worse to come’.³

Nevertheless, in literature the option to use tools other than sanctioning to prevent free-riding is hardly ever seriously considered, although it is generally acknowledged that sanctioning can be a costly affair. The results in this article, however, will demonstrate that there is not necessarily a positive correlation between the presence of a repressive apparatus in the form of serious sanctions and the longevity of an institution. We will explore the use of sanctioning in a number of very long-lived commons in the Netherlands.⁴ The longevity of the cases we study varies from 236 to 695 years of documented existence. The archival sources allow us to retrieve the regulation devised to control who the commoners were (access rules), how the use of their common resources was regulated (use rules), how access and use were managed (management rules) and how the governance of the institution as a whole was arranged (governance rules). Moreover, we can include in our analyses not only the rules as such, but also an analysis of the type and level of the sanctions that were used to scare off and punish those who did not follow those rules. The mass of data we have collected allows us to approach the above-mentioned issues related to sanctioning in a different way, but due to a lack of other studies that deal with sanctioning in the context of the (very extensive) longevity of the commons, we also need to create our own methodology.

In addition, this article links up to the discussion on how to measure institutions, which has developed out of the longstanding debate on the role of institutions in economic development.⁵ The commons as governance model have of course already played a substantial role in various social and economic debates with repeated attempts to actually measure their impact on the economic development of individual users⁶ or agricultural systems⁷, but their role as resilient systems for resource management has as such not been considered, nor have there been attempts to measure their development on the basis of their institutional features, such as their rules, and in particular those rules that set this governance form apart from others such as private market or state arrangements for resource management. Here we approach the ‘measurement’ of commons as institutions for collective action from the latter side, from the internal design of the institution, which is markedly different from other types of institutions, in particular due to the involvement of the stakeholders themselves in defining, implementing and controlling the rules. Our analysis will thus not focus on measuring the impact of the governance model on resource use but on the organisation of resource use within the group of entitled users.

Although we will not link our own analysis to economic development as such, we do attempt to offer a way to look at how institutions – in particular self-governing ones – can be managed efficiently: by saving on the investment of time and effort of the whole group of commoners, which can go into the design and implementation of sanctioning on the one hand; and by preventing the negative effects in terms of resource depletion that inefficient institutional management might incur on the other. The decision to invest time and effort in either prevention or in sanctioning can – even if it might be difficult to express this in

figures – be considered an economic decision, although we should not forget that ‘costs’ in this context could also include effects on, for example, community cohesion, which are social costs and as such even harder to measure than actual time and effort invested. Besides these two ways of measuring the efficiency of management there is also the issue of resilience and the minimisation of transaction costs incurred due to changes in ownership of the resources in a common. The institutions we are considering are, as mentioned, very long-lived and make it possible to avoid such costs, because of their specific set-up, through the transfer of use-rights without a necessary change in property rights. Moreover, one could also argue that resilient institutions offer a solid basis for an economy to develop, although studies that consider such an effect within the broad time-window that is considered here and that could confirm this assumption are not available.

In this article, we consider the total body of rules linked to each of the commons we use as case studies as the total effort the commoners have spent to design the regulation of their institution. We assume that commoners wanted to keep this effort as limited as possible, as they had to attend all meetings where new rules were decided upon. We start from the premise that making more rules than effectively needed would be considered a waste of time by the commoners. The validity of this premise is also suggested by the practice that whenever a rule was still in place and did not require change, the rule was simply copied in new regulation documents.⁸ This approach is used to find out which aspects (access, use, management, governance) the commoners found most important to regulate, and also to sanction if needed, and we relate this effort to the longevity of the case studies, in terms of numbers of years of existence.

In the first part of the article, we will give a brief overview of our case studies and methodology. Also, we will provide some additional background information on how these commons were organised in terms of the setting of rules, the monitoring of compliance and the execution of sanctioning. In the second part, we will discuss the design of sanctions, and how this design differs from case to case. In the last part we will concentrate on the dynamics of the rules and related sanctions.

Methodology and case studies

Experimental methods have as yet proven unable to deal with periods of a sufficient length in order to capture the effects of individual users’ behaviour on resource depletion within a commons context. To some extent, experiments (e. g. infinitely repeated games)⁹ can capture experiences from, and the effect of, behavioural choices in previous periods, but it is hard – if not impossible – to also incorporate the many changes in the regulation and sanctioning, and the external circumstances that may have induced such changes at the same time. Another problem we face with experimental studies as a way to understand the functioning of institutions for collective action, is the focus on individual behaviour and the difficulty in relating this behaviour to decisions made on the institutional level. How are individual preferences and choices translated into rules that apply to the whole group, and at which point do changes in those individual preferences lead to a group decision to change the institutional setting? This last question can be answered by intensive field research, as was demonstrated for the first time by Elinor Ostrom in the 1990s.¹⁰ But still, capturing and explaining the long-term

dynamics of institutions for collective action beyond an institutional lifetime of more than a single century remains out of reach with the mentioned methods.

In this article, we present another approach that allows us to cover very lengthy periods of time (at least two centuries) of institutional change. We systematically analyse the regulation of eight cases of common pool institutions (CPIs) in the Netherlands and their transition, and we try to relate these institutional changes to changes in the environment of the common. Our approach to understanding institutional change has not been tried out before, probably because – although it delivers interesting results and new perspectives – it is a daunting and very labour-intensive task. Reaching a consensus on how to analyse these regulations for several countries has already proven to be a considerable challenge due to the huge variety in local forms of use and formulation of rules. Entering, translating and analysing for several cases each rule that had been recorded in the course of several centuries has been extremely time-consuming. This article is an exploration of the potential value of our data for institutional analysis for just one of the European countries we are dealing with (albeit for a still limited number of eight cases, all located within a particular region).¹¹ Regarding the analysis, we have limited ourselves to very simple methods, whereby we mainly looked at the distribution of different types of rules and sanctions and in particular how this relates to the longevity of the specific cases, thereby including some detailed examples of specific cases. With the small number of cases we are dealing with at the moment, our current approach does not encounter any real problems. In due time, when we have explored the possibilities of our data in various fields, we will seek to develop more specific methods in order to deal with more specific research questions on the dynamics of institutions for collective action. Such methods, however, are not yet well defined in literature.

Contrary to experimental studies, we cannot identify the role of individual preferences in our sources, but we can determine what type of collective choice to mediate the behaviour of individual members of the common has been preferred over other types. We consider this first attempt to analyse regulation of commons on a large scale as a way to bridge the gaps between experimental studies and field studies on regulation in general, and on sanctioning in particular. So far, these methodologies are, to a large extent, still isolated. From a merely methodological point of view, our approach is much closer to field studies, but our results make clear that in the past many more instruments for managing common pool resources (CPRs) were available than those that have been considered so far in experimental studies. We can determine how the willingness to cooperate and sanction was translated into collectively set group norms. Although our results will not fundamentally change the possibilities within experimental or present-day field research, long-term historical research could highlight a number of best – or worst – practices, and as such add to the options given to participants in experimental studies. Also, as we will show, generally accepted sanctioning instruments such as graduated sanctioning, although they may have proved their usefulness in short-term studies, may not necessarily have played an important role in the survival of commons in the very long term.

In the Netherlands, there are two main forms of commons to be found. In the east (in particular in the provinces of Gelderland and Overijssel) and in the more central part of the Netherlands, commons usually took the form of *markegenootschappen* (also known as *marken*), which were associations of a number of members that were entirely self-governing, although their organisation did need to be formally recognised by the local authority.¹² Else-

where in the Netherlands, particularly in the southern province of Brabant, we also find the so-called *meenten*, where the right to use the common was usually reserved for the inhabitants of the village in which the common was situated; the management of such commons was often in the hands of representatives of that village.¹³ The degree to which commoners were actively involved in deciding upon new rules in most cases was probably less for *meenten* than for *markegenootschappen*. For our study, we therefore focused on eight *markegenootschappen*, all situated in the eastern part of the Netherlands;¹⁴ Appendix 2 provides a more detailed overview of a number of features of these commons.

Figure 1: Location of the eight case studies



Legend: 1) Marke Berkum, 2) Marke Rozengarde, 3) Marke Raalterwoold, 4) Marke Bestmen, 5) Marke Geesteren, Mander and Vasse, 6) Marke Coevorden, 7) Dunsborger Hattermer Marke (slightly beyond the southern margins of the map), 8) Marke Exel.

Source: Den Haag, Koninklijke Bibliotheek, Atlas Van der Hagen [c. 1690], 1049B11_098.

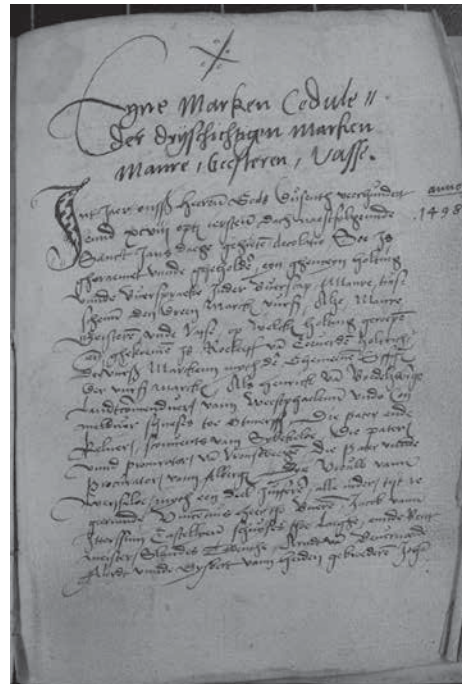
Further information about the case studies is available at <http://www.collective-action.info> (15.5.2015).

Notwithstanding the similarities in their ‘institutional format’, each of these *marken* could be rather different from the others: in the types of resources they could harvest, in the way they set up their rules and sanctions, in their longevity as an institution. Our interest in this article, however, is in the common denominators of these commons, and we try to determine these

denominators by analysing the regulation of these commons in great detail. The regulation of the selected commons – in total we analysed 2,553 rules for the eight case studies – was entered rule by rule into a database, and was also analysed rule by rule, using a pre-set number of variables allowing us to specify both the content of the rule as well as the sanction that was applied if the rule was breached (see Appendix 3 for the layout of the database). On the most basic level, rules were identified as being related to access, use, management or governance structure. Appendix 4 gives a description of the types of rules that made up each category. The content of the rule furthermore was analysed in other ways, related to the type of the rule (obligation, permission, etc.), the type of resource (peat, water, hay, grass, etc.), the activities (digging, management tasks, etc.) to which the rule refers, and the specific circumstances in which a rule was applicable (time of the day; in case the use of specific tools for harvesting resources was mentioned, etc.). Furthermore, we analysed the sanction that was to be executed in case the rule was breached. This again was analysed in detail, determining for example the party that was breaching the rule, the party affected by the offence, the kind of sanction that was set (fines, penning up of cattle, exclusion from common, etc.), the type of the sanction (singular, graduated, differentiated), the level of the sanction, as well as some specific issues such as the eventual inclusion of a liability clause within the rule.¹⁵

Since sources become increasingly scarcer as we go back in time – and also given the lack of a uniform definition of the concept of the *marke* – it is hardly, if ever, possible to exactly pinpoint the year of origin of the *marken*.¹⁶ M. Paskamp-van Santen mentions that the *buurschappen* (hamlets), which became part of the *marke* later on, already had a form of legal self-governance, having their own jurisdiction, jurisprudence and their own governance system; however, primary sources from these early stages of this informal institution hardly exist.¹⁷ The first appearance of the *marke* as being a formal institution, however, usually took the form of the first (or at least the oldest preserved) set of rules that consisted of rules dealing with access, use and management of the common. The oldest examples of such regulations often consist of one single document, written on parchment and sealed by the local authority or authorities and dating back to the end of the thirteenth and the beginning of the fourteenth centuries. In cases where the first preserved regulations date from a later period, the first set of rules – sometimes in transcribed form, as was the case for Marke Raalterwoold – often cover the starting pages of the so-called *markeboeken*, in which the regulations – and often also the resolutions taken at annual and other general meetings – were recorded. We know from the case study of the Marke Exel that, in regard to the registration of rules, a combined form was also in use: It appears from the text of the resolutions of this *marke* that the regulations and resolutions of previous meetings were inserted into the collected body of regulations as being the first point of order at the next meeting. Next to the regulations and resolutions agreed upon at the general meetings, the *markeboek* was often used for administrative purposes such as the registration of shares or other financial matters.¹⁸

Figure 2: Page of the *markeboek* of Marke Geesteren, Mander and Varsse (Overijssel), started in 1498¹⁹



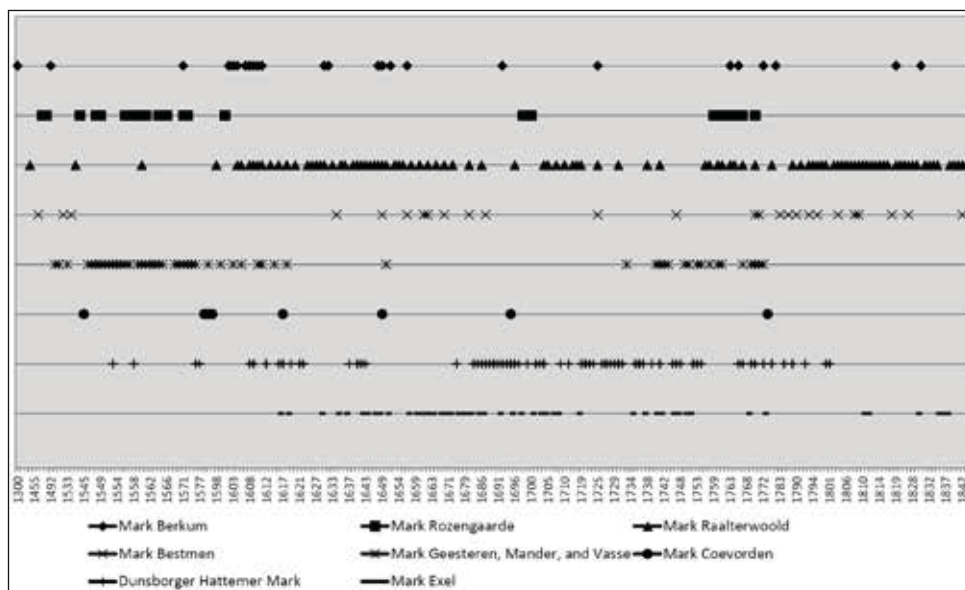
Source: Historisch Centrum Overijssel (HCO), Archief van de marken in de provincie Overijssel, index 0157, inv. nr. 350, Markeboek Geesteren, Mander en Vasse, 1498–1647, composed in 1555 (1498). Photo: Annelies Tukker.

These *markeboeken* are the historical sources on which we have based our analysis for this study (see Appendix 1). We have made a preselection of cases on the basis of the availability of such *markeboeken* and a minimum longevity of the institution of 200 years. Furthermore, we selected only those cases that had, within those two centuries, at least three changes of regulation (at least one at the beginning of that period, one at the end and one somewhere in between). Usually, more than just one rule at a time was changed, and the regulation was often adjusted far more frequently than three times in two centuries, as is illustrated in Figure 3. The list of years in which the regulation was changed in Appendix 2 also demonstrates this very clearly. This in itself already demonstrates a high degree of ‘dynamism’ of these regulations, but we will come up with more sophisticated ways to evaluate ‘dynamism’ further on in this article.

Fortunately, the historical archives offer us plenty of choice for multiple case studies, but due to the very high labour intensity of entering data from these *markeboeken* into databases and analysing their regulation, we selected only eight cases. In all but one of the cases, the origins of the common as an institution date back to at least the middle of the sixteenth century; none of them was dissolved earlier than 1847. All of these cases thus managed to survive for at least 236 years, with an absolute record for the Marke Berkum, which has a documented existence of nearly 700 years. Markedly, the two cases with the shortest (though still considerable) life spans in our selection, the Dunsborger Hattermer Marke and the Marke Exel, had the most frequent changes during their life spans when looking at the ratio between the number of occasions when regulation was changed and the total number of years of existence.²⁰ On the whole, shorter-lasting commons such as the Dunsborger Hattermer Marke or Marke Exel adjusted their regulation less frequently than longer-lasting commons like Marke

Berkum. The latter had to change the regulation on average every nineteen years (see Table 1) and when they did so, they changed relatively few rules. Shorter-lasting commons changed their regulation less frequently and changed many rules every time they did so. Important to note is that changing the regulation required convoking and holding a general meeting, with all the commoners in attendance, hence creating a substantial amount of administration and thus also expenditure for both the individuals attending and for the group as a whole, which would have to carry the cost of administration. The graph shown in Figure 3 allows us to visually inspect the moments of rule-change throughout the life of the respective cases discussed here. It shows that each common apparently followed its own strategy: Some, like Marke Raalterwoold, had continuous changes in their regulation, whereas others, like Marke Coevorden, had very concentrated moments of rule-change. To some extent, this can also have been influenced by the amount of available sources, as there are more continuous sources left for some cases than for others.²¹ However, the graph demonstrates that commons in a very similar area – all commons are located within a radius of 40 kilometres from their virtual centre point – were not influenced by external factors in the same way, or at least did not all respond (i.e. by adapting their rules) to specific external factors in a similar fashion. Continuity and constant adaptation to changing circumstances were clearly far more important than ad hoc responses to external shocks or crises.

Figure 3: Years in which new rules were introduced or old rules repeated or adjusted



Source: see Appendix 1.

The rules and sanctions for the commons in our case studies were all designed by the commoners or their representatives. Representation was a common practice, as it would have been nearly impossible for all members to be directly involved in designing rules and sanctions, especially in large commons with many members. While new rules and sanctions generally

had to be ratified by the assembly of the *marke* at a general meeting, the day-to-day management of the common was typically entrusted to a small group of representatives ('commissioned members, together with the chairman of the assembly'). Members with shares (and sometimes also owners of partial shares) generally had the right to speak and to vote at the meetings of the *marke* and were obliged to attend the meeting or send a representative, at the risk of being fined if absent without a proper reason or without sending a representative. In Marke Raalterwoold, for instance, any landlord who failed to attend the meeting without excusing himself would, temporarily, lose his vote and be fined one *heren pond* – equal to one guilder.²² Furthermore, to verify that all the members with shares knew that a meeting was being held, other members, often their tenants, or appointed officials were obliged to inform them. In Marke Geesteren, Mander and Vasse the tenant farmer from Mander was required to inform all hereditary shareholders of a pending meeting, and he would have to get their signatures and present them at the meeting to prove that all hereditary members were notified.²³ To ensure that all members were familiar with the regulations too, members without shares – or representatives chosen from their midst – were usually required to attend the meeting as well. For instance, in Marke Rozengarde the neighbours were obliged to attend the meeting, or if they had a good reason for being absent they could send a replacement; otherwise they would be fined two *heren pond* (two guilders).²⁴ Decisions made at the meeting were usually announced after the meeting, most often in church, and sometimes repeated several consecutive weeks thereafter in order to ensure that no one could claim being unaware about the changed regulations. For instance, in 1609 in the Dunsborger Hattermer Marke a publication was presented at church about a new regulation for impounding all pigs that would cause damage to the common in order to prevent any person from being able to claim ignorance of this rule.²⁵ So, the commoners set the rules and sanctions that they had to obey themselves, and ensured that all persons to whom these rules and sanctions applied were familiar with the rules or changes in them. And this may have been vital in circulating knowledge about the state of the common and the related measures taken and communicated by the representatives at the meetings. The explicit demand to attend these meetings is a clear sign that participation was not just a right but considered a duty for all claiming rights on the common.

For the years that *markeboeken* or their equivalent have been preserved, the rules mentioned within these sources were not necessarily new ones. In some cases the books were copied because older versions had become unreadable, but usually this was also used as an opportunity to actually change or adjust some rules to new circumstances. Whether or not rules were mentioned for the first time, repeated or adjusted, has been included in our database (and will be analysed later in this article). Table 1 gives an overview of the life span of each of the cases included in this article. There are a number of other commons that like Marke Berkum also managed to survive into the twentieth century (and in one very exceptional case even to the present day, see below), but these cases are exceptional. Most of the Dutch commons succumbed to the *marke*-laws that were promulgated during the nineteenth century, which is an evolution to be found all over Europe.²⁶ Three legislative measures formed the basis of this 'evening tide' of the *marken*. First, the Royal Decree of 10 May 1810 caused a new financial burden for the *marken*: All land had to be taxed, including the uncultivated – and previously untaxed – parts of the *marke*. An additional incentive was the exemption from taxation for newly reclaimed land. However, the status of self-govern-

ance of the *marken* remained intact: It was up to the assemblies of the *marken* themselves to decide whether or not to divide the common and uncultivated lands of the *marke*. As the stock taking performed by Hendrik B. Demoed shows, this initial decree seems to have had little effect.²⁷ The contents of the regulations and resolutions of the assemblies of the *marken*, however, provide more nuance to these figures: Although the number of complete and final dissolutions of *marken* remained relatively low between 1819 and 1839, the *markeboeken* reveal the increasing concerns of the members of the *marke* about the financial status of the *marke*, often resulting in the decision to sell parts of the common in order to try to resolve at least part of the debts owed by the *marke*. The 1810 law had driven many commons that had previously not been taxed into debts, leaving no other option than to sell the common land to cover those debts.²⁸

As with the other *marken*, Raalterwoold too was subject to the legislation of 1810 that sought to divide the uncultivated lands. In 1825, the chairman of the assembly of the *marke*, together with some commissioned members of the assembly, refused to accept a proposal by some beneficiaries to implement the division as suggested by the Royal Decree of 1810. Their main argument was that most of the uncultivated lands had already been developed or had been used for the construction of roads and so forth; division of the remaining lands among the owners of shares would result in less than half a hectare (*bunder*) per share, an amount they considered as being ‘never a reasonable compensation for the [loss of] existing rights of mowing and grazing.’²⁹ The tax burden on the *marke*, however, increased year after year, causing mounting deficits to a level at which they could no longer – as had been customary practice – be resolved by the tax collector of the *marke* by paying this out of his own resources. After several pieces of land had already been sold to resolve the debts of the *marke*, it was decided in 1841 to sell most of the remaining uncultivated land. Only a small area would still remain to be used for common pasture, but this use was also terminated in 1843 and thus the nearly 400-year-old common of Raalterwoold came to an end.³⁰

Second, the Royal Decree of 24 June 1837 brought the legislation of 1810 to the attention of the *marken* once more; the third measure, the Law of 1840 corresponding with the Royal Decree of 1837, implying the final implementation of tax exemption for reclaimed land that was formerly common and uncultivated, may have been decisive for most *marken* in their decision to divide and sell the remainder of the common land the *marke* owned, resulting in the final dissolution of the majority of the *marken* between 1840 and 1859.³¹ Most of our cases ceased to exist in the course of the nineteenth century.

Although almost all *marken* had disappeared at the end of the nineteenth century, some – like the Marke Berkum – still survived, either de jure or de facto. An extraordinary example of survival is shown by the common Wijkerzand: Up to this day, this common is in use as such. Those who ‘emit smoke from a chimney at Wijk’ still enjoy the right of common pasture; in practice, this means that the revenues of the letting out of this right of pasture are collected and distributed evenly among the commoners of Wijk.³²

The fact that most of the commons in the Netherlands and all but one in our selection eventually succumbed to the national *marke*-laws does complicate our discussion about the relationship between rule-making and longevity. If these commoners had not experienced the pressure to dissolve, would they have carried on in the way that they had been for centuries? Could the dissolution of the *marken* also be a consequence of institutional malfunctioning? Would they, if the national laws on *marken* had not come about, have continued to exist and

have proven to be resilient? This remains, with the current state of the debate, a tricky question. In this article, we will not address that question as such, but start from the premise that a life span of several hundreds of years deserves an explanation. In the end, examples such as Marke Berkum or Marke Rozengarde could already have ceased to exist after 200 years, but they did not and managed to survive crises and shocks. The weakness of our dataset rests in a bias towards successful examples, as archival information from cases with a shorter life span that had already disappeared before the nineteenth century is extremely rare. With our analysis we try to find out what characterises long-enduring institutions in terms of types of regulation and sanctions, as a way to understand how a dynamic institution deals with external change. In this sense, the comparison between the very long-lasting institutions such as Marke Berkum with the medium-long-lived institutions such as the Marken Raalterwold and Bestmen is as important as the comparison with the shorter-lived ones such as Exel. In general, one can say that although the national legislation of 1810 and later additions were not directly – e. g. through usurpation or forced privatisation – responsible for the dissolution of these commons, the change in tax regime they involved made survival in the ‘traditional’ way impossible, although some of the commons did survive, as in the case of the Marke Berkum: After the sale of the major part of the uncultivated lands, it appeared that some of the land that had still belonged to the Marke Berkum remained undivided, which was then sold in the course of the second half of the nineteenth century and also in the twentieth century. The money earned by this sale of land was invested, and the revenues of these investments went to the *marke*. In 1994, the formal decision was taken to terminate the *marke* as an institution after nearly 700 years of existence.³³

With this background information in mind, we can make some basic comparisons between the cases and their longevity. The row entitled ‘occasions of change’ in Table 1 refers to the number of years for which we have included regulation (for the exact years for which we have found regulation for each case: see Appendix 2). Please note, however, that ‘occasions of change’ refers to the number of moments or occasions the commoners had the opportunity to change the regulation – i. e. at general or at emergency meetings – but does not automatically imply that rules were changed at every meeting; although in most cases meetings resulted in one or multiple adjustments, some meetings may have resulted in only new rules (first mentions), rules mentioned only once (single mentions), repetition of rules already in force, and/or annulation of rules. Some of the cases altered their regulation very frequently, such as the Dunsborger Hattemer Marke, for which we found 70 occasions of change within its life span of almost three centuries. In all tables in this article in which data are presented per case study, the sequence of the cases is from longest-lasting to shortest.

Table 1: Years of origin and dissolution in decreasing order of years of existence

	Marke Berkum	Marke Rozengaarde	Marke Raalterwoold	Marke Bestmen	Marke Geesteren, Mander and Vasse	Marke Coevorden	Dunsborger Hattermer Marke	Marke Exel
Year of origin	1300	1417	1445	1458	1498	1545	1553	1616
Year of dissolution	1995	1859	1840	1853	1847	1860	c.1850	1852
Years of existence	695	442	395	395	349	315	297	236
Occasions of change	25	30	109	31	73	9	74	46
Average years between regulation changes	28	15	4	13	5	35	4	5
Individual rules in total	220	264	751	156	334	211	246	371
Average number of rules per occasion of change	9	9	7	5	5	23	3	8
Individual rules without repetition of rules	212	248	614	138	297	191	219	268
Average number per occasion excl. repetition	8	8	6	4	4	21	3	6

Source: see Appendix 1.

Although commoners designed their own regulation, without the interference of the local or higher authorities and without the consultation of commoners from other commons, we do see some remarkable similarities in the way commoners divided their attention in terms of institutional design. We come to this conclusion on the basis of the figures in Table 2, but starting from the premise that both rule-making and sanctioning are costly affairs, in particular if rules need to be discussed and agreed upon by a whole group. We therefore approach the complete body of rules to be found per common as the ‘total effort’ a group of commoners was prepared to spend on rule-making (or designing sanctions, see below) and the implementation of those rules (and sanctions). So far, there are no other adequate methods available to understand the process of institutional design, hence we propose to analyse this effort on a fairly simple basis: by calculating the percentages of rules that were devoted to a particular objective, as part of the total body of rules designed for the whole life span of the common.

Although the commons were all situated in the same area, it is unlikely that commoners from different commons discussed this matter among themselves. Still, they seem to have shared a similar manner of handling commons issues. It is striking how consistent the distribution of the rules over the goals was (Table 2): On average, nearly half of the rules applied to issues of use, while less than five per cent dealt with regulating access. The rest of the rules

concerned management and quite a substantial part, almost 35 per cent, were related to governance. Each case did vary, with some – such as the Marke Coevorden – spending an exceptionally large part of the ‘regulatory effort’ (eight per cent) on distinguishing insiders from outsiders and a bit less on use. But on the whole, the picture of the distribution of types of rules is rather similar.

Table 2: Rules per type divided according to their content (access, use, management, governance structure) per *marke*, in percentages of total number of rules (N=2,553)

Type of rule	Berkum	Rozengaarde	Raalterwoold	Bestmen	Geesteren, Mander and Vasse	Coevorden	Dunsborger Hattemer Marke	Exel	Average	Total N
Access	3	1	7	2	1	9	5	2	4	104
Use	40	35	43	58	39	46	52	54	45	1,152
Management	17	25	19	8	18	16	17	10	17	432
Governance	41	39	31	31	41	29	26	35	34	865

Source: see Appendix 1.

This analysis of the problems that the rules were supposed to regulate suggests that access to the common was neither a major issue nor was it on the whole a matter that required much attention. Apparently, the use by those who had gained access required far more scrutiny from the rule makers. That most of the attention had to be paid to commoners, and not to potential non-entitled users, also becomes clear on the basis of the subdivision per main category of party that was addressed in each rule. On average, 83 per cent of all rules specified what the common's own members could (not) or should (not) do. Contained within this percentage are an average of 40 per cent of rules set up in which a specific subtype of member was referred to, and an average of 36 per cent of these rules for members pertained to officials. No distinction was made between members and non-members in twelve per cent of all cases. Only a very small percentage – on average four per cent – of the rules dealt with non-members (see also Appendix 2). When comparing the distribution of types of rules over the cases, there are no real marked differences, except for a larger percentage of the rules about the rights (or the lack thereof) of non-members.

Designing sanctions

Introduction

The possibility of creating sanctions was vital – both in the preventive and in the remedial sense – to assure compliance with the rules, and our sources demonstrate that the commoners were well aware of this. In each of the commons in our database, throughout the period we studied, officials were appointed from among the members in order to monitor the usage of the common's resources and to sanction misbehaviour whenever needed.³⁴ They were obliged to keep a close watch on the common to ensure that all rules were executed properly, and in doing this they performed regular inspections. The most common types of monitors were the cattle pounders (*schutters*), the sworn members (*gezworenen, swaeren*) and commissioned members (*gecommitteerde leden*). Strictly speaking, impounding animals was the main task of cattle pounders. Sworn members were mainly involved in inspections, and commissioned members generally executed ad hoc tasks for the common or tasks that required a more formal representation of the assembly of the *marke*. The tasks these specific types of officers fulfilled varied per common, and over time their functions became more extensive, eventually leading to an overlap of their tasks with those originally performed by other officials. In almost all of our case studies the officials received some compensation for their efforts, which was usually part of the proceeds of sanctions.³⁵ In particular towards the end of the period studied (in the eighteenth century), officials were paid wages for monitoring.

Monitors were appointed or elected at the meeting, often on a rotational basis. In four out of the eight cases, accepting the task as a monitor was compulsory, and refusing this task would be punished one way or another. For instance, in Marke Rozengarde a person refusing an appointment as sworn member would be fined three *heren pond* (three guilders), and he would be obliged to accept the appointment in the following year.³⁶ The appointed officials were also obliged to perform their task properly, again at the risk of being fined. In Marke Exel, for instance, the cattle pounders were obliged to sanction all offences without connivance, or they would be fined themselves, having to pay (the value of) half a barrel of beer.³⁷ Offences committed by officials were punished more severely than those committed by ordinary commoners.³⁸ But monitoring was not only the task of those appointed as monitors. In all of our case studies, members that had not been appointed as officers were also required to assist in the monitoring, in the form of social control. Commoners were liable for allowing (or not preventing) other persons to commit offences or for actively participating in the crime. For instance, in Marke Bestmen, landlords and tenants who kept sheep on the common belonging to a person from outside the common were fined four *kromstaart* (twelve guilders) for every sheep.³⁹ In all but one of our cases, the person reporting the offence received part of the proceeds of the sanction as an incentive to participate in controlling the use of the common's resources.

The actual execution of the punishment was left up to the persons appointed to monitor the common. They generally fined offenders and impounded and confiscated animals or resources stolen from the common (see below). The chairman of the assembly generally only got involved in executing the sanctions when assets were confiscated or destroyed. Commoners – often also involved in executing sanctions – were allowed to shut in animals and remove illegal constructions from the common.

Frequency of sanctioning

Not all types of regulation that were mentioned in the *markeboeken* needed sanctioning. About eleven per cent of all rules were general rules and appointments. A sanction was rarely attached to these types of rules – in less than five per cent of all cases. Especially rules on administration, financial matters and the management system – which make up almost a third of all rules recorded – were often not sanctioned. This is not surprising, as these rules often specified tasks to be performed and procedures to be followed. On average, 56 per cent of the rules were not accompanied by a sanction, but this varied quite substantially per common. The picture that emerges when comparing the number of sanctioned with non-sanctioned rules is most interesting: There seems to be a relationship between longevity and sanctioning. On the whole, the commons that survived longest had far more rules that were not accompanied by a sanction than those that survived a shorter period of time. Only one third of the rules in Berkum were accompanied by a sanction, whereas the commoners of Exel came up with a sanction for more than half of their rules. This seems to be a trend across other cases as well, although there are some exceptions to this rule.

Table 3: Percentage of rules accompanied by a sanction

	Non-sanctioned	Sanctioned	Total N
Berkum	68	32	220
Rozengarde	65	35	264
Raalterwoold	63	37	751
Bestmen	44	56	156
Geesteren, Mander and Vasse	68	32	334
Coevorden	53	47	211
Dunsborger Hattemer Marke	46	54	246
Exel	43	57	371
Total	56	44	2,553

Source: see Appendix 1.

Apparently, more sanctioning was not considered – at least by the commoners – as a way to avoid free-riding per se. If sanctioning was not the prime mover for commoners to behave according to their self-designed rules, how then were the commoners stimulated to follow the rules? In order to find out what really mattered, we start by making a subdivision of the sanctions according to the distinction between sanctions applying to rules concerning access, use, management and governance, and compare the division of sanctions according to these categories per case, to the division of regulation per category per common. Out of all the analysed sanctions, on average almost 80 per cent were related to a rule on the use of the resources. In principle this should not be a surprise, as we already found that more than half of the rules were about use; but the even greater share of the related sanctions indicates

that the rules on use were also the ones most violated, and as Table 4 demonstrates, this was pretty much the same for all the commons.

Table 4: Sanctions per category, in percentages

Type of rule	Berkum	Rozengarde	Raalterwold	Bestmen	Geesteren, Mander and Vasse	Coevorden	Dunsborger Hattemer Marke	Exel	Total
Access	0	2	8	1	1	7	3	1	4
Use	91	66	77	87	76	68	72	85	79
Management	6	15	6	8	15	15	14	6	9
Governance	3	16	8	4	8	10	10	8	8

Source: see Appendix 1.

Table 5: Difference (subdivided between cases) between percentage of rules per category and sanctions per category*

Type of rule	Berkum	Rozengarde	Raalterwold	Bestmen	Geesteren, Mander and Vasse	Coevorden	Dunsborger Hattemer Marke	Exel	Total
Access	-3	1	1	-1	0	-2	-2	-1	0
Use	51	31	34	29	37	22	20	31	32
Management	-11	-10	-13	0	-3	-3	-3	-4	-6
Governance	-38	-23	-23	-27	-33	-18	-16	-27	-26

* This number is obtained by subtracting the percentages in Table 2 (as representation of the effort spent on rule-making) from the figures in Table 4.

Source: see Appendix 1.

However, if we look at Table 5, a clearer pattern emerges. The commoners of the commons on the left-hand side – the ones with the longest life spans – clearly spent a much larger part of their sanctioning efforts on issues dealing with use than commoners of commons that had a shorter life span (on the right). The difference between the percentage of rules and that of sanctions on use was exceptionally large in the case of Berkum. This means that abuse of

resources in Berkum received more attention than in cases like Exel. On the other hand, the longer-lasting commons apparently needed far fewer sanctions related to management and also far fewer related to governance, both in comparison to the percentage of the effort they had spent on 'rule-making'. A tentative conclusion that can be drawn is that a good management system requires the design of fewer sanctions as a means of threat and that successful managers spend most of their effort on regulating and sanctioning the use of the resources.

Dynamics in rule-making

In order to check whether commons were managed dynamically or not, we will take a look at the degree to which rules were adjusted. We designed four categories: some rules were mentioned just once (single mention), while other rules appeared for the first time (first mention), but were subject to change (adjusted rules) or repetition (repeated rules) later on. Although such a distinction between rules has not been made before in studies about rule change, we believe there are good reasons to study the dynamics of institutions in this way, even though the interpretation of our results is still preliminary.

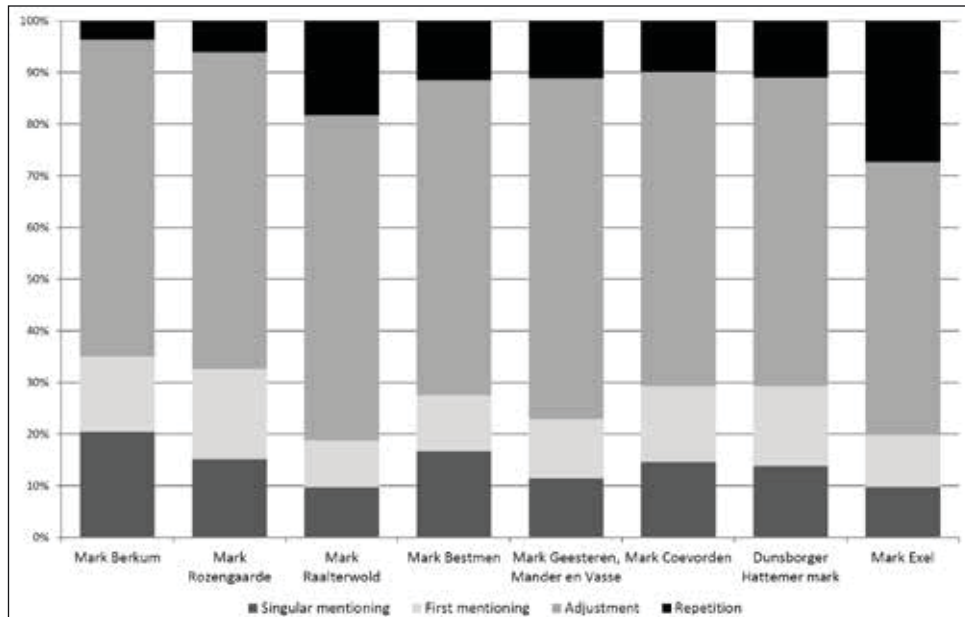
We interpret an adjustment as an indicator that commoners took changes in their environment into account or realised that the sanction that had been set before was not appropriate (either too high or too low). In our view, a repetition indicates that rules were too frequently trespassed and that a warning was necessary; hence the rule was repeated to make sure that everyone was informed about the rule again. Therefore, the repetition of a regulation is an indication of failure in the implementation of the rule, rather than an indication of dynamism.

Adjustment of the rules took up a far larger share of the regulation than repetition. In all types of rules, only about one-tenth of the rules were included as a form of repetition, whereas at least half of the rules (or nearly half) per type were adjustments. This can be interpreted in two ways: It can be considered as a positive sign of the commoners' dynamism; those who frequently adjust their rules are really on top of things, and by adapting the rules to changing circumstances they manage to avoid trouble. A negative interpretation could be that commoners who had to change their rules all the time were incapable of making rules that lasted, rules that were sufficiently flexible to deal with such changes. The question whether the positive or the negative interpretation is in place can be answered if we look at the combination of adaptations with repetitions and with the longevity of the institution.

In order to understand the above results better, we look at the division between single mention, first mention, adjustment and repetition on the level of the case study. Figure 4 gives us some very clear indications on how to consider adjustment and repetition: There was not much variation between the cases as to the effort they spent on adjusting the rules; on average, 61 per cent of the rules were adjustments to previously mentioned rules. However, there is a clear difference in terms of the repetition of rules that was needed. The longer an institution survived, the less its rule-making was devoted to stressing that the regulation had to be respected (through repetition of the rules). Whereas Marke Berkum spent less than five per cent of its total rule-making effort on repeating rules, the rules of the commoners of Marke Exel consisted for about 25 per cent of repeating previous regulation. The overall picture is consistent with the conclusion that the need to repeat rules that were already in place might be a fairly good indicator of the survival potential of an institution. Likewise, the relatively

high number of rules that were mentioned only once in the case of Berkum seems to indicate that ‘experienced commons’ were particularly good at dealing with specific circumstances that might arise during the lifetime of a common.

Figure 4: Sequence of the rules according to case, in percentage of total number of rules per case



Source: see Appendix 1.

Conclusion: commons as a moral institution?

In our article, we have systematically analysed the regulations of eight Dutch commons, known as *markegenootschappen* or *marken*. These *marken* were self-governing: The members regulated and sanctioned their own use of the common, and they ensured that all persons to whom these rules and sanctions applied were familiar with the rules and rule changes. The longevity of our case studies varies significantly: Marke Berkum was active and documented as an institution for almost 700 years, while Marke Exel only functioned for 236 years. Perhaps these commons would have survived if not for the pressure of the *marken*-laws in the nineteenth century. In any case, a life span of several hundreds of years deserves an explanation.

We started from the premise that both rule-making and sanctioning are costly affairs, in particular because the rules needed to be discussed and agreed upon by the whole group of members. Therefore, we approached the complete body of rules found per common as the ‘total effort’ of a group of commoners. We used this concept as a way to link the rules and accompanying sanctions to the longevity of each of the cases.

All commons in our case study made frequent changes to their regulation system, although some more often than others. There was little difference between the cases in terms of the

effort they spent on adjusting the rules – on average, 61 per cent of the rules were adjustments to previously mentioned rules. This and the continuous effort to adjust their rules most of the cases demonstrated show that all cases were essentially ‘dynamic’. But still, their longevity varied substantially. This can be explained by several factors.

First of all, it appears that sanctioning was not a decisive factor in the longevity of these commons. Rather the contrary seemed to be true: The longer-lasting cases had a lesser need to come up with sanctions for their rules. Secondly, it seems that most of the rule-making efforts went into designing the governance structure of the institution well. This also links nicely to the earlier-made conclusion that longer-lasting institutions made changes to their regulation more frequently, but changed fewer rules per occasion. There is also a clear difference in terms of the repetition of the rules that was required: Longer-lasting institutions needed to repeat less, instead concentrating on adjusting the rules.

Taking all these analysis results together, one might tentatively claim in general terms that the secret of a long-lived institution seems to lie in ensuring that people meet frequently so that they internalise new rules and adjustments easily rather than threatening people with sanctions. Whenever commoners wanted to change the rules, they had to convene and approve of the changes. If this is done frequently, commoners will also be more frequently confronted with their moral duty to behave well towards others than if they meet only once in a while. We thus assume that high levels of participation consequently may have been more important for the longevity of the institution than sanctioning.

Appendix 1: Sources

Archival sources:

Drents Archief [Archives of the province of Drente] (DA), Archief van stad en heerlijkheid Coevorden [Archives of the City and seigniorship of Coevorden], toegang 0116: inv. nr. 1047, Willekeur van drost en stadsbestuur op het gebruik van de gemene weide [Byelaw, issued by bailiff and city council regarding the use of the common pasture], 1545; inv. nr. 1048, Willekeur van drost en stadsbestuur waarbij de in 1545 vastgestelde willekeur op het gebruik van de gemene weide wordt bevestigd en het burgergeld van Coevorden verhoogd [Byelaw, issued by the bailiff and the city council, confirming the byelaw regarding the use of the common pasture of 1545 and raising the *burgergeld* (tax paid by residents) of Coevorden]; inv. nr. 1049, Willekeur van drost en stadsbestuur op afbraak en herbouw van behuizingen, het hakken van telgen uit het Broeck en het gebruik van de gemene weide [Byelaw, issued by the bailiff and the city council regarding the demolition and rebuilding of houses, the cutting of sprouts in the area called Broeck and the use of the common pasture]; inv. nr. 1050, Overeenkomst tussen de drost en het stadsbestuur over de regeling van stads- en markezaken [Agreement between the bailiff and the city council regarding the arrangement of issues concerning the city and the *marke*]; inv. nr. 1051, Verordening van drost en stadsbestuur op het gebruik van de marke, de rechtspraak, het burgerrecht en de bevoegdheden van bestuursorganen, 1586; afschrift, 1617 [Ordination, issued by the bailiff and the city council regarding the use of the *marke*, jurisdiction, the right to be a citizen, and the competences of administrative organisations]; inv. nr. 1052, Willekeur van het stadsbestuur op het gebruik van de gemene weiden, 1617 [Byelaw, issued by the city council regarding the use of common pastures]; inv. nr. 1053, Willekeur van de geza-

menlijke eigenaren van de Saetvenen op de afwatering van hun landerijen, met goedkeuring door het stadsbestuur [Byelaw, issued by the common owners of the Saetvenen, regarding the drainage of their farmlands, approved by the city council]; inv. nr. 1054, Besluit van het stadsbestuur waarbij vastgesteld wordt wat de individuele weiderechten van de rechthebbenden op de Coevorder Mars behelzen [Decision by the city council, establishing the individual rights of pasture of those having use rights on the Coevorder Mars]; inv. nr. 1055, Willekeur van de eigenaren van de Coevorder Loo waarbij bepaald wordt dat op de Loo geen schapen, varkens en ganzen geweid mogen worden, 1695; afschrift met nieuwe ondertekeningen, 1773 [Byelaw, issued by the owners of the Coevorder Loo, stating that on the Loo no sheep, pigs, and geese are allowed to be grazed, 1695; excerpt with additional signatures, 1773]; inv. nr. 1056, Willekeur van de eigenaren van de Coevorder Loo waarbij het jaarlijks toezicht op de sloten, veldscheidingen enz. geregeld wordt [Byelaw, issued by the owners of the Coevorder Loo, arranging the annual inspection of ditches, fences, etc.]; inv. nr. 1057, Verklaring van het stadsbestuur, zich uitsprekend voor toepassing van de willekeur van 1778 op het gebruik van de Coevorder Mars [Declaration of the city council, in which the council expresses its support for the execution of the byelaw of 1778 regarding the use of the Coevorder Mars].

Historisch Centrum Overijssel [Centre for History of province of Overijssel] (HCO), Stadsarchief van Zwolle 1230–1813, deel III [Archive of the City of Zwolle 1230–1813, part III], index 700C: inv. nr. 12599, Markeboek met willekeuren van Berkum 1300–1611; inv. nr. 12603, Resoluties van de markegenoten van Berkum 1722–1777.

HCO, Archief van de marken in de provincie Overijssel [Archive of the marks within the province of Overijssel], index 0157: inv. nr. 148, Markeboek Berkum, 1300–1656; inv. nr. 149, Markeboek Berkum, 1819–1865; inv. nr. 157, Markeboek Besthmen, 1458–1748; inv. nr. 158, Markeboek Besthmen, 1841–1852; inv. nr. 159, Markeboek Besthmen, 1458–1840; inv. nr. 350, Markeboek Geesteren, Mander en Vasse, 1498–1647; inv. nr. 353, Markeboek Geesteren, Mander en Vasse, 1649–1772; inv. nr. 1109, Markeboek Rozengarde 1417–1509; inv. nr. 1110, Markeboek Rozengarde 1417–1572; inv. nr. 1111, Markeboek Rozengarde 1480–1572; inv. nr. 1112, Markeboek Rozengarde 1608–1704; inv. nr. 1113, Markeboek Rozengarde 1693–1766; inv. nr. 1114, Markeboek Rozengarde 1767–1808; inv. nr. 1115, Markeboek Rozengarde 1809–1866.

Transcribed sources:

Gerrit Jan Beuzel, Markeboek van de marke Exel 1616–1837, s.l. 1988; Geert Hannink, Het markeboek van de marke Raalterwoold, s.l. 1992 (available online at: <http://grotenhuis.natuurlijk.nl/documents/Markeboek%20van%20Raalterwoold.pdf>, 15. 5. 2015); Albert Menkveld/Jarich Renema, Markeboek van de Dunsborger Hattermer Marke 1553–1810, s.l. 1996; Albert Menkveld/Jarich Renema, Markeboek van de Dunsborger Hattermer Marke 1810–1847, s.l. 1996.

Appendix 2: Features of the eight cases

	Marke Berkum	Marke Rozengaarde	Marke Raalterwoold	Marke Bestmen
Year of origin	1300	1417	1445	1458
Year of dissolution	1995	1859	1840	1853
Evolution & size	<ul style="list-style-type: none"> 1630: lands of Broeck and Ooyte were divided among the owners of 838.5 shares 1653: Berckmerbergen and Nemelevelden as well as the Berckmervelden near Dambrugge were divided among the owners of 390.5 shares 1819: division of Marke Berkum into a southern and a northern part, each to be regarded as an individual entity from the middle of the 19th century up until 1994, some parts still remained as common land 	<ul style="list-style-type: none"> throughout the centuries land from the common has been reclaimed and enclosed; in 1664 and 1764 lists were constructed of reclaimed land that had to be bought from the common in the 18th century the Rode Hart at Ancum was sold in the 15th century the <i>marke</i> contained almost 4,800 ha there were 77 shares in 1417 of which 76 were still known in 1866 	<ul style="list-style-type: none"> between 1445 and 1600, part of the original Marke Raalterwoold was split off and became the Marke Luttenberg; this split-off was not recognised by Marke Raalterwoold until 1722 number of users increased slightly: in the 16th century 53.5 shares for 67 farms, in 1840 55.5 shares for 71 farms 	<ul style="list-style-type: none"> a few individual plots were sold in the late 18th century the <i>marke</i> contained 231 ha at division in 1853 there were 9 shares in 1458 and 9¼ shares at the final division
User types	<ul style="list-style-type: none"> caretaking farmers on behalf of inheritors of Berkum no peasant farmers mentioned! 	<ul style="list-style-type: none"> members of the <i>marke</i> caretaking farmers tenant farmers neighbours 	<ul style="list-style-type: none"> inhabitants of hamlets of Tije, Boethele, Raan, Luttenberg inhabitants of (church) village of Raalle (limited access) owners of farms surrounding common land of Raalterwoold peasant farmers inhabitants of adjacent <i>marken</i> who had obtained <i>paalbuurrecht</i> (customary right of inhabitants of adjacent <i>marken</i> to use part of the <i>marke</i>, if this was essential for taking care of their own animals) 	<ul style="list-style-type: none"> members of the <i>marke</i> landlords caretaking farmers peasant farmers tenant farmers neighbours

	Marke Berkum	Marke Rozengaarde	Marke Raalterwoold	Marke Bestmen
Resource types	<ul style="list-style-type: none"> • hay • arable land 	<ul style="list-style-type: none"> • fossil trees • grass • hay • sods • wood • arable land 	<ul style="list-style-type: none"> • peat & topsoil peat • sods • hay • heath • arable land 	<ul style="list-style-type: none"> • peat • drifting sands • heath • sods • wood • acorns • clay • loam
Rules applying to	<ul style="list-style-type: none"> • everybody or unspecified: 49 (21.8 %) • members: 172 (76.4 %) • non-members: 4 (1.8 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 28 (10.3 %) • members: 238 (87.8 %) • non-members: 5 (1.8 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 115 (14.9 %) • members: 609 (78.8 %) • non-members: 49 (6.3 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 28 (5.4 %) • members: 153 (91.6 %) • non-members: 5 (3.5 %)
Sanctions applying to	<ul style="list-style-type: none"> • everybody or unspecified: 39 (54.9 %) • members: 31 (43.7 %) • non-members: 1 (1.4 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 8 (8.7 %) • members: 82 (89.1 %) • non-members: 2 (2.2 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 63 (22.8 %) • members: 166 (60.1 %) • non-members: 47 (17.0 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 4 (4.6 %) • members: 71 (80.7 %) • non-members: 13 (14.81 %)
Animal types	<ul style="list-style-type: none"> • sheep • cows • pigs • geese • horses • fishing rights 	<ul style="list-style-type: none"> • cows • geese • horses • pigs • sheep • ravens 	<ul style="list-style-type: none"> • sheep • cows • pigs • geese • horses 	<ul style="list-style-type: none"> • cows • geese • horses • pigs • sheep • bees
Regulations available over years (time spans: regulations available in every year of the period)	<p>1300, 1492, 1571, 1602-04, 1606, 1608-11, 1631-32, 1647, 1649, 1651, 1656, 1692, 1725, 1763, 1766, 1772, 1777, 1819, 1830</p>	<p>1480-81, 1543, 1548-49, 1556-58, 1560-61, 1564-66, 1571-72, 1601, 1698, 1700, 1759-60, 1762-64, 1767</p>	<p>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</p>	<p>1458, 1529, 1537, 1634, 1649, 1656, 1661-62, 1670, 1681, 1687, 1725, 1747, 1770-71, 1783, 1786, 1790, 1793, 1797, 1804, 1808-09, 1817, 1827, 1842</p>

	Marke Geesteren, Mander and Vasse	Marke Coevorden	Dunsborger Hattermer Marke	Marke of Exel
Year of origin	1498	1545	1553	1616
Year of dissolution	1847	1860	1 st half 19 th century	1852
Evolution & size	<ul style="list-style-type: none"> throughout the centuries plots of common land were sold the forest called Werent was cut over the centuries and made place for heath land 1847: division of 883 ha of common land and dividing Geesteren, Mander and Vasse into three separate <i>marken</i> 1851: division of Marke Geesteren, 2,676 ha 1857: division of Marke Mander 1871: division of Marke Vasse, 794 ha 	<ul style="list-style-type: none"> parts of the <i>marke</i> sold in 1509, 1575, 1590 and 1616 an almost final division took place in 1650–51 in which the fen at Steenwijk Moer, the fens south of the Coevorder Saatveenen, Holwart, Grote Loo, Kleine Loo, Matmegeoor, Groenlanden east of Coevorden next to Daler Ossehaar, the undivided fens and marsh next to Schoonebeeker Moer, Weyerswolt and adjacent fen, the Grote Coevorder Mars and the Kleine Scher were divided the Mars (292 ha) was the last part of the common and dissolved in 1860 	<ul style="list-style-type: none"> common of this <i>marke</i> decreased in size during first half of 19th century 	<ul style="list-style-type: none"> remained the same
User types	<ul style="list-style-type: none"> members of the <i>marke</i> assessors landlords tenant farmers peasant farmers neighbours 	<ul style="list-style-type: none"> owners of Solsteden owners Coevorder Forest citizens of Coevorden 	<ul style="list-style-type: none"> members of the <i>marke</i> peasant farmers specific inhabitants of lands of Marke Ruurlo adjacent to <i>marke</i> (under strict conditions and limited in number) caretaking farmers tenant farmers 	<ul style="list-style-type: none"> Lord of Ampsen owners of farms surrounding Ekselse Enk peasant farmers

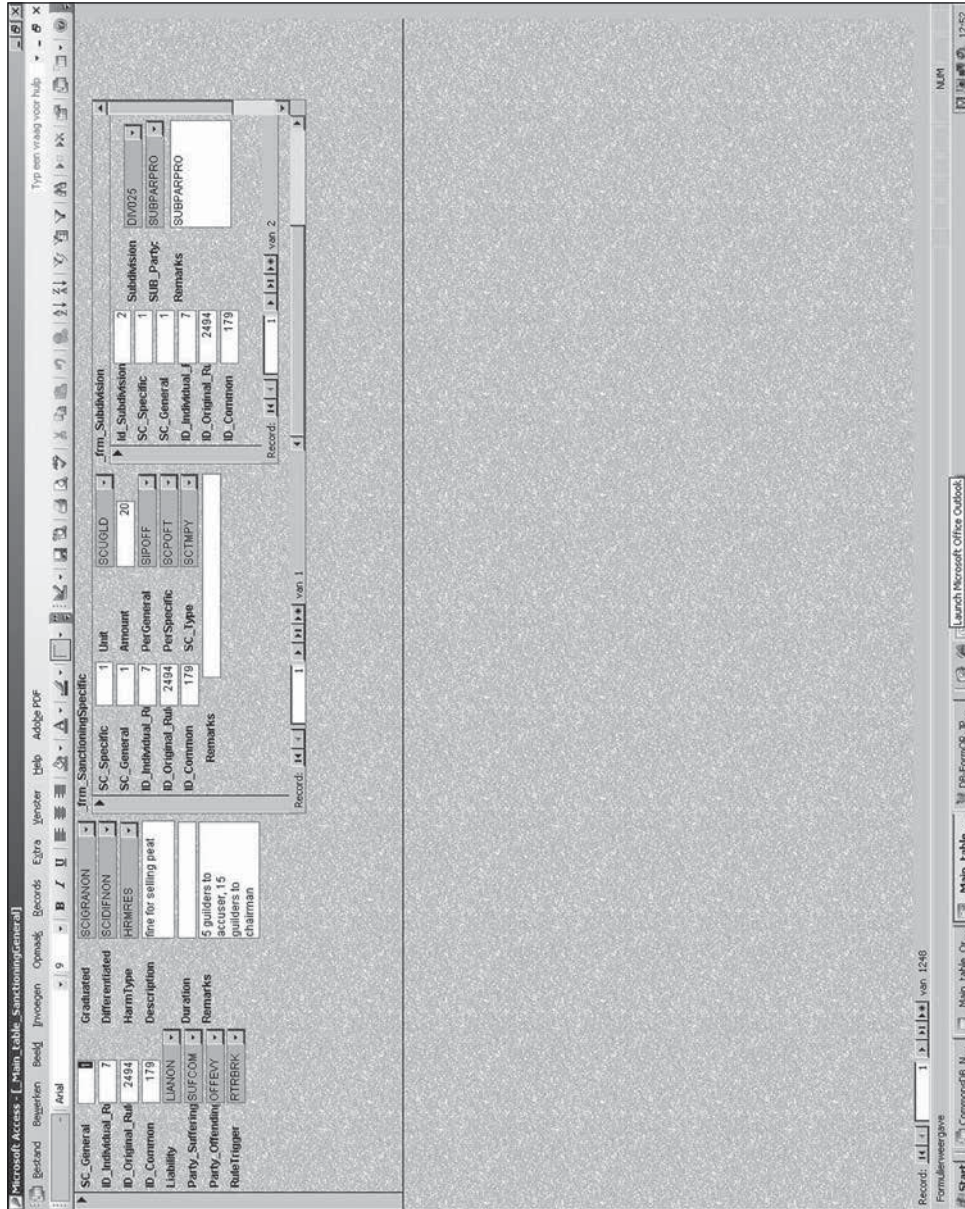
	Marke Geesteren, Mander and Vasse	Marke Coevorden	Dunsborger Hattermer Marke	Marke of Exel
Resource types	<ul style="list-style-type: none"> • peat • grass • hay • heath • sods • wood • arable land 	<ul style="list-style-type: none"> • peat • sods • wood • arable land 	<ul style="list-style-type: none"> • peat • top-peat • drifting sand • sods • bushes • wood • arable land 	<ul style="list-style-type: none"> • peat • sods
Rules applying to	<ul style="list-style-type: none"> • everybody or unspecified: 6 (1.8 %) • members: 320 (94.4 %) • non-members: 13 (3.8 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 32 (14.2 %) • members: 186 (82.3 %) • non-members: 8 (3.5 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 48 (18.4 %) • members: 201 (77.0 %) • non-members: 12 (4.6 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 75 (19.2 %) • members: 308 (79.0 %) • non-members: 7 (1.8 %)
Sanctions applying to	<ul style="list-style-type: none"> • everybody or unspecified: 0 • members: 97 (90.7 %) • non-members: 10 (9.4 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 26 (26.3 %) • members: 70 (70.7 %) • non-members: 3 (3.0 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 33 (24.4 %) • members: 89 (65.9 %) • non-members: 13 (9.6 %) 	<ul style="list-style-type: none"> • everybody or unspecified: 67 (31.9 %) • members: 138 (65.7 %) • non-members: 5 (2.4 %)
Animal types	<ul style="list-style-type: none"> • cows • horses • pigs • sheep • goats 	<ul style="list-style-type: none"> • cows • geese • horses • pigs • sheep 	<ul style="list-style-type: none"> • horses • pigs • sheep • bees 	<ul style="list-style-type: none"> • sheep • cows • pigs • geese • no horses
Regulations available over years (time spans: regulations available in every year of the period)	1498; 1509; 1533; 1546-49; 1551-57; 1559-65; 1569-72; 1574; 1576; 1582; 1600; 1603; 1605; 1610-11; 1615; 1618; 1650; 1733; 1740-42; 1744; 1749; 1751; 1753-54; 1758; 1760-61; 1767; 1769; 1770-72	1545; 1579; 1582; 1586; 1617; 1649; 1695; 1774	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

Screenshot of the database form to enter the rules in their original format and, linked to that, to analyse each individual rule comprised in the original rules

The screenshot displays a Microsoft Access database form titled 'Main_Table_OriginalRules'. The form is organized into several sections:

- Header Fields:** Includes 'ID_Common_New' (179), 'ID_Original_Rule' (2471), 'Date Recorded Orig. Approx.' (5/16/16), and 'Date Referred Orig. Rule' (5/16/16). There are also checkboxes for 'Needs Check?', 'Needs Further Investigation?', 'Assesbroek?', and 'Source Processed?'. A text area for 'Remarks:' is located below these fields.
- Text Transcription:** A large text area for 'Text_Translation_EN' contains a detailed historical record: 'Today, the 2nd of May 1616, the honorable and esteemed Joost Nagel tot Ampsen, being the chairman of the congregation of neighbors, meeting with the assembly of inheritors, having communicated with the other ones, having thus found the amount of 219 guilders and 10 stuivers to be the quorum of this congregation of neighbors to contribute to the construction of the church of the parish, has subsequently decided that some land in the Ekerkamp, stretching in front of the land belonging to Hiddink, will be sold for eternity as inheritable property. This sale has been made and this land has been left to Barbot Schomaecker for the amount of 90 daalders and a lutt of beer, having ordered him (Barbot Schomaecker) to pay this amount.' Below this text are fields for 'Content_Summary', 'Rule_Sequence', 'Rule_Category', 'Rule_Form', 'Party_Category', 'Party_Subcategory', and 'Party_Specific', each with a dropdown menu.
- Sanctioning/General Section:** This section contains expandable sub-sections:
 - SanctioningGeneral:** Fields for 'SC_General' (179), 'ID_Individual_R' (2471), 'ID_Original_Rule' (2471), 'ID_Common' (179), 'Party_Suffering', 'Party_Offending', and 'Rule Trigger'.
 - SanctioningSpecific:** Fields for 'SC_Specific', 'ID_Individual_R', 'ID_Original_Rule', 'ID_Common', and 'Remarks'.
 - Management/Structure:** Fields for 'Res_Technology', 'Res_Intenduse', 'Res_Harvesting_Rom', 'Conditions1', 'Conditions2', and 'Conditions3'.
 - SanctioningSummary:** Fields for 'Res_Amount', 'Res_Unit', 'Res_Location', 'Res_Inno_Start', 'Res_Inno_End', 'Res_Period', 'Management', and 'GovStructure'.
- Footer:** Shows the current record number 'Record: 14' and the table name 'Main_Table_OriginalRules'.

Screenshot of the form (and subforms) used to analyse the sanctions connected to each rule



Appendix 4: Types of rules that were considered as related to access, use, management and governance structure

Category	Individual rules
Access	<p>Regulations specifying who was entitled to use the <i>marke</i>, either implicitly or explicitly excluding all other persons</p> <p>Regulations specifying the conditions for being admitted as entitled user</p> <p>Regulations forcing those not entitled to correct their unjustified use (e.g. the obligation to remove their animals from the lands of the <i>marke</i>)</p> <p>Regulations prohibiting the use of resources by non-members who are using 'strawmen'</p> <p>Regulations prescribing former members to leave the <i>marke</i> or the common land</p> <p>Regulations prohibiting non-members from gaining any profit from resources of the <i>marke</i> (e.g. the prohibition against exporting any resource or selling these resources outside of the <i>marke</i>)</p>
Use	<p>Regulations prohibiting specific use or action to all, regardless of whether one is a member or not</p> <p>Regulations providing specifications on the way to use resources to those entitled to use these resources</p> <p>Regulations prescribing obligations concerning physical action (e.g. maintenance of a drainage system, maintaining fields properly, covering up lands)</p> <p>Regulations granting permission to specified members</p>
Management	<p>Regulations granting general management permissions for the benefit of the members as a whole (e.g. the permission to sell land for the benefit of the <i>marke</i>)</p> <p>Regulations specifying obligations concerning non-physical action (e.g. being present at a meeting, notifying superiors)</p> <p>Regulations regarding financial obligations for members</p> <p>Regulations based on 'higher' regulations, sometimes originating from ancient times (e.g. exemption from taxes for 'havezaten')</p> <p>Regulations about procedures of meetings</p>
Governance structure	<p>Regulations with a direct link to the management structure of the <i>marke</i> (e.g. the frequency of meetings, the way the public was notified of regulations)</p> <p>Regulations determining who should execute sanctions and/or in which way</p> <p>Regulations regarding appointment of officials</p> <p>Regulations specifying the tasks of officials within the <i>marke</i></p> <p>Regulations regarding the authorisation of officials to act on behalf of the <i>marke</i></p>

References

- 1 The research for this article was made possible by funding from the European Research Council under the European Community's Seventh Framework Program (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’ (2010–2014) and by the Netherlands Organisation for Scientific Research (NWO) via the grant ‘Common Rules. The regulation of institutions for managing commons in Europe 1100–1800’ (2011–2014). For more information on both projects, see also: www.collective-action.info (15. 5. 2015). Corresponding author: Tine De Moor (t.demoor@uu.nl). We would also like to thank René van Weeren who was responsible for most of the tedious work that was required to put together the database on which this article is based.
- 2 Nikos Nikiforakis, Punishment and counter-punishment in public good games. Can we really govern ourselves?, in: *Journal of Public Economics* 92 (2008), 91–112; Ernst Fehr/Bettina Rockenbach, Detrimental effects of sanctions on human altruism, in: *Nature* 422 (2003), 137–140; Laetitia B. Mulder et al., Undermining trust and cooperation. The paradox of sanctioning systems in social dilemmas, in: *Journal of Experimental Social Psychology* 42/2 (2006) 147–162.
- 3 Elinor Ostrom, *Governing the commons. The evolution of institutions for collective action*, Cambridge 1990.
- 4 Tine de Moor, Avoiding tragedies. A Flemish common and its commoners under the pressure of social and economic change during the eighteenth century, in: *The Economic History Review* 62/1 (2009), 1–22.
- 5 See Stefan Voight, How (not) to measure institutions, in: *Journal of Institutional Economics* 9/1 (2013), 1–26.
- 6 See e. g. Jane Humphries, Enclosures, common rights and women. The proletarianization of families in the late eighteenth and early nineteenth centuries, in: *Journal of Economic History* 50/1 (1990), 17–42.
- 7 See e. g. Donald N. McCloskey, The enclosure of open fields. Preface to a study of its impact on the efficiency of English agriculture in the eighteenth century, in: *Journal of Economic History* 32/1 (1972), 15–35.
- 8 See, for instance, Geert Hannink, *Het markeboek van de marke Raalterwoold*, s.l. 1992. A complete transcription of this markeboek is available online at: <http://grotenhuis.natuurlijk.nl/documents/Markeboek%20van%20Raalterwoold.pdf> (15. 5. 2015).
- 9 Marco Casari, Emergence of endogenous legal institutions. Property rights and community governance in the Italian Alps, in: *Journal of Economic History* 67/1 (2007), 191–226.
- 10 Ostrom, *Governing the commons*, see note 3.
- 11 Given that the cases dealt with in this article are the subject of a much larger project, for which cases in the United Kingdom and Spain are also analysed in detail, the exercise presented here can be easily copied to other countries.
- 12 Anton Albert Beekman, *Geschiedkundige atlas van Nederland*, 's-Gravenhage 1938; Bernard H. Slicher van Bath, *Bijdragen tot de agrarische geschiedenis*, Antwerpen 1978; Peter Hoppenbrouwers, The use and management of commons in the Netherlands. An overview, in: Martina De Moor/Leigh Shaw-Taylor/Paul Warde (eds.), *The management of common land in north-west Europe, c. 1500–1850*, Turnhout 2002, 88–112.
- 13 Hoppenbrouwers, The use and management of commons, see note 12, 92.
- 14 The Marke Coevorden, one of our case studies, differs a little from this general pattern. The *marke* was originally managed by the representatives of the town, in a similar way as applied to the *meenten*. However, over time regulations came to be designed by an external institution. This *marke* does differ from *meenten*, as the use of the common was not available to all inhabitants, and the members or their representatives were involved in the decisions about the common.
- 15 Details on the variables that were included in the analysis can be found in the codebook that was developed for the purpose of this database: <http://www.collective-action.info> (15. 5. 2015).
- 16 See discussion mentioned by Hoppenbrouwers, The use and management of commons, see note 12, 93.
- 17 M. Paskamp-van Santen, *Mander 797–1997. Een hoogbejaarde boerschap in Noordoost-Twente*, s.l. 1997, 8–32.
- 18 See also: René van Weeren/Tine De Moor, Controlling the commoners: Methods to prevent, detect, and punish free-riding on Dutch commons in the early modern period, in: *Agricultural History Review* 62/2 (2014), 256–277.
- 19 Transcription of the page of the *Markeboek Geesteren, Mander en Vasse* in Figure 2 (abbreviated characters are indicated in italics): ‘[*In de naam van de Vader, de Zoon en de Heilige Geest. Amen*] Eyne markencedule der drijschichtigen marken Manre, Geesteren, Vasse. Anno 1498. In 't jaer Onsses Heeren Gods dusendveerhun-

dertenn XCVIII opten iersten dach naestfolgende Sanct Jansdaege gehieten decolatio, soe is gheraemt van de gheholden eyn gemeyn holling van de buerspraeke in der buerscap Manre, tuisschenn den dreenschichtige marke vurseyt, alzo Manre, Geisteren, unde Vasse, op welcke holling geroepen ende ghekoemen is Roeleeff van Coeverden, holtrichter der vurseyte marckenn mytsgaders den gemeenen erffgenaemen der vurseyte marcke, als Henrick van Boedelzwinghe, lantcommendeurt vann Weestphaelenn unde conmelduer 's huefs toe Otmerssen, die pater ender kelners 's convents van Sybekeloe, die paters unnd procurators van Vrenswewege, die pater unnd procurators van Albergen, die Vrouw van Wersseloe, mytsgaders een deel jufferen, alle in der tijt regeerende, Vincentius, heer tho Bueren, Jacob van Itterssum, castellyen 's chuyses toe Laeghe ennde rentmeister 's landes Twenthe, Arndt van Beverwarde, Alerdt unnde Gijsbert vann Heiden gebroederen, Johan.' [[In the name of the Father, of the Son and of the Holy Spirit. Amen] A warrant on behalf of the threefold mark of Mander, Geesteren, and Vasse. 1498 AD. In the year of Our Lord 1498, on the first day after the day of Decollation of Saint-John Baptist [29 August], the members of the mark entitled to vote had scheduled a general meeting to have a judicial meeting [*buurspraak*] in the hamlet of Mander, between the aforementioned threefold marke, being [the marke of] Mander, Geesteren and Vasse, to which meeting have been summoned and have attended Roeloeff van Coeverden, chairman of the assembly of the aforementioned marke, as well as the common owners of shares of the aforementioned marke [on one side] as well as [on the other hand] Henry of Boedelzwinghe, knight commander of Westphalia and commander of the episcopal court of Ootmarsum, the priest and the treasurers of the convent at Sibculo, the priest and the procurators of the [convent of] Vrenswegen, the priests and the procurators of [the convent at] Albergen, the Lady of [the convent at] Weerselo, as well as some mistresses who were in charge over this period, Vincentius Lord of Buren, Jacob van Itterssum, lord of the manor of Laeghe and land agent of the Twente area, Arndt van Beverwarde, the brothers Alerdt and Gijsbert van Heiden, Johan.] See also, for instance, Hannink, *Het markeboek van de marke Raalterwoold*, see note 8, 1. (1615): 'Geëxtrahiert uth het olde marckenboeck ende vortsz allet genne der marcken voerschreven soe van die Vloetgravens ende anders daerahn appendiert, upt nije gereijstreert durch marckenrichteren in der tijtt, die Edelen Johan van der Beecke ende Unico van Twickelloe, schults tho Raelte, Anno 1615 den 25 May.' [Extracted from the old marckenboeck, and furthermore everything that concerns the aforementioned marke, regarding the drainage ditch called Vloetgraven as well as all other issues, and registered again by the chairmen of the assembly of the marke, the honourable Johan van der Beecke, and Unico van Twickelloe, the bailiff, at Raalte, 25 May 1615.]; *Ibid.*, 5. (1615): 'All dese voerschreven 45 articulen sinnen vergadert, unde bijeine geschreven offte getagen, uth alle der marcken olde zedelen, die men hefft konnen vinden, unde sunderlinge uth die handt bij Zaliger Wijnholt van Mouwickx, dewelcke voerschreven articulen die gemeine erffgenamen up die holtsprike anno 1598 hebben met gemeiner stemmen ingewilliget, datmen die met alle olde marckenzedelen unde resolutiën, in dit nije marckenboeck – vermitz het olde in die lange verwoestede jaren met versterff unde anders, is vercamen – solde stellen unde schreven, dat welcke bij den gemeinen erffgenamen solde worden onderteickent, unde achtervolget, daernha dat sich die marckenrichteren, die geswaren, unde gemeine erffgenamen solden richten unde reguleren. Edoch altijtt tot wille unde koir der guietheren, jaerlicx toe veranderen, toe vermehren unde toe verminderen, tot oeren goetduncken.' [All the 45 above written byelaws have been gathered from all the old documents regarding the marke that could be found, especially those recorded by the late Wijnholt van Mouwickx, of which aforementioned byelaws the commoners at the assembly meeting of 1598 unanimously have approved to incorporate these byelaws, together with the old documents and resolutions regarding the marke, by writing them down in the new markeboek – since the old markeboek has decayed over the past long and devastating years –, which should be signed and obeyed by the commoners, and which will be the base for the chairman of the assembly of the marke, for the sworn members, as well as for the commoners themselves for their judgments and regulations. However, this will always be annually subject to the wishes and the best judgement of those entitled to vote because of their estate, regardless whether this concerns an increase or a decrease of the number of rules.]

- 20 Please note that this, however, does not relate to the number of rules that were changed on each occasion when changes were made.
- 21 For Marke Coevorden no markeboek has survived, but the changes in regulations have been handed down by several lists with regulations.
- 22 Example: Hannink, *Het markeboek van de marke Raalterwoold*, see note 8, 4. (1445): 'Ten 28. Wanneer die marckenrichteren laten kerckenspraeke doen, dat die erffgenamen te samen sullen komen, sall ider meijer dat sijnen lantheren laten weten, bij poena, soe die meijer datt versumede, van een heeren punt. Unde soe die lantheer dan niet en queme, offte sande sinen gewarthen bade niet, offte sich niet leete excusieren, soe verloere hij voerierst sijne stemme, unde verbrockede een heeren puntt, unde sulcken brocke salmen van den meijer

durch die geswarenen affpenden, unde die mijer salt sijnen lantheeren ahn sijne gelt offte saetpacht mogen korten.' [Obligation for each tenant farmer to notify his landlords about any convocation of hereditary members of the marke proclaimed by the chairmen of the assembly of the marke at church; if the tenant farmer fails to do so, he will be fined at one heren pond. If the landlord failed to attend the convocation, nor sent another owner of shares to the marke assembly as a messenger, nor informed the markenrichters about his absence in advance, he will be punished by losing his right to vote as well as by being fined at one heren pond. This fine will be collected by the sworn members from the tenant farmer, who in his turn will be entitled to decrease the amount he has to pay to his landlord (be it in money or in seed/grain) accordingly.]

- 23 Example: HCO, Archief van de marken in de provincie Overijssel, index 0157, inv. nr. 353, Markeboek Geesteren, Mander en Vasse, 1649–1772. (1771): 'Convocatie. Op het aenhoudent versoeck van eenige boermannen der 3 schigtige marktens Geesteren, Vasse en Manderen, aen d'ondergeschreven gedaen om tot wegneeminge van de nog sweevende verschillen in die marktens voornoemt eene algemeene goedsheerenvergadering te willen convoreeren. Soo hebbe om reedenen voorschreven aen haer sulks niet willen verweijgeren en daer toe best geoordeelt, om op den achtende deeser maand april, des morgens om tien uuren op het erve Normende in Geesteren t'samen te koomen. Werdende de gesamentlijke goedsheeren versogt om op tijt en plaets te willen verschijnen. En de meijer te Manderen gelast om deese datelijck aen de goedsheeren te doen bekend maaken. En door onderteeking te doen blijken van recepisse. Actum op den huijze Almelo den 5den april 1771.' (Ondertekening van ontvangers volgt.) [Convocation. Following the repeated requests of some farmers of the three marken to resolve the problems between the three marken, a general meeting of commoners shall be held on 18 April at Geesteren. The tenant farmer of Mander must make this known to all *goedheren*, who should sign after reading the invitation as proof of receiving the information. (Signatures written below.)]
- 24 Example: HCO, Archief van de marken in de provincie Overijssel, index 0157, inv. nr. 1110, Markeboek Rozengarde 1417–1572, 45. (1481): 'Item in den eersten dat die markenrichter mijt die erffg[enamen] alle jaer te samen comen sollen des maendages voor meijdage bij den Rutenberch op den brijnck to x uren vor middage end wie daer nijt en kumpt breket ii heren pont en dat mogen verteren die markenrichter met die genne die daer comen. Des gelijken breken oick die boren die daer nijt en comen meer ijn noetsaeken mach en yegelick enen in sijn stede senden. Ende die noetsaeke sall de genne daarvan des anderen wegen dan comen wordt den marckenrichter seggen en is die noetsake betamelick so sall hie daer mede vri wesen.' [Firstly, the chairman of the assembly of the marke is to gather with the hereditary members every year on the Monday before 1 May at the Ruitenborg at the village green at 10 am, and whoever does not appear will be fined 2 Heren pond, to be used by the chairman of the assembly and the persons present. The same fine will be paid by the neighbours who do not appear at the meeting nor have sent a replacement. The reason for sending a replacement must be told to the chairman of the assembly, and if the chairman approves, he will not be fined.]
- 25 Example: Albert Menkveld/Jarich Renema, Markeboek van de Dunsborger Hattemer Marke 1553–1810, s.l. 1996, 11. (1609): 'Word hier mede ook belastet den schaeters dat alle vee insonderheyt varkens soo wel in den Enk als andere landen te schutten die sij bevinden schade te doen in ander luyden saat en om dat nimant sig mag geexcuseert hebben van enige ignorantie sal dit alles als voornoemt in der kerke gepubliceert worden.' [The cattle pounders are instructed to pen in animals, especially pigs, that destroy part of the crop on the *Enk*, other parts of the common, or private crops. To remove the possibility of claiming ignorance of this rule, it will be announced at the church.]
- 26 Marie-Danielle Démelas/Nadine Vivier (eds.), *Les propriétés collectives face aux attaques libérales (1750–1914)*. Europe occidentale et Amérique latine, Rennes 2003.
- 27 Hendrik B. Demoed, *Mandegoed, schandegoed*. Een historisch-geografische beschouwing van de markeverdelingen in Oost-Nederland in de 19e eeuw, Zutphen 1987, 65, Table 1.
- 28 Van Weeren/De Moor, *Controlling the commoners*, see note 18, 261 f.
- 29 Hannink, *Het markeboek van de marke Raalterwoold*, see note 8, 163.
- 30 *Ibid.*
- 31 Demoed, *Mandegoed, schandegoed*, see note 27, 65, Table 1; cf. Van Weeren/De Moor, *Controlling the commoners*, see note 18, 261 f.
- 32 Hoppenbrouwers, *The use and management of commons*, see note 12, 108 f.
- 33 HCO, Archief Familie Slichterman, met marken Berkum en Streukel en Overijsselsche Kanalisatie Maatschappij: Inleiding (available online at <http://www.historischcentrumoverijssel.nl>, 15. 5. 2015).
- 34 Elsewhere it has been noted that gradually external monitors were appointed, who were paid for their efforts. However, no explicit mention has been found of third parties being appointed. In general, only the names of the appointed monitors were recorded. Therefore, it is possible that some of these persons were external parties;

see Jan Luiten van Zanden, The paradox of the marks. The exploitation of commons in the eastern Netherlands, 1250–1850, in: *Agricultural History Review* 47/2 (1999), 125–144, here 133.

- 35 Only in Marke Berkum no division of the proceeds of sanctions was made in favour of the officials, although the sworn members did receive a wage for inspection. It is not unreasonable to assume that the regulation on the division of sanctions is lost, rather than to assume that monitors did not receive a part of the fine.
- 36 Example: HCO, Archief van de marken in de provincie Overijssel, index 0157, inv. nr. 1110, 46. (1481): 'Item de to swaren gecoren wort ende des nicht doen en wolde breket iii heren pont ende die sall he ter stunt affdoen daer die marckenrichter vnd erffg: des begeren, ende dede hie des nicht so salmen hem des andren dages penden vor iiii heren pont sunder ennighe weer daer tegens tdone ende des naesten jares sall hie die erste wesen.' [Also, he who is chosen to be a sworn member, but refuses to perform this task, will be fined 3 heren pond, and will pay this directly to the chairman of the assembly of the marke, and the hereditary members of the marke. If he does not, he will be fined 4 heren pond the second day, without any resistance possible, and the next year he will be the first to be appointed.]
- 37 Example: Gerrit Jan Beuzel, *Markeboek van de marke Exel 1616–1837*, s.l. 1988, 18. (1662): 'Sijn mede tot schutteren gestelt voor dit jaer Lambert Broeckman, Arent Wilmerinck ende Reijnt Menger, die alle misbruicken sullen sonder conniventie executieren bij poene van een halve tonne biers.' [Also appointed as cattle pounders are Lambert Broeckman, Arent Wilmerinck, and Reijnt Menger, who will sanction all abuse without any connivance, failing to do so will be punished by the payment of half a barrel of beer.]
- 38 Cf. Van Weeren/De Moor, *Controlling the commoners*, see note 18, 273.
- 39 Example: HCO, Archief van de marken in de provincie Overijssel, index 0157, inv. nr. 158, *Markeboek Besthmen*, 1458–1748, 6. (1458): 'Item zo en sal geen landheer jmand van buiten wharen, anders dan sijnen meijer wie hier boven de den, de breeket aen elk schaep iiii kromsteerd, ende des gelijkes ende sullen de meijer ook niets als voorschreven is op sulken breuken.' [No landlord is to grant access to a person from outside the common other than his tenants, or he will be fined 4 *kromsteerd* for every sheep, as will the tenants if they allow a person from outside onto the common, for the same penalty.]