

# Mills and the politics of water management in the NW of the Iberian Peninsula, 900-1050\*

by Álvaro Carvajal Castro, Julio Escalona

This chapter aims to present watermills as a component of local political landscapes and as a proxy to power relations and political interactions within early medieval local communities. Research on various European regions has shown that watermills could be subject to complex property regimes, often characterised by partible ownership and shared use. Through the analysis of the evidence from the north of the Iberian Peninsula, the chapter considers the different resources and infrastructures that mills weaved together, analysing different levels of decision-making on which their management relied, and delving into the local landscapes that they contributed to shape.

Early Middle Ages, ninth-eleventh centuries, Iberian Peninsula, León, Castile, mills, commons, landscapes, local societies.

## Abbreviations

BGD = *Becerro Galicano Digital*

CatAstorga = Cavero Domínguez, Gregoria, and Encarnación Martín López (eds.). *Colección documental de la Catedral de Astorga*. León: Centro de Estudios San Isidoro, 1999.

CatLeón = Ruiz Asencio, José Manuel, Carlos Sáez, and Emilio Sáez (eds.). *Colección documental del archivo de la Catedral de León (775–1230)*. Vols. I-IV. León: Centro de Estudios San Isidoro, 1987.

FV = Gil, Juan (ed.). *Formulae Wisigothicae*, in *Miscellanea Wisigothica*, edited by Juan Gil, 70-112. Sevilla: Universidad de Sevilla, 1972.

FVC = Jordán de Asso, Ignacio, and Miguel De Manuel (eds.). *El fuero viejo de Castilla: Sacado, y comprobado con el exemplar de la misma obra, que existe en la Real Biblioteca de esta Corte, y con otros MSS*. Madrid: Joaquín Ibarra, 1771.

\* Research for this paper has been funded by Project NASD (PID2020-112506GB-C44), funded by MCIN/ AEI /10.13039/501100011033. Álvaro Carvajal Castro is Investigador Ramón y Cajal (RYC2020-030272-I, funded by MCIN/ AEI /10.13039/501100011033).

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Referee List (DOI 10.36253/fup\_referee\_list)

FUP Best Practice in Scholarly Publishing (DOI 10.36253/fup\_best\_practice)

Álvaro Carvajal Castro, Julio Escalona, *Mills and the politics of water management in the NW of the Iberian Peninsula, 900-1050*, © Author(s), CC BY 4.0, DOI 10.36253/979-12-215-0530-6.12, in Iñaki Martín Viso (edited by), *Political landscapes in Late Antiquity and Early Middle Ages: the Iberian Northwest in the Context of Southern Europe*, pp. 225-247, 2024, published by Firenze University Press, ISBN 979-12-215-0530-6, DOI 10.36253/979-12-215-0530-6

LFC = Sánchez, Galo (ed.). *Libro de los Fueros de Castilla*. Barcelona: Universidad de Barcelona, 1924.

LV = Zeumer, Karl (ed.). *Leges Visigothorum (MGH LL nat. Germ. I 1)*. Hannover: Impensis Bibliopolii Hahniani, 1902.

Sahagún = Mínguez Fernández, José M.<sup>a</sup>, and Marta Herrero de la Fuente (eds.). *Colección diplomática del monasterio de Sahagún (857-1300)*. Vols. I-II. León: Centro de Estudios San Isidoro, 1976-88.

SCIbeas = Martínez Díez, Gonzalo. "Colección Diplomática Burgalesa, I: Diplomatario de San Cristóbal de Ibeas." *Boletín de la Institución Fernán González*, 185 (1975): 689-720.

SCSDCovarrubias = Serrano, Luciano (ed.). *Cartulario del Infantado de Covarrubias*. Valladolid: Abadía de Santo Domingo de Silos, 1907.

SMCastañeda = Rodríguez González, Ángel (ed.). *El tumbo del monasterio de San Martín de Castañeda*. León: Centro de Estudios San Isidoro, 1973.

SPCardena = Martínez Díez, Gonzalo (ed.). *Colección documental del monasterio de San Pedro de Cardena*. Burgos: Caja de Ahorros y Monte de Piedad del Círculo Católico de Obreros, 1998.

SSCelanova = Sáez, Emilio, and Carlos Sáez (eds.). *Colección diplomática del Monasterio de Celanova (842-1230)*. 3 vols. Alcalá de Henares: Universidad de Alcalá, 1996-2006.

## 1. Introduction

Early medieval local societies are increasingly seen as complex microcosms composed of households that were unequal in both economic and status terms, and whose internal differences were further complicated by external impacts from peer neighbouring localities and higher status actors.<sup>1</sup> However, there is also a growing recognition that peasant households operated within the unifying background provided by collective action. Collective action played a major structuring role in early medieval local societies as a whole.<sup>2</sup> It brought people together around common concerns and goals, created arenas in which individual and family interests were negotiated, and framed the relationships between local actors and overarching powers.<sup>3</sup> They were central to political practice, which in medieval rural societies, in the words of Luigi Provero, was essentially manifested "in the management of relations between communities and seigneurial powers, but even more so in a system of intra-community relations of land policy, the creation of patronage solidarity [and] the sharing of resources"<sup>4</sup> Political practice was also firmly embedded in the local landscape, as the manipulation of space was itself a major dimension of political agency,<sup>5</sup> and the commons were paramount

<sup>1</sup> For the state-of-the-art in current research on early medieval local societies, see Zeller *et al.*, *Neighbours and strangers*. More specifically, for an overview of recent research on social inequalities in early medieval localities, see Quirós Castillo (ed.), *Social Inequality*.

<sup>2</sup> On collective action in early medieval local societies, see Carvajal Castro *et al.*, "Collective Action". On the weight of the commons in structuring early medieval local societies and territories, see Oosthuizen, "Beyond Hierarchy"; Martín Viso, "Commons."

<sup>3</sup> For a theoretical approach to commons and the display and negotiation of power relations and inequalities, see Cleaver, and de Koning, "Furthering Critical Institutionalism."

<sup>4</sup> Provero, *Le parole dei sudditi*, 1.

<sup>5</sup> On land as the stage of conflict, see Wickham, "Space and Society;" and on the manipulation of landscapes in the course of conflict, see McDonagh, "Making and Breaking Property."

among those politically sensitive locales, although others, such as local places of worship and assembly, were very relevant as well.<sup>6</sup>

This chapter presents watermills as a component of local political landscapes and as a proxy to power relations and political interactions within early medieval local communities.<sup>7</sup> Although classically regarded as a seignorial monopoly since Marc Bloch's ground-breaking study, research on various European regions has shown that watermills could be subject to complex property regimes, often characterised by partible ownership and shared use.<sup>8</sup> As such, they were arenas in which "subaltern people interacted with social superiors on unusual, theoretically equal terms".<sup>9</sup> However, social inequalities had a bearing on the definition of those property and use regimes that still needs to be assessed. In addition, watermills had a significant impact on local landscapes, particularly in potentially conflictive issues such as land-use patterns and water management customs. More than mere technological devices, watermills were polyvalent locales where individual and collective agencies and rights converged. This chapter departs from this premise, and addresses the evidence from the north of the Iberian Peninsula in order to define the contours of mills as spaces of micro-politics.

## *2. Mills in the early medieval charters from the Duero valley*

Watermills were known in the Iberian Peninsula at least from Roman times,<sup>10</sup> and the technology must have remained in use, especially in urban and peri-urban settings, during the Visigothic period, when specific legislation was passed on this subject. In rural contexts, though, in-house milling with quern-stones probably persisted, though the existence of specific locations where more intense milling practices were carried out has also been hypothesised.<sup>11</sup> In the north, the written evidence for mills becomes abundant in the ninth century, coinciding with an increase in the number of surviving

<sup>6</sup> On the relevance of the commons, see, most recently, Martín Viso (ed.), *Pastos, iglesias y tierras*. On places of assembly, specifically from this perspective, see Semple, and Sanmark, "Assembly in North West Europe."

<sup>7</sup> We will not review here the extensive evidence for Al-Andalus, where hydraulic infrastructures were much more developed. For an overview, see Glick, *Islamic and Christian Spain*, 247-94.

<sup>8</sup> Bloch, "Avènement." For a review of the historiography on mills in medieval Europe, see Arnoux, "Les moulins." For the Iberian Peninsula, a comprehensive historiographical review up until the late twentieth century is provided in Martínez Martínez, "Desarrollo historiográfico." On the different social standing of the owners of mills, for the Iberian Peninsula, Italy, France, and Portugal, see Gautier Dalché, "Moulin à eau;" Chiappa Mauri, *I mulini*; Francesco, *La molitura*; Durand, "Les moulins." For England, for a later period, see Holt, *The Mills*, 37-41.

<sup>9</sup> Squatriti, *Water and Society*, 144.

<sup>10</sup> García-León, González-García, and Collado-Espejo, "Documentation and Modelling."

<sup>11</sup> Vigil-Escalera Guirado, "Cinturones, molinos y cosechas," 55-9.

charters. Although hand querns may have still been in use,<sup>12</sup> by that time, the use of watermills had become widespread across the region. This image is reinforced by the evidence from the so-called Visigothic Formulae, the single surviving formulary from the Visigothic period. Only two out of forty-five formulae include lists of appurtenances associated to transferred properties. Both lists comprise landed property, as well as infrastructures such as irrigation canals, but neither mentions mills.<sup>13</sup> By contrast, numerous charters from the tenth-century Iberian North West use the exact same formula of FV-VIII, but they frequently associate mills with irrigation canals and watercourses (see below). All this seems to indicate that, even if the technology was long known, the generalisation of watermills in Iberia took place in the post-Visigothic period. Regrettably, the early stages of this process cannot be traced due to the paucity of eighth- and ninth-century texts and off-site excavations.<sup>14</sup> The charter evidence booms in the tenth century, though, and in the vast majority of cases, by the time they are first mentioned, watermills appear to be already fully operational. In theory, their spread could be a result of overall economic growth, including an increase in cereal production. It could also indicate the rise of social actors who had a greater capability to intensify production and control the distribution of agrarian surplus.<sup>15</sup> What the charters do illuminate in certain detail are the property regimes they were subjected to, as well as the landscapes they were part of.

For this study, we have systematically analysed all published charters – in single parchment and cartulary copies – from the northern half of the Duero plateau that date prior to the reign of Fernando I of León (1038-1065) (see Table 1). The region under study, covering over 50,000 km<sup>2</sup>, comprises the political core of the tenth-century Leonese kingdom and the county of Castile, its eastern appendix, and is relatively homogeneous in terms of topography and climatic conditions.<sup>16</sup> It is covered by the charters of a number of collections, mostly monastic, which are listed in full under the Edited Sources section at the end of this chapter. The territories of Liébana, Asturias de Santillana and Trasmiera were used as a point of comparison with the more mountainous and humid lands to the north of the Cantabrian mountain range.

<sup>12</sup> The continued use of querns is attested in other regions. See Squatriti, *Water and Society*, 128; Holt, *The Mills*, 40-2.

<sup>13</sup> FV-VIII (*Oblatio ecclesiae vel monasterio facta*): *donamus gIoriae uestrae in territorio ill. loco ill. ad integrum, sicuti a nobis nunc usque noscitur fuisse possessum, cum mancipiis nominibus designatis, id est, ill. et ill. cum uxore et filiis, similiter aedificiis, uineis, siluis, pratis, pascuis, paludibus, aquis aquarumque ductibus uel omni iure loci ipsius. FV-XXI (Testamentum): locum illum ad integrum cum mancipiis rusticis et urbanis, terris, uineis, aedificiis, siluis, aquis aquarumque ductibus, hortis, pascuis, paludibus omnique iure loci ipsius.*

<sup>14</sup> Notwithstanding the increasing attention that is currently being paid to off-sites (Quirós Castillo, “The Archaeology of the Off-Sites.”)

<sup>15</sup> Carvajal Castro, *Bajo la máscara*, 111-9; Godoy, “Crecimiento agrario.”

<sup>16</sup> On the political articulation of the tenth-century kingdom of León, see Carvajal Castro, *Bajo la máscara*.

Table 1. Number of charters and references to mills

	León	Castile
Total number of charters (pre-1038)	1987	727
Charters with references to mill	311 (16%)	211 (29%)
N. of references to mills	387	287

The terms most frequently found in the charters are *molinum/molina* and *molendinum/molendina*, which seem to be interchangeable.<sup>17</sup> They are usually associated with water courses and races, so it is safe to assume that they were mostly water mills. The term *molinaria* is also used sporadically but its meaning is uncertain. In most cases, it seems to imply a group of mills.<sup>18</sup> In a few cases, variants of the expression *sedes molinorum* are used to refer to the places where mills were or could be built.<sup>19</sup> Regarding the hydraulic technology, it is likely that the simple and less costly horizontal-wheels predominated, as elsewhere in Europe in this period.<sup>20</sup> A handful of references from León to *acénias* – the Arabic term for vertical mills –<sup>21</sup> suggest that the vertical wheel was known in the area already in the mid-tenth century, but the extent of its use cannot be determined on the basis of the extant sources.<sup>22</sup>

The spatial distribution of charter mentions of mills is remarkably uneven. The majority of the documented mills lay near major rivers, particularly in their middle and lower courses, and most significantly in the peri-urban surroundings of the rising towns of the plateau, most notably León and Bur-

<sup>17</sup> The theoretical difference between *molinum* (mill) and *molendinum* (mill-place), is not apparent in the charters (Álvarez Maurín, *Diplomática asturleonense*, 294-7).

<sup>18</sup> E.g.: *molino de illa molinaria de Sancti Adriani* (CatLeón612, 1002).

<sup>19</sup> The expression has many variants, e.g.: *sesigas molinarum* (CatLeón433, 974); *sedes muline* (CatLeón747, 1017); *solios de molinarias* (CatLeón779, 1021). There is only one detailed description of what one of these *sedes molinorum* could comprise: *sedilia nostra propria de molino cum suo rego et suo aquaducto usque in riulo Uernisica et omne suo intrusigo et solare ubi faciatis una corte* (CatLeón688, 1010). See Pérez González, *Lexicon*, s. v. “sexiga.”

<sup>20</sup> Importantly, technical complexity and differences in building and maintenance costs were only some among the factors that may have determined the choice of one or the other type of mill. Topography, the availability of water, the availability of resources, the goals and the expected demand for milling services and products were others. Cf. Amouric, “De la roue horizontale,” 159-62; Arnoux, “Les moulins,” 700-1; Durand, “Les moulins,” 89-90. For Ireland, Rynne notes the coexistence of both horizontal and vertical mills in early medieval Ireland from an early date, though the number of excavated horizontal mills is significantly larger than that of vertical mills (Rynne, “Waterpower,” 40-4; Rynne, “Mills and Milling”). The existence of tide mills in the north of the Iberian Peninsula has sometimes been suggested. For a critical approach to the evidence from Cantabria, see Martínez Lorenzo, “Molinos de marea.”

<sup>21</sup> Glick, and Kirchner, “Hydraulic Systems.”

<sup>22</sup> The few known instances of *acénias* were in the hands of kings and major monasteries, and most were located near major cities – León, Zamora, and Salamanca. See CatLeón53 (921); CatLeón149 (941); Sahagún132 (951); Sahagún181 (960); SSCelanova90 (951). No such references are found for Castile. See Álvarez Maurín, *Diplomática*, 293; Pérez González, *Lexicon*, s. v. “azenia.”

gos.<sup>23</sup> This may partly show a preference for locations that could guarantee a steadier supply of water, and perhaps facilities for transport – whether through waterways or land roads along watercourses.<sup>24</sup> Nevertheless, watermills also abound in alternative locations, both in the northern mountains and in the plateau, in rural settings and on secondary watercourses. As for the chronological distribution of mentions of mills, it is largely consistent with the overall distribution of preserved charters, so it cannot be interpreted as an indication of changes over time.

Mentions of mills in charters vary much regarding specificity. Firstly, the most incidental ones are those in which mills appear, not as objects directly involved in a transaction, but rather as prominent points in the landscape used as references for locating or delimiting a transferred property. Secondly, most mentions of mills appear in appurtenance clauses, that is, in the lists describing the components of a given estate.<sup>25</sup> Some authors, like Sylvie Caucanas, disregard this information as purely formulaic, while others, like Jean Gautier Dalché, assume that their inclusion was intentional.<sup>26</sup> The fact that mills are only explicitly cited in a fraction of the extant charters with appurtenance clauses is a strong argument in favour of the latter opinion. However formulaic the wording, the scribes referred to actual mills. By contrast, since these appurtenance clauses very often list rights of access to locally shared resources, such as pastures or waters, when they mention mills, it is unclear whether they were exclusively attached to the estates along which they were mentioned, or shared with other co-owners.<sup>27</sup> Thirdly, a significant proportion of mentions occur in the context of transactions in which mills or fractions thereof changed hands. Finally, a small group of mentions relate to disputed mills or conflicts that affected their operation – most notably disputes over of water use. Records of disputes usually provide a wealth of information about the multiplicity of actors, practices, and relationships articulated around mills, and about the landscapes they were part of.

### 3. *Collective ownership and shared use*

The charters from the Duero plateau reveal that watermills could be controlled either exclusively by one actor, or jointly by a number of them.<sup>28</sup> What

<sup>23</sup> Davies, *Water Mills*, 19; González González, “Building Urban Markets,” 34-7; Portass, “Peasants,” 26-32.

<sup>24</sup> The association between mills and roads is noted in Bolòs i Masclans, and Padilla, “Un molí.”

<sup>25</sup> On these clauses and how they may be interpreted, see Zimmermann, “Glose, tautologie ou inventaire?”

<sup>26</sup> Cf. Caucanas. *Moulins*, 17; Gautier Dalché, “Moulin à eau,” 338.

<sup>27</sup> On the rights of use in local commons as reflected in appurtenance clauses, see Larrea, “De la invisibilidad,” 185-93.

<sup>28</sup> As first argued in Gautier Dalché, “Moulin à eau.” See also Álvarez Llopis, “El molino hidráulico,” 671-2; García de Cortázar, “El equipamiento molinar,” 90-1; Peña Bocos, *La atribución*

this control entailed is not fully clear, as two notionally different systems coexisted and sometimes overlapped. On the one hand, many transactions involved either the totality or a fraction of a mill (one half, one third, etc.), apparently meaning portions of ownership. In contrast, other texts seem to record instead the transfer of time-slots for the use of the mill, employing the Latin terms *vices* (Sp. *veces* = turns) or *horas* (hours). Although, on paper, both systems belong to clearly distinct semantic fields, their actual functioning could have been much more ambiguous and overlap in reality.<sup>29</sup>

Two charters from the monastery of San Adrián de Juarros, some 20km south-east from Burgos, shed some light on the complex interplay between ownership and use, and into the nature of the social relationships established around mills. These charters, dated 970 and 971 (SCIbeas1 and SCIbeas2), have been preserved in two late-tenth century copies drafted by the same scribe and stitched together to create a small dossier. From the content it is clear the whole set worked as a single documentary unit in which three parts can be distinguished:

- A charter, dated 971, by which Gonzalo Gudéstioz, at the time lord (*potestas*) in Juarros, sold a third (*tercia*) of a mill to the monks of San Adrián.
- A charter, dated 970, by which Oveco, García, and the latter's daughter, Urraca, sold two turns (*vices*) in that same mill to San Adrián.
- A short note recording all the rights acquired by San Adrián in that mill.

The combination of these three elements reveals a complex pattern. First of all, thanks to the 971 charter, we know that a third of the mill was handed over as such. But then, from the 970 text we learn that the mill was divided up into time slots (*vices*) of a day and a night, based on an eleven-day cycle.<sup>30</sup> Oveco and García had two such turns, which they sold to San Adrián. It is uncertain how many turns corresponded to rights to a third of the mill, which the district's lord could have hypothetically earned as a judicial revenue from its former owner, a certain García Argíscoz. However, the closing annotation illuminates how this mill functioned in practice: "These are the turns (*beces*) of the brethren of San Adrián: nine days and nine nights, and the heirs two days and two nights, and of the latter, four hours, four *maquilas* for the brethren of San Adrián".<sup>31</sup> Thus, in 970 the monks acquired two of the mill's

*social*, 85-98. The accumulation of mills and shares in mills was clearly a means through which lords asserted their control over local societies but this did not go uncontested (Pastor, *Resistencia*, 56-60; Orcástegui Gros, "Notas sobre el moltino"); see also, for a later period, Díaz de Durana Ortíz de Urbina, "Las bases materiales." Moreover, lay owners of non-aristocratic standing could still be found in the central medieval period (Rucquoi, "*Molinos et aceñas*", 115-20; Ruiz, *Sociedad y poder real*, 73-90), and indeed much later on (Zapico Gutierrez, "Inventario").

<sup>29</sup> Some authors actually equate them (Ruiz, *Sociedad y poder real*, 81).

<sup>30</sup> The charter literally says *ad caput de XII dies*, but we should take this to mean that the cycle lasted eleven days and started again on the twelfth. Similarly, weekly cycles are registered as "every eighth day", and bi-weekly cycles as "every fifteenth day".

<sup>31</sup> *Istas sunt beces de fratres de sancti Adriani VIII dies et VIII noctes et de eredes II dies II noctes in istas IIII oras IIII maquilas ad fratres de sancti Adriani* (SCIbeas1). While a rare

eleven shares and in 971 they bought a third of the mill. Given that eleven is indivisible by three, we must understand that García Argüeso's third included a fraction of a turn equivalent to the four hours noted. Other charters prove that *veces* could be subdivided, and there are occasional references to sales and donations of half a turn. As for hours, they could also be transferred independently. In Castile, six charters record the transfer of hours, usually by non-aristocratic actors.<sup>32</sup>

These texts enable us to delve into the complex property regimes that mills were subjected to. First of all, they suggest that differences in the terms used to refer to fractions of rights in a mill (namely shares and turns) do not correspond to separate spheres of property and use, but are rather alternative ways of expressing segments of property. Fractions may have been a way of accounting for a number of turns. That there was no direct correspondence between them could be explained by the fact that it would have varied depending on the number of owners involved in each case, which could further change over time as shares were accumulated or further divided. Also, a turn could be subdivided into hours, for the note says that of the two turns owned by the heirs, four hours belonged to the monks.<sup>33</sup> Finally, and very interestingly, the hours are directly associated with *maquilas*. The term, which became common in later times, refers to the payments made for the use of a mill.<sup>34</sup> In this case, the *maquila* would correspond to the revenue generated by an hour of use. This suggests that the interest lay in the rent paid by those who effectively used the mill, rather than on actual access for use. We may well suspect that this was the same in other cases, but we have not been able to identify further references to *maquilas* or to any equivalent term in the charters from the period here considered.

If this interpretation is correct, it would mean that we cannot really observe the practical arrangements that regulated the use of mills, while it highlights the complexity of property regimes. Even if *veces* refer not to the actual distribution of time of use but to fragmented rights over the rent collected, the case of San Adrián de Juarros, as many others, demonstrates that they

occurrence in the charters from this period, *maquila* is amply documented in later times to refer to the rents paid for milling; see Pérez González, *Lexicon*, s. v. "maquila." See also Peña Bocos, *La atribución social*, 94.

<sup>32</sup> See also BGD382 (a notice of a sale dated 1015 inserted in a list of transfers of 937-1035); BGD523 (a donation dated 951 inserted in a list of 899-1035); SCSDCovarrubias6 (978); SP-Cardena211 (999).

<sup>33</sup> If referring to standard medieval hours, this would translate as one half day, since there were eight hours to a day (one medieval hour corresponding to three hours in the modern 24-hour cycle). A charter from Covarrubias, dated 978, seems to establish a correspondence between turn and hour, though this is exceptional: *et II vineas et una terra et vice in molinu in ribulo de Motua, que dicent de Luusa, in lunis ad lunis I ora [...] et vice in flumen Assazon in mulino qui dicent de Joannes, de VIII ad VIII dies una ora* (SCSDCovarrubias6, 978).

<sup>34</sup> *Maquila* has a broader meaning as a capacity measure for grain, from which it derives its meaning of both the amount of grist or flour charged for the use of the mill and the amount of grain paid as custom to the king for bringing it to the market. On all of this, see Pérez González, *Lexicon*, s. v. "maquila."



were carefully regulated by complicated patterns. The cycles typically span one or two weeks, though different durations are also attested. When cycles were weekly or bi-weekly, sometimes the exact day of the week is specified.<sup>35</sup> In one case, it is even specified that the hour granted was the *tertia*.<sup>36</sup> One of the implications of this is that actors with shares and turns in different mills could have quite complex portfolios. An interesting case in this regard concerns a group of people led by a priest who in 949 granted their churches and their shares in several mills around Pancorbo to the monastery of Santiago de Mardones. This included day and night turns but also smaller fractions estimated in hours:

*Ego Alfonso presbiter, simul cum alios socios Teresa, Oveco, Sesuto, Rodesendo, placuit nobis spontanea voluntate tradimus nos medipsos ad regula Sancti Iacobi apostoli, in manus de Severo abbate de Maurdones, cum nostras hereditates, et ecclesias Sancti Iohanne et Sancta Maria, Sancti Torquati; et in molino de Barrios, de octo in octo dies, die et nocte; et in molino de Conguelas, die et nocte, de X in X dies; in molino de Bascones, una ora de XI in XI dies; et in molino de la Fonte, in XV in XV dies una ora; in molino de la Petra, de XII in XII dies, die et nocte. Et sunt isti in loco qui dicitur Pantecurvo.*<sup>37</sup>

A further question concerns the conditions that all this set for the accumulation of shares and turns in the hands of an actor. Here a regional difference must be noted. In Castile, turns are more frequently recorded – we have identified 56 such cases – than shares, which are rarer. The cases of San Adrián de Juarros and San Millán de Hiniestra, whose community bought two thirds of a mill in 1017,<sup>38</sup> are exceptional in this region. In most transactions (69%), only one turn was transferred, though there are cases in which two, three, four, and six turns changed hands together.<sup>39</sup> Actors aiming to accumulate shifts must have proceeded in a piecemeal fashion, and gaining full control of a whole mill may have been more difficult in Castile, even when shares were transferred. In the case of San Adrián, the portion that the monastery did not control was referred to as “the turns of the co-heirs” (*veces de los herederos*), which suggest that the mill had originally been in the hands

<sup>35</sup> *In Molino Mediano, tertia feria, quando die, quando nocte, de octo in octo diez* (BGD551, 1028).

<sup>36</sup> *et illa tertia ora in illo molino intrinsecus, que est ad noueno die, nocte et die* (SPCardaña211, 999).

<sup>37</sup> BGD544 (949).

<sup>38</sup> BGD382 (a sale made in 1017 inserted in a list of 937x1035). Transfers of halves are recorded in BGD523 (899-1035) and SPCardaña91 (957), though the latter is dubious.

<sup>39</sup> The subdivision and concentration of turns could lead to more complex patterns. In a mill in Oreña (in Asturias de Santillana, outside the area we have considered for our systematic analysis), the monastery of Santa Dorotea de Cigüenza had a turn comprising a day and a night every Thursday, and an additional turn every third and fourth weeks of the months: *molinos cum aqueductilibus suis in ribulo de Orenia, id est in illo mulino quod dicunt Rotariu, de octo in octo diebus, die V feria integrum aut diam aut noctem et in tertia et quarta ebdomada singulos dies aut singulas noctes* (Santillana44, 1031). It is plausible that this complex pattern, which is equivalent to 1.5 turns, resulted from an arrangement made to operationalise a right over a fraction of the mill's property, as we have seen for the case of San Adrián.

of a larger group of actors – perhaps including San Adrián itself – and that it was progressively – and incompletely, as far as we can tell – absorbed by the monastery. Similar groups are attested in other records. For example, in 1012 a total of twenty-one individuals jointly sold their turns in a mill in Villafria to the monastery of Cardeña, for a price of fifty-five silver *solidi*.<sup>40</sup> Similarly, a brief text records the sale of 30 turns in a mill made by four individuals from Arlanzón, who acted together with “their people”.<sup>41</sup> The accumulation of turns in an the hands of an actor could affect the management of the mills and raise tensions among those involved. Thus, in 932, the abbot of San Torcuato, a church near Burgos, disputed the use of the water that fed the mills that he held in common with a large group of co-heirs: *ego Stefanus abba sic abui iudicio cum omnes meos heredes qui sunt heretarios in illos molinos*.<sup>42</sup>

By contrast, in León transfers of shares – usually of halves, thirds, and quarters of a mill when specified – are more abundant.<sup>43</sup> This gives the impression ownership of mills was in general less fragmented than in Castile, and thus that some actors found it easier to situate themselves in a dominant position, or even to control the mills in full. However, a cautionary warning is due, for this observation pertains only to documented mills. Some charters suggest different situations where ownership of some mills could be highly fragmented too. For example, twenty-six people from Villaselán (León) sold their mills to the monastery of Santiago de Valdávida, for which all of them together received thirty *solidi*.<sup>44</sup> In another case, only a twentieth of a mill was transferred.<sup>45</sup> Also, we must bear in mind that in many localities there existed more than one mill, so the effects of fully controlling one should be addressed against a more complex background, depending on the local contexts.

Considering the importance we have placed on the revenues generated by mills, it is necessary to explore their potential impact on the distribution of produce. A suitable point of departure would be a hypothetical scenario where the mill would be a form of commons, controlled by the local community as such. In this case, the categories of ownership and use rights would overlap, and the revenues from the mill would be put to cover community expenses. This situation is not clearly recorded as such in the tenth- to eleventh-century charters from these regions, though it cannot be ruled out for undocumented cases (the transfers recorded in charters should be regarded

<sup>40</sup> SPCardeña217 (1012).

<sup>41</sup> *Nunnu, et Alvaro, et Oveco et Gudemiro de Aslanzone, cum alios nostros homines* (BGD382, 937-1035).

<sup>42</sup> SPCardeña22 (932). The charter records that 23 people attended the trial, and that a countless multitude was also present – though this does not necessarily mean that they were all co-heirs in the mills.

<sup>43</sup> Of the 33 mentions of shares being transferred, 13 refer to halves, 2 to thirds, and 9 to quarters. Many other mentions vaguely refer to shares termed *portiones* or *rationes*, without any further specification.

<sup>44</sup> Sahagún142 (954).

<sup>45</sup> *et in illo molino de osteo, in illo octavo die, in Xa portione, medietate* (CatLeón229, 950).

as a key symptom of alteration of such a scenario). From this departure, we can consider two different situations. In our second scenario, even if the mills belonged notionally to the community, leading local characters could actually control their revenues, which would foster the accumulation of resources in their hands and feed social differentiation within the community. For instance, as we have seen above, in the case of San Adrián de Juarros the mill was likely divided among an uncharacterised group of *heredes*, but a fraction of one third had fallen under the control a person named García Argíscosz who cannot be considered an aristocrat. Likewise, in the mid tenth century, a couple named Iscam and Filauria accumulated plots of land and mill shares in Melgar, very much like García Argíscosz probably did.<sup>46</sup> All over the study region there are traces of this process of concentration of portions of mills in the hands of non-aristocratic elites. The same process of accumulation could also pave the path for external interference, and this would be our third scenario. For example, upon their death, Iscam and Filauria bequeathed their properties to Sahagún, leading to a new situation where part of the mills' resources was diverted from the locality to the benefit of supralocal elites and lords. A process like this – especially under ecclesiastical lordship – might in turn have contributed to levelling the local societies by draining the resources local inequalities were built upon. There are rare examples that illustrate the tension between total community control and lordly interference, such as the case of the inhabitants of two neighbouring Castilian villages who, in 1065, jointly owned two mills (*nos omnes de villa de Urrezti et de Kaprera, de minimo usque ad maximum [...] nostros molinos que abemus in unum*), but by that time the monastery of San Julián de Bezares had already accumulated eight turns in the same mills.<sup>47</sup> Likewise, the Melgar case also shows that numerous mills could coexist under different property regimes within the same locality. All three scenarios could be in play, leading to the emergence of highly complex socio-economic dynamics.<sup>48</sup>

This threefold model does not, of course, exclude other possibilities, like mills that were built from scratch by private individuals, or groups of them, on their own land. The problem with the model, anyway, is that it does not explain why, in the absence of coercion, peasants chose to grind their corn at water mills – at a cost – instead of milling at home, an option that probably remained in use throughout the Middle Ages. Without ruling out coercion at some level, different combined stimuli may have been in operation, such as the time and effort saved and the increasing availability of resources in a context of generalised growth in agrarian production that would have allowed

<sup>46</sup> Sahagún94 (945-54).

<sup>47</sup> SPCardeña314 (1065).

<sup>48</sup> *molinos de Severo; molino quem habeo [Munio] in Ceia, IIIa de eo; Sendredo et Albaro vendimus vobis hic in Melgare de Foracasas in IIIor molinos cum meos heredes; Dolquiti vendo vobis medietate in uno molino hic in Melgare de Foracasas; molinos de fratres* (Sahagún94, 945-54).

peasants to pay such fees.<sup>49</sup> It is a pressing issue for future research to explore the role of rising urban and seigniorial centres in creating the steady demand of flour that would absorb all this produce.

#### 4. Mills, local landscapes, and normative frameworks

Most charter references mention mills in isolation, but not a few show that they were part of more or less complex aggregates of lands, buildings, and water infrastructures that had a significant presence in the local landscape.<sup>50</sup> Mills were sometimes built in association with houses – or endowed with land with the expectation that a house would be built on it – and could even be counted among the appurtenances of *cortes*.<sup>51</sup> They were sometimes explicitly provided with the specific plot where the mill stood – called *sexiga* or variants such as *sesiga*, *segiga*, *sedica*, etc. –<sup>52</sup> as well as other lands, gardens, and orchards, and in many charters they are more generally situated in relation to the different agrarian features that could be found in the floodplains.<sup>53</sup> This fits into the broader picture of partible and communal ownership of the floodplains.<sup>54</sup>

Building and operating a mill involved making decisions about the allocation and management of two fundamental resources, land and water, which

<sup>49</sup> In this regard, changes in milling patterns could be analogous to changes in production and consumption of other marketable products such as pottery and clothes. See Wickham, “How did the feudal economy work?” The standard view that economic growth in the kingdom of León is largely a matter of the eleventh and twelfth centuries (see the recent discussion in Godoy, “Crecimiento agrario”), is in need of revision, as more and more indicators are suggesting growth already in the tenth century.

<sup>50</sup> For a detailed description of the different parts of a water-mill based on written evidence from northern Iberia, albeit from Catalonia, see Bolòs i Masclans, “Els molins,” 195-7. See also, for an overview, Sáenz de Santamaría, *Molinos hidráulicos*, 60-76.

<sup>51</sup> *molinos duos in una casa* (CatLeón658, 1006); *molendino* (sic) *cum suo solare et suo aquaducto et sua presa* (CatLeón640, 1004); *molino cum suo regu et suo aquaducto et ipso solare pro ipsa corte facere* (CatLeón688, 1010); *corte conclusa cum casas ni et suo palumbar et suo molino intrinsecus* (CatAstorga24, 923). A certain Hazan specified that the shares in some mills in Cea that he sold Sahagún comprised the millstones and the houses, together with the plot in which they were built and the millrace (Sahagún65, 937). In León, the term *corte* identifies a compound, usually comprising a house, some surrounding land, and different appurtenant structures including storage facilities (see Pérez González, *Lexicon*, s. v. “corte”).

<sup>52</sup> See Pérez González, *Lexicon*, s. v. “sexiga.”

<sup>53</sup> E.g.: *molinaria pro molino, in flumine Torio et Uernesga [...] in terras, in aquaductic uel reductis, in ortus, in omnia sua fundamenta, quantum uestro molino molino pertinet* (CatLeón95, 932); *per termino de Regollos cum suos sautos el suas orgas usque concludet per illa retorta cum aquis de ille rio et suas molinarias et piscarias* (CatAstorga17, 917); *et in uno molino, duas partes, cum suo aquaducto, et terras ad ipso molino, in illa ueiga* (CatLeón293, 955).

<sup>54</sup> To quote but some examples: *et mea ratione in illa orga quod uobiscum abebam comunem* (CatLeón272, 954); *marginem cum sua ueiga, qui est comune cum Pillote* (CatLeón350, 952-961); *Et ipsum regum qui discurrit ad ortos et linares de Sancta Maria Alba concilio* (CatLeón293, 955). There is at least an instance of a *serna* linked to *molinarias*: *alia serna in rivo Turio cum suas molinarias* (Sahagún290, 977). On *sernas* as commons, see Gómez Gómez, and Martín Viso, “Rationes y decimas.”

affected a variety of actors. Previous studies, on the basis of Visigothic law, have assumed that water was a public good, and that, even in the tenth and eleventh centuries, only public authorities could confer rights over it.<sup>55</sup> However, while grants of water made by kings and counts are indeed attested in other regions, for the most part our charters show lay and ecclesiastical actors exchanging water rights with no reference to those authorities.<sup>56</sup> This does not necessarily mean that at some point the water had been privatised.<sup>57</sup> If anything, it makes it doubtful that Visigothic law can be interpreted as enshrining the public character of waters. Two laws in the Visigothic corpus are most relevant in this regard. One aims to prevent theft of water from canals. The other to ensure that major rivers remain navigable.<sup>58</sup> Thus, if we can speak of any sovereign rights over water at all, they manifested themselves through very specific and limited regulations, rather than by claiming any overarching public authority over waters.

The latter law is particularly interesting. It establishes that in major rivers, dams can only cover half of the river course, leaving the other half free for other uses – if two dams were to be built, one on each side of the river, they should be placed one after the other.<sup>59</sup> The underlying assumption is that anybody with access to a watercourse could use the water, as long as circulation was not impeded, and this only in the case of major rivers.<sup>60</sup> So, besides the limitations imposed by transit,<sup>61</sup> the rights to use water seem to have been mainly affected by title – whether individual or collective to the lands on the river banks.

Interestingly, the association between owning riparian land and the right to capture water is explicit in a few tenth- and eleventh-century charters. A priest called Melic granted the monastery of San Cosme y San Damián a land plot, presumably by the river Porma, in a village called *Gorron*, so

<sup>55</sup> Bolòs i Masclans, “Els molins,” 197; Sáenz de Santamaría, *Molinos hidráulicos*, 87-8. Cf., for a more sceptical view, Gautier Dalché, “Moulin à eau,” 348.

<sup>56</sup> As is the case in France and Italy. Cf. Caucanas, *Moulins*, 26, 40-1; Francesco, *La molitura*, 288.

<sup>57</sup> For Italy, Squatriti has indeed argued that the Goths were the last kings to attach to the Roman conception of water as a public resource. The Lombards, for their part, would have regarded it “their personal property [...] to be managed for their own immediate benefit”, therefore alienating it to their protégés and allies “as a manner of obtaining political and economic advantage” (Squatriti, *Water and society*, 71, 91-2). See also Francesco, *La molitura*, 288.

<sup>58</sup> LV, VIII.4.31 and LV, VIII.4.29 respectively.

<sup>59</sup> *sed usque ad medium alveum, ubi maximus fluminis ipsius concursus e st, sepem ducere non vetetur, ut alia medietas diversorum usibus libera relinquatur. Quod si ab utraque parte huius fluminis duo manserint, non liceat ad integrum flumen excludere, ut dicat unusquisque eorum, quod medietatem sue partis excluserit; sed alter superius, alter inferius clusuram facere ex medietatem fluminis non proibeatur* (LV, VIII.4.29).

<sup>60</sup> Sáenz de Santamaría, *Molinos hidráulicos*, 131.

<sup>61</sup> As contemplated in LV, VIII.4.28, which is concerned which the damage caused to cultivated lands in floodplains by livestock crossing rivers. Some tenth-century charters record grants including, or referring to, access rights to rivers and fountains to water livestock (CatLeón94, 932; SPCardeña18, 929; SPCardeña20, 931; SPCardeña109, 963).

that they could make a *portus*<sup>62</sup> and divert water wherever they wanted.<sup>63</sup> In this, we must bear in mind that the floodplains were dynamic landscapes that were exposed to the vagaries of the currents, which could force certain actors to develop specific landowning strategies to ensure that they retained access to the water. Most dramatically, floods could destroy mills and change watercourses. One such flood invaded land owned by the monastery of Santiago de Valdevimbre, thereby affecting the provision of water to some of its mills.<sup>64</sup> The monks had to buy another land plot by the new contour of the river bank as it stayed after the flood. In the sale, it was specified that if the water receded, the stretch of land down to the new course should be rendered accessible to the monks, thus ensuring that they retained access to the water.<sup>65</sup>

The abovementioned notion that damming rights only extended to half of the watercourse seems to surface in some charters. For example, a mill by the river Torío was sold together with a dam which seemingly stretched only to the middle of the watercourse.<sup>66</sup> The monasteries of Sahagún and San Cosme y San Damián de Abellar settled a dispute over the water that fed their mills somewhere along the river Porma by agreeing to build together a dam that should reach only to the middle of the river.<sup>67</sup> Somehow analogously, this is expressed in a conflict between San Martín de Castañeda and a certain Abbot Romano and his community over a fishery in the river Tera. The monks of San Martín argued that they had bought the fishery together with land on both banks of the river, and accused Romano and his followers of usurping half of the fishery and a land on one of the banks. Both principles – land ownership and rights over half of the watercourse – seem to inform this case.<sup>68</sup> Similarly, in 974, Vela Verobiz was accused by the monks of Sahagún of usurping some of their lands by the river Curueño and building a dam. The conflict was

<sup>62</sup> In this context, *portus* means not so much a harbour or mooring as some infrastructure to divert the water. E.g., for another case in which the link between landownership and access to water is evident: *ipso porto ubi ista aqua prendetis in ipsa terra, cerka ad ipsa presa ubi ipsa aqua filastes pro ad ipsos molinos* (CatLeón935, 1034). See Pérez González, *Lexicon*, s. v. “portus,” fourth meaning.

<sup>63</sup> *terram, subtus uillam que dicunt de Gorrón, per ubi portum faciatis ad ipsa aqua, adiciendo eam ad qualibet partem digne uobis uidetur* (CatLeón321, 959).

<sup>64</sup> A flood that rivers Bernesga and Torío and destroyed some mills is documented in CatLeón128 (938).

<sup>65</sup> *uenit cum ipsa flumen tumore et plenitudine, et dirupet uobis ipsa uestra terra et demersit illa in profundum, et esteterunt ipsos uestros molinos in siccitate desertis... terra nostra propria qui est iusta ipsa flumen, per ubi se parauit ipso riuulo, ut aperiat ibidem portum pro ad ipsos molinosprehendere aqua [...] et si reuersus fuerit ipso riuulo in terga, apramus ipsa terra usque in aqua, quia ipsa aqua propria uestra est* (CatLeón61, 924).

<sup>66</sup> *CatLeón333 (960); molino cum suo aquaducto quomodo leuare ipsa aqua de Legionense in loco predicto medio riuulo ipsa presa* (CatLeón690, 1010).

<sup>67</sup> *ut faciatis nobiscum illam presam in riuulo Maiore per medium* (CatLeón437, 975).

<sup>68</sup> *conparauimus ipsa piscaria ex utraque parte riuulo tam de illa parte quam et inde cum suo terreno et terras ex omni parte per girum de ambas ripas fluminis [...] tulerunt nobis medietate de ipsa piscaria et agrum terre nostre de illa parte Teira* (SMCastañeda3, 952).

settled with an exchange of lands – apparently located both banks of a river – and an agreement to share the dam.<sup>69</sup>

However, in practice, some actors did control land on both banks and dams that stretched across the whole river.<sup>70</sup> Some examples show specific Castilian aristocrats who held control of long stretches of the river Arlanzón in the vicinity of the city of Burgos. In 921 Gonzalo Díaz and his wife María granted San Pedro de Cardeña a set of mills with rights to capture water in an almost eight-kilometre stretch of the River Arlanzón, while years later, a little further downstream, Diego Ovécoz sold water “from one shore to the other” to the monastery of San Martín de Villabáscones “from the mills of Micarri to the boundary” of the monastery.<sup>71</sup> Such large blocks of rights over waters clearly overlapped with the very conspicuous use that local communities made of the same resource. There is nothing in those texts to indicate how those two levels were combined in practice. It seems clear, by contrast, that the ecclesiastical houses that ultimately acquired water rights from those lords treated them less as a kind of ultimate superiority and more as full ownership that enabled them to put limits to and profit from the use made by peasant communities;<sup>72</sup> even to exclude them, especially in conditions of water scarcity – an issue that may become pressing from time to time in dry inland Iberia. Competition for water underlies the penalty that features in a short record of a transfer of turns in a mill to the monastery of Hiniestra, east from Burgos, to be applied to whoever stole water from the reservoir “from the time when the waters rise to mid-April”, the implication being that the mill could go dry during spring and summer.<sup>73</sup> Likewise, in a lawsuit of 915, the monks of Valdevimbre accused Munio of building a dam upstream from one that the monastery had, thus depriving their mills of water for three months.<sup>74</sup>

Once the water was diverted from the river, it was directed through canals. This presented new challenges with regards to ownership of both the

<sup>69</sup> *et accepi de vos alias terras qui sunt in Ripa Rubia ubi figet rio Antiquo ad ripa usque ad alia ripa et divisemus omnia inter nos ut habeamus illa presa commune* (Sahagún277, 974).

<sup>70</sup> *in locum que dicitur Morales, uilla obtima [...] ribulo discurrente Porma, sic de una parte quomodo de alia* (CatLeón43, 917); *et ipsum sautum de illa parte riuo et de ista parte, uobis concedimus ab integritate nostra portione* (CatLeón124, 937); *in illa ueiga, iusta ortos de Pinolo et Felix, ipsa terra cum suo aquaducto uel molinarias, sic de ista parte rio quam et de alia* (CatLeón336, 961).

<sup>71</sup> *molinis cum suis productilibus aquis, uidelicet, aqua de Ebeia et de Aslanzon de presa de sub ripa de Uilla Albura usque ad desruinata de Castrello* (SPCardeña11, 921); *uendo uobis ipsa aqua de litus ab alio litus de super termino molina Miccarri usque ad termino Sancti Martyni* (SPCardeña87, 955).

<sup>72</sup> Escalona, “Older and Newer Commons.”

<sup>73</sup> *Ego Beila et Munnio presbiter tradimus nos medipsos ad ipsa regula, cum hereditate, terras, vineas, ortos, pomiferos, casas, cum introitus et exitus; et in molino de Tovas, VI vicies, cum tale usu ut de quando aquas crescunt usque medio aprile, si quis aqua furaverit de illa presa, pactet pro die carnero, et pro nocte V solidos. Et cauto ad rex, quinque libras auri* (BGD382, 947).

<sup>74</sup> *et fecit sua presa super illa, et tulit ipsa aqua illis de iure et cessabit ipsos molinos menses tres* (CatLeón34, 915).

canals themselves and the lands they crossed, as well as negotiating the use for the water – mainly for milling and irrigation, but also for watering livestock, etc. Additionally, mechanisms needed to be established to ensure that those with title could safely expect to receive their water supply.<sup>75</sup> The monks of San Cosme and San Damián de Abellar reached an agreement with Virtute and other *heredes*, who owned land on the bank of the river Torío at San Felices. The group gave the monks a canal, so that they could use the water for whatever purpose they wanted – including the construction of mills. However, the donors stipulated that they would always maintain the right to capture water from the canal to irrigate their fields. It is significant to note that the donors did not gift the entire canal – of which they probably did not have full ownership – nor did they donate the land that the canal traversed, but only rights over the section that ran through their own plot until it reached the monastery's property. In this instance, the monks had to liaise with the owners of the land located between the river and the monastic property in order to secure the provision of water.<sup>76</sup> Ultimately, shared access to water is one of the factors that explains why different mills owned by different actors could be found along the same canal.<sup>77</sup> Finally, while these cases reflect agreements reached at a local scale, under certain conditions hydraulic systems could become more complex. Thus, near Burgos, canals several kilometres long involving several local communities are attested.<sup>78</sup>

These cases show that, even if the principles of Visigothic law remained operative in the background, new normative solutions developed in time.<sup>79</sup> In the Castilian-Riojan regions, by the thirteenth century, a number of legal customs of alleged much earlier origin had been codified as the Law of Mills (*Fuero de los Molinos*).<sup>80</sup> However, only a few snippets of information from the tenth- and eleventh-century charters reveal the existence of customary norms about mills and waters in Castile. For example, in the vicinity of Bur-

<sup>75</sup> Sylvie Caucanas argues that, towards the late tenth and the early eleventh century, the monks of Saint Michel de Cuxa carried out a decided policy of land purchases and exchanges with the ultimate aim of building a canal of their own and, in this manner, avoiding any conflicts (Caucanas, *Moulins*, 26-7).

<sup>76</sup> The agreement is accounted for in two charters. The first one corresponds to the grant made by Virtute and the other *heredes*: *scriptura donationis de nostra aqua et suo aqueducto, quam abemus de parentum nostrorum, quam abemus in flumen Turio, de unde exit de matre quousque ubi intrat in uestro termino, sic donamus quomodo abeatis illa cum sua aiacencia [...] ut faciatis de ea quod uolueritis ad irrigandum, et nos semper abeamus de ipsa aqua regum ad irrigandum* (CatLeón66, 925). The second one records the commitment made by Abbot Cixila: *dedistis ad nostram ecclesiam Sanctorum Cosme et Damiani et ad nos ipsos portum in riuo Turio, secus Sancti Felicis, aqua et per uestra terra aqueductile, ut faciamus de ipsa aqua quos nobis bene uiderimus, eciam et si uiderimus, mulinus inde construamus [...] ut demus uobis de ipsa aqua pro uestro adimplum regare, ortum, linum etiam et uestrum cannamum* (CatLeón67, 925).

<sup>77</sup> As noted in Gautier Dalché, "Moulin à eau," 340.

<sup>78</sup> Escalona, "Older and Newer Commons."

<sup>79</sup> For a legal perspective, more broadly – including later medieval law codes –, see Sáenz de Santamaría, *Molinos hidráulicos*, 123-84. See also López Beltrán, "Economía y derecho."

<sup>80</sup> LFC, 40, 46, 79, 148, 155, 159, and 281. FVC, 4.6.



gos it seems that, in situations of shared water rights, each user had the right to divert as much water from a canal as would flow through a hole the size of a fist drilled in a disused millstone acting as a stopper. The hole could be unblocked during the agreed-upon period. This is first recorded in 932, in a dispute over water rights in the vicinity of the city of Burgos,<sup>81</sup> and then again in 956 in nearby Villabáscones.<sup>82</sup> This was not just limited to the surroundings of Burgos, but more widespread practice, because much later, in 1070, a third charter related to the territory of Grañón, bordering the Rioja, repeats the same notion.<sup>83</sup> Importantly, the 932 charter described this method of gauging the water flow as “custom” (*quomo erat foro*), and the charter of 956 also formulated the locals’ newly agreed obligation to clean the canal in exchange for water as *foro: et uos dates mici testamentum de lauore per foro, que mundetis calicem* and again, *si illa aqua uoluerit quispiam demandare per foro et non mundauerit calicem totum*. In doing so, it aimed to turn the new arrangement as customary and durable. It was case-specific, not a general norm, but in time it could even turn into one, as suggest the pieces of jurisprudence inserted into the thirteenth-century *Libro de los Fueros de Castilla*. Yet another example: in 1073, on the western borders of Castile, a number of local people from Olmos de Pisuerga claimed that they were entitled (*per foro*) to build a canal seven hands wide to lead water to their mill from a dam that belonged to the monastery of Rezmondo.<sup>84</sup> The legal custom (*foro*) seems to have determined the standard legitimate width of the canal, just as it established the flow of water through the millstone. Meagre as they are, these references may well be just the tip of the iceberg of a broader corpus of dynamic normative traditions regarding mills, canals, and waters, that developed in Castile regardless – as far as we know – of any higher political initiative.

Normative arrangements of this kind were not only grounded on abstract principles. They adjusted to specific situations depending on the relative positions of the involved actors, and worked in arenas where their mutual relationships could be negotiated. A notable example is the protracted conflict that opposed Gundemaro and his *heredes*, from San Juan de Vega, to the monastery of Santiago de Valdevimbre.<sup>85</sup> Both parties owned mills along a race that conducted water from the river Bernesga. A flood destroyed Gundemaro’s mills and he and his people built others on the same race. The monks

<sup>81</sup> *per mola forannata manu clausa quomo erat foro* (SPCardeña22, 932).

<sup>82</sup> *aqua per ad uestros ortos et per ad uestras necessarias, admetita quantum exierit per forato de mola molinaria, id est, manu serrata* (SPCardeña89, 956). On these two cases, see Morala, “Léxico agrícola,” 249.

<sup>83</sup> *Et de illo rivulo qui aqua ducit ad villam, suam partem de aqua cotidie quantam per foramen unius manualis mole potest transire* (BGD244, 1070). Sáenz de Santamaría interpreted this as referring to a quern (Sáenz de Santamaría, *Molinos hidráulicos*, 199).

<sup>84</sup> *una kanale de septem palmos, per foro et pro hereditate, in illa presa de Sancte Mariae* (SPCardeña228, 1073).

<sup>85</sup> Carvajal Castro *et al.*, “Collective Action,” 153-4.

took them to court twice on this account, arguing that, in the process, they had deprived them of the water they needed for their mills. The inquirers sent by the king found the monk's claim unsubstantiated. However, the conflict was settled on the condition that Gundemaro and his *heredes*, at the monks' request, would perform maintenance of the dam that diverted the water from the river to the race.<sup>86</sup> In this case, both parties clearly depended on their capacity to draw support from external actors and to appeal to royal justice and to the broader normative references informing the inquirers' investigation, such as the principles that regulated the use of the race before the flood occurred.<sup>87</sup> While Gundemaro was entitled to amend his mills, the monks managed to benefit from the situation by unloading on his shoulders the burden of maintenance (conceivably as a sort of compensation), resulting in a new, tailor-cut regulation to apply to their specific relationship in the future. Moreover, it was for the monks to decide when the canal needed cleaning, which put them in a stronger position regarding the management of the system and reinforcing the lordly aspirations of the monastery.

In a comparable case, the monastery of San Martín and the local community of Villabáscones, near Burgos, reached a similar agreement whereby the abbot of San Martín allowed the locals to take water for irrigation in exchange for keeping their canal clear.<sup>88</sup> The abbot, however, admitted that if he denied them permission, they could still use the water as long as they cleaned the canal. While the wording may lead to suspect the abbot's actual capacity to grant or deny access to water, the charter clearly focuses on the community's maintenance obligation, a task that the locals would probably be prepared to perform nevertheless, as it was in their best interest to keep the canal in operation. The issue at stake here, instead, may have been the terms under which the maintenance was to be realised, rather than the actual attribution of the task. By avoiding the performance of labour duties and having them assigned to the locals, the monastery reinforced its position of superiority. By contrast, the abbot of San Torcuato, a lesser church not far away from Villabáscones, had to litigate to secure access to an extensive canal shared by different local communities.<sup>89</sup> The abbot acted here as a peer member of that supra-local collective established around the canal, without any position of superiority over the others.<sup>90</sup>

<sup>86</sup> *quando eos admonuerint fratres pro ipsa superiora presa restaurare uel aquam domare, sine aliqua excusacione mense auertant* (CatLeón128, 938).

<sup>87</sup> The late medieval Castilian corpus – probably containing norms that were in use much earlier – contemplates the exact same situation, and establishes that the owners of the ruined mill cannot cut the provision of water for more than twelve days to perform their reparations (FVC, 4.6.5).

<sup>88</sup> SPCardeña89 (956).

<sup>89</sup> SPCardeña22 (932).

<sup>90</sup> For more detail on the two latter cases, see Escalona, "Older and Newer Commons."

## 5. *Conclusions*

Throughout this paper, our aim has been to demonstrate that mills were an essential component of the scenarios of political dynamics in early medieval localities. Mills could be at the core of multi-layered property regimes weaving together different resources and infrastructures whose management unfolded at different levels of decision-making. In such context, besides attesting the participation of actors of varied social standing, what is relevant is that mills emerge as one of the arenas in which cooperative as well as unequal relationships between them could be articulated and their terms negotiated.

During the tenth and early eleventh centuries, local elites and lords, both lay and ecclesiastical, gradually accumulated lands, mills, infrastructures such as dams and canals, and water rights. This accumulation did not arise from the fragmentation of the public sphere nor from a simple process of seigneurialisation, in which mills were merely income-producing assets under elite control. It was based on the particular agreements made by individuals from various social backgrounds at the local, or sometimes supralocal, level. This led to the development of institutional and normative frameworks modulated by the varying levels of inequality between the parties involved. Those inequalities were evident in the uneven allocation of ownership and access rights, and they must have had determined the rent generated, the distribution of maintenance labour, as well as the allocation of decision-making authority for its management.

Ultimately, addressing mills from the perspective of micro-politics frees their study of the constraints of former narratives of agrarian growth and seigneurialisation. It opens the path to account for the variety of social and institutional factors, other than the drive for profit, that could inform individual and collective decisions to promote their building and engage in their workings. On this basis, further studies may help us delve further into the reasons that explain their spread over time and their impact in the circulation and distribution of produce, as well as its social consequences, at the local level and beyond.

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