

An Irrigation Decree from Roman Spain: *The Lex Rivi Hiberiensis**

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I INTRODUCTION

The inscription known as the Bronze of Agón, which dates from the time of Hadrian, contains a series of regulations relating to the running of an irrigation community situated on the right bank of the middle Ebro, in the hinterland of Hispania Citerior.¹ Although

* This article follows the same principal lines as my talk ‘An Irrigation Decree from Roman Spain: the *Rivus Hiberiensis*’, given at St John’s College (Oxford, 19 June 2003), at the kind invitation of N. Purcell and A. Wilson. I am grateful for the observations of those who attended, as well as of those who took part in the seminars held in the Universities of Zaragoza, Genoa, and Eötvös Loránd (Budapest) and in the Spanish School in Rome throughout 2002, and to the numerous colleagues with whom I have had the opportunity to discuss various aspects of this text, among others A. Wilson, A. Lintott, G. Alföldy, and particularly M. H. Crawford, who undertook to translate the inscription into English, and J. N. Adams, who also helped with the translation of various sections; I owe to M. H. Crawford as well many suggestions for supplementing the lost parts of the text. I am grateful also to I. Aguilera, who informed me of the inscription as soon as it appeared, and to the staff of the Zaragoza Museum, particularly its director, M. Beltrán Lloris, for all the help they have given me in studying this inscription. This research has been financed with funds from the Caja Inmaculada Savings Bank’s *Europa* programme and the Grupo de Excelencia ‘Hiberus’ of the University of Zaragoza (Aragon Regional Government). English translation by M. Douch.

¹ The text is first mentioned in F. Beltrán, ‘Inscripciones sobre bronce: ¿un rasgo característico de la cultura epigráfica de las ciudades hispanas?’, *XI Congreso Internazionale di Epigrafia Greca e Latina (Rome, 18–24 September 1997)*, *Atti II* (1999), 21–37, particularly 31–3. The finding of the inscription is reported in *AE 1993, 1043* = *HEp 5* (1995), 911.

part of the title is missing, it certainly refers to a *riuus* or canal shared by several rural communities, the *riuus Hiberiensis* or ‘Ebro canal’, that made up the central element of the irrigation system. Therefore, since the document has the unmistakable status of a *lex*, we have adopted the conventional name *lex riui Hiberiensis*, which does not feature in the surviving part of the document, but could well have figured in the missing section of III.40. The irrigation community which used the canal was remarkable in being made up of rural communities belonging to two distinct cities, both founded by Augustus: the *pagus Gallorum* and the *pagus Segardenensis* belonging to the Roman colony of *Caesaraugusta* (Zaragoza), and the *Belsimonensis* district belonging to the Latin *municipium* of *Cascantum* (Cascante).

The inscription consisted of a heading and 152 lines (some 1,200 words) of which two thirds survive today. It contains irrigation regulations, with details of the levies and labour to be provided by the irrigators; it designates those responsible for taking decisions and carrying them out; it provides mechanisms to ensure that the irrigators comply with their obligations, but also to protect them from unfair treatment by the local authorities and to keep the latter in check, as well as instructions for procedure before the municipal magistrates for judicial issues arising from the *lex*. All this in a document drawn up by consensus of the *pagus* inhabitants with the intervention of the provincial governor, or less likely, his *legatus iuridicus*.

The inscription provides a lot of new information concerning a broad spectrum of issues, although obviously the two most interesting historical questions, in addition to the procedural aspects, are agricultural irrigation and the organization of rural districts (*pagi*) — two matters about which there had been little written information thus far, not only with regard to the middle Ebro valley or Hispania, but also to the whole of the Roman Empire, particularly in the West. In this respect, it is unique, as there is no other Roman document that systematically includes the regulations governing a community of irrigators. Furthermore at a regional level it emphasizes the singular importance of the irrigation infrastructures in the middle Ebro valley, already hinted at by the *Tabula Contrebiensis* of 87 B.C.E. and by remains such as the monumental dam in Almonacid de la Cuba,² although they have not always received the attention they deserve in the specialist literature.

In addition, the document gives insights into the little-known issues of rural life in a provincial municipality — its remarkably high level of activity, its social coherence, and its surprising autonomy with regard to its urban nuclei. All this is revealed by references to the election and powers of the local authorities (the *magistri pagi*), the meetings of the *pagani in concilio* (the basic administrative body, practically unknown until now), the *curatores* or those in charge of collective work, the community funds, the publicans who collected taxes and fines, the seizure and auctioning of defaulters’ assets, the use of *actiones populares* to keep an eye on the behaviour of the local authorities, the regulation of appeals to municipal magistrates, and the surprising fact that it was not the *duoviri* of *Caesaraugusta* who lodged appeals with the provincial authorities, but one of the *magistri pagi*. And, of course, one should add its importance on a regional and local scale, since, among other things, it records the name of a new governor of Hispania Citerior (or, less likely, his *legatus iuridicus*) and reveals the wide extent of the territory of *Caesaraugusta*. Furthermore, as often happens when a new document throws light on a little-known topic, many other documents that were hitherto difficult to interpret now become more comprehensible as a result of the new information; such is the case, for example, with a series of Italian and provincial inscriptions concerning *pagi* and irrigation.

Within the confines of a single article, it will be impossible to deal in sufficient detail with all the new information and issues arising from this text, as this can only be achieved

² G. Fatás, *Contrebia Belaisca (Botorrita, Zaragoza). II. Tabula Contrebiensis* (1980) = *CIL* I².2951a (see n. 3); M. Beltrán and J. Viladés, ‘*Aquae Romanae*. Arqueología de la presa de Almonacid de la Cuba’, *Boletín del Museo de Zaragoza* 13 (1994), 126–293.

through the participation of researchers from different disciplines over the coming years. Since, due to a variety of unforeseen circumstances, the monograph which will examine the epigraphic details, the regional irrigation infrastructures, and the local topography and administration, is still some way in the future, we have thought it best not to delay any longer the presentation of the text to the academic community. We have therefore taken advantage of the invitation from *JRS*, whose pages have in the past included studies on other major Spanish inscriptions, such as the *Tabula Contrebiensis*, thematically and geographically linked to the *lex riui Hiberiensis*.³

II DISCOVERY AND DESCRIPTION (PLATES I–XXIII)

The inscription was found some 50 km west of Zaragoza, in the wine-growing district of the Campo de Borja, which runs from the foot of Mount Moncayo on either side of the Huecha, a river that flows into the Ebro 11 km to the north (Fig. 1). It came to light in the as yet little investigated archaeological site of ‘Las Contiendas’, in the municipal limits of Agón, very close to Magallón, as a result of the works carried out in 1993 to repair the road from Magallón to Gañarul. Shortly after the works, Javier Pellicer Benito, a resident of Magallón, noticed one of the fragments emerging from the ground and, on removing it, found the other ten fragments beneath it. The excavations carried out subsequently to document the find revealed a domestic context of the fifth century C.E.,⁴ where the bronze, once it had served its purpose, would have ended up, conveniently broken into pieces, as scrap with the apparent aim of recycling it: this is why it was cut into eleven fairly similarly sized and shaped fragments, and also why they were in a pile.⁵ The use of a metal detector in the area failed to find any further fragments of the tablet, and so we may assume that approximately one third of the original has been lost for ever.

Obviously the location of the find bears no necessary relation to the inscription’s original home, which would have been a public place, probably situated in the administrative centre of one of the *pagi* to which the *lex* applied or at a meeting point of the *pagani* like the villa mentioned in I.49. Of these, as we shall see later, the only one whose location we are absolutely certain about is the *pagus Gallorum*, situated next to Gallur, a town on the banks of the Ebro some 10 km north-east of ‘Las Contiendas’, which obviously still bears its old name.⁶ It is clear, therefore, that the item was found near the area it referred to, although probably outside the ancient *riuus Hiberiensis* irrigation community, since the location is some 340 m above sea level (almost 100 m above the level of the River Ebro as it passes through Gallur), that is above the area which could have been irrigated from a canal which, judging by its name, would have been fed by the waters of this river or run parallel to it.⁷

The inscription is now housed in the Zaragoza Museum (catalogue number 93.04.02.03), generously donated by its finder in 1993. After it had been meticulously cleaned and the fragments reassembled, it was subjected to various tests and X-rays, which have not helped as yet with the reading of the areas that were in the worst condition.⁸ The

³ J. Richardson, ‘The *Tabula Contrebiensis*: Roman law in Spain in the early first century B.C.’, *JRS* 73 (1983), 33–42; P. Birks, A. Rodger and J. Richardson, ‘Further aspects of the *Tabula Contrebiensis*’, *JRS* 74 (1984), 45–74.

⁴ I. Aguilera and M. Beltrán, ‘Excavaciones arqueológicas en torno al “Bronce de Agón”: Las Contiendas (Agón-Zaragoza)’, *Arqueología Aragonesa* 1993 (1997), 61–5.

⁵ The archaeological context, although chronologically later, is fairly similar, for example, to that of the *lex Imitana*, whose tablets were also discovered cut into fragments in a ‘domestic’ space, identified by the archaeologists as the workshop of a bronzesmith or a scrap store; F. Fernández and M. del Amo, *La lex Imitana y su contexto arqueológico* (1990), 21–2.

⁶ See IV.1.a.

⁷ See IV.2.a.

⁸ Unlike the case of, for example, the Celtiberian bronze known as *Botorrita* 3: F. Beltrán, J. de Hoz and J. Untermann, *El tercer bronce de Botorrita (Contrebia Belaisca)* (1996). The fragments are currently awaiting new radiographic tests.

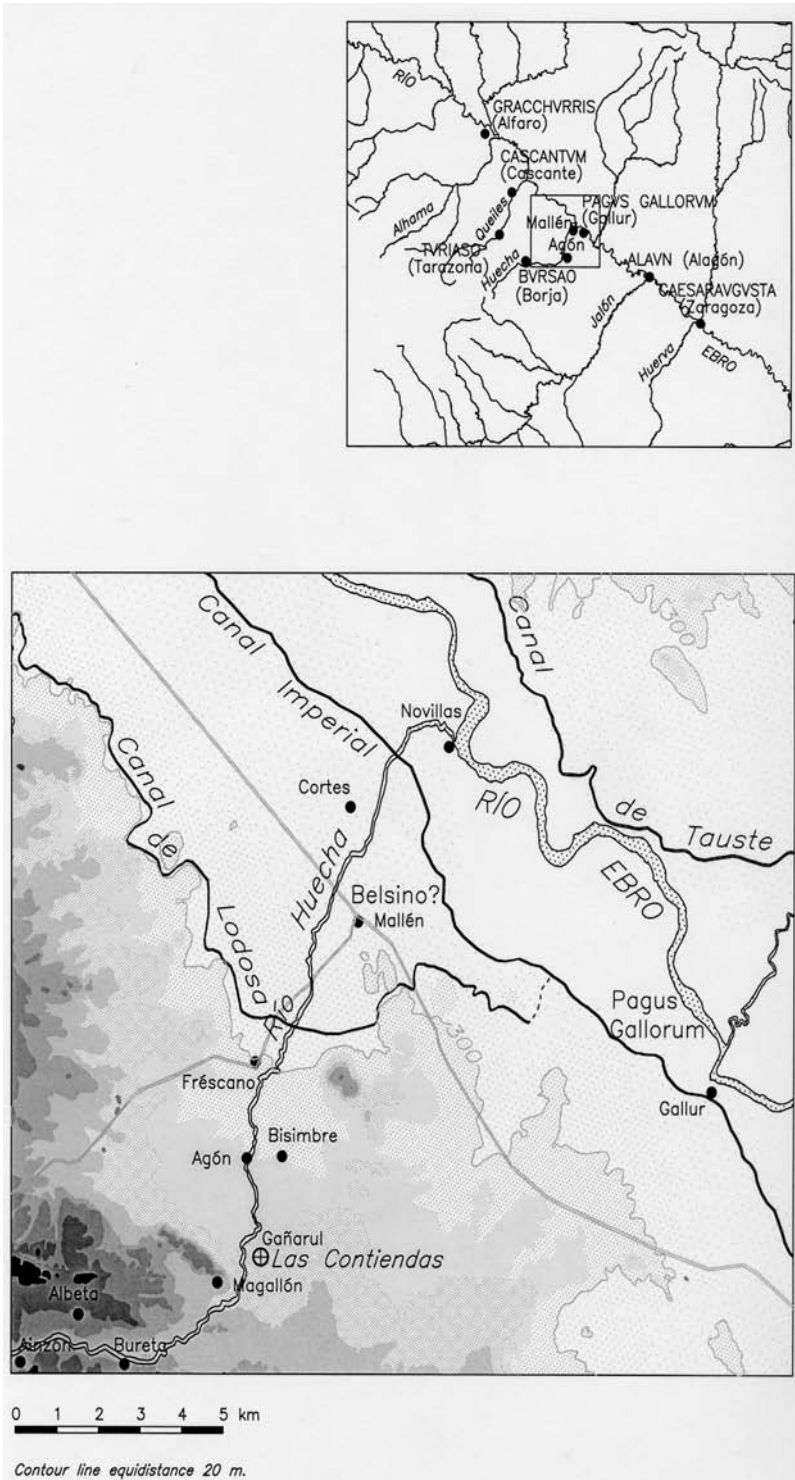


FIG. 1. Map showing find-location of the ‘Bronze of Agón’ — *lex rivi Hiberiensis*.

analysis of the metal composition of the tablet, carried out using the non-destructive X-ray fluorescence spectrometry technique, on a KeveX 7000 spectrometer, yielded the following results: Cu 36.9%; Sn 5.55%; Pb 56.8%; Fe 0.33%; Ag 0.015%; Sb 0.063%. There were no traces of Ni, Zn, As, or Bi. The alloy matches that of a ternary bronze with a good deal of lead and little tin, which lends itself to being easily moulded into sheets and is soft (although fragile) when engraving a text on its surface.⁹ The piece consists of eleven fragments of variable thickness, with those on the left somewhat thicker (0.50–0.55 cm) than those in the centre and on the right, which go down to 0.39 cm, almost certainly because of a flaw in the levelling of the mould. The fragments, although of different dimensions, are relatively regular (Fig. 2): the height varies between 32.4 and 16.2 cm, and the width between 14.3 and 26.5 cm, except for Fragment 6 which is smaller.¹⁰ The text is surrounded by a frame formed by a fillet between two mouldings 2.5 cm wide, with no perforations for holding it, as this was probably done with clamps. The writing surface is well preserved on Fragments 1–3, corresponding to the left-hand part of Column I, and Fragments 8–11, which form part of Column III, but this is definitely not the case with Fragments 4–7, which feature the extreme right-hand part of Column I and the little that still survives of Column II; in particular, the lower part of Fragment 4, the whole of Fragment 5, and the upper part of Fragment 7 are extremely difficult to read, as the surface is so eroded that many letters cannot be distinguished, even with a magnifying-glass; this means that a good many of them can only be understood when the context is clear (as is the case with the right-hand part of Column I) and guesswork needs to be employed when there is no context or else it is fragmentary, as with various sections in Column II, particularly in II.16–48.

The text consists of a heading and three columns with 51, 54, and 47 lines respectively, which are of regular size, 23 cm wide for Column I and 23–24 cm for Column III, separated by spaces of 2–3 cm. The whole is subdivided into sixteen (or maybe seventeen) paragraphs, marked by hanging indents and the two initial letters which are larger than the others.¹¹ The left-hand margin is perfectly vertical, while the right-hand one is somewhat irregular; lines II.16, 29, and 38, and perhaps II.17, 19, and 33, run outside the left-hand margin.

The letters, which are very similar to those appearing in other bronze documents of the Principate,¹² vary in height between 0.5 and 0.6 cm in the text, and between 4.1 and 5.8 cm in the heading, and correspond to Mallon's 'classical capitals': A with no interior stroke, the asymmetric A, M and V, the Q with a long lower stroke, and so on. The interpunctuation consists of a prolonged diagonal stroke. Some points on the surface have been repaired with small rectangular patches (II.8, III.13, 41–2, etc.).

The overall dimensions of the original piece were 66 cm high by approximately 86 cm wide, and so very similar to other important Spanish bronzes, such as the *lex Irnitana*¹³ or the *lex Vrsonensis*,¹⁴ which were also laid out in three columns.

⁹ The analysis was carried out by Salvador Rovira (Museo Arqueológico Nacional, Madrid).

¹⁰ Dimensions of the eleven fragments are as follows: 20.9 x 26.5 x 0.5 cm (1); 16.2 x 25 x 0.55 cm (2); 18.8 x 25.5 x 0.5 cm (3); 32.4 x 14.05 x 0.45–0.5 cm (4); 17.2 x 16.3 x 0.45 cm (5); 8.3 x 13 x 0.45 cm (6); 20.8 x 14.5 x 0.45–0.5 cm (7); 23.9 x 14.3 x 0.41 cm (8); 27.5 x 23.6 x 0.39 cm (9); 18.6 x 25.6 x 0.41 cm (10); 24.3 x 25.9 x 0.45 cm (11).

¹¹ We have subdivided the paragraphs in terms of their syntactic caesuras (§§ 1.a, b; 2.a, b; 3.b, c; 12.a, b), except in one case (§ 3.a), where the grouping is by topic.

¹² Such as the previously-mentioned *lex Irnitana*: Fernández and del Amo, op. cit. (n. 5), 31–70.

¹³ The dimensions of the tablets are around 57 by 90 cm; Fernández and del Amo, op. cit. (n. 5), 35–69. For the bronze inscriptions of Baetica, J. González, *Bronces jurídicos romanos de Andalucía* (1990).

¹⁴ c. 59 by 91–93 cm; *CIL* II²/5.1022.

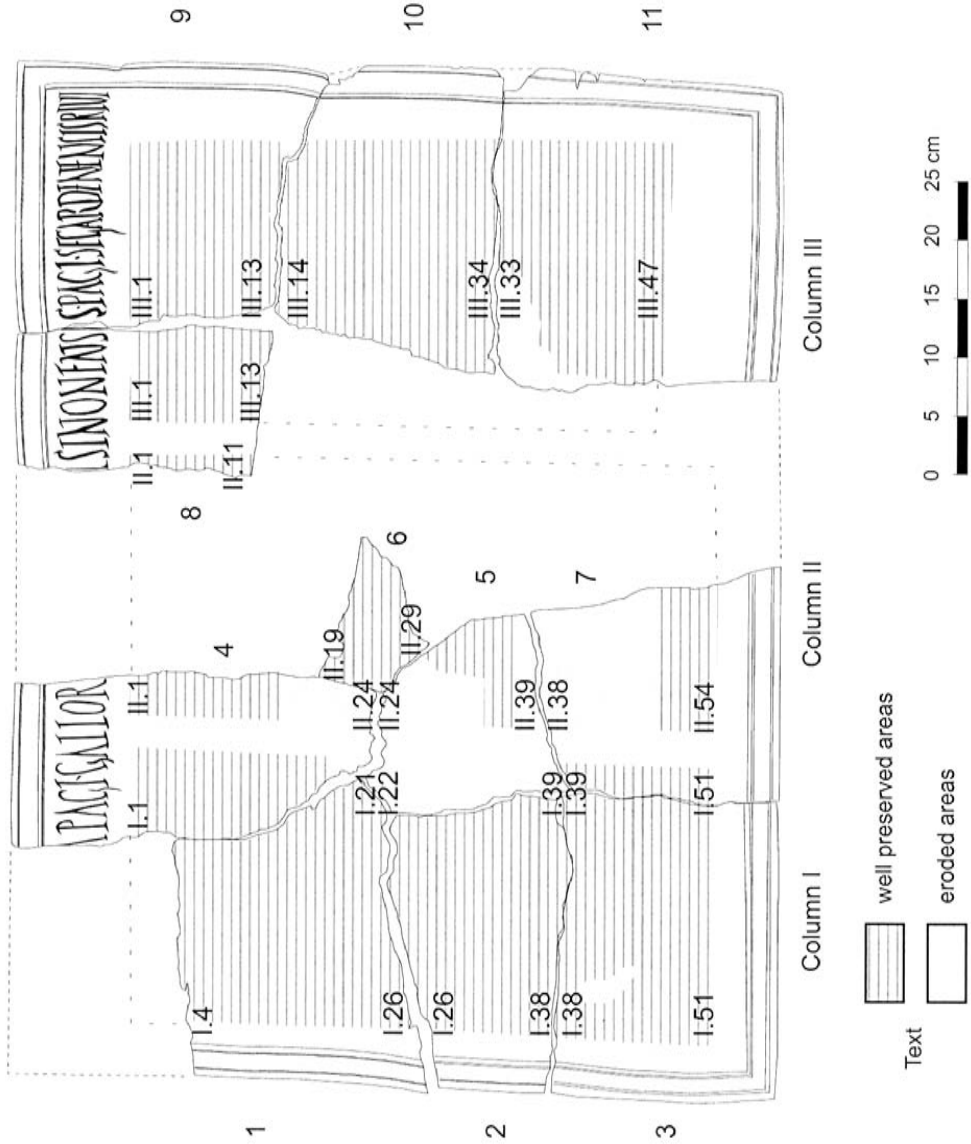


FIG. 2. Drawing showing position of surviving fragments of the *lex rivi Hiberiensis*.

III EDITION AND TRANSLATION

In our reading of the text, we have used the standard diacritics as employed in the new edition of *CIL*, but we have also used shading to show the areas of the surface that have been most affected by erosion. The restored letters in square brackets without a question mark are taken as certain, while those with a question mark should be considered as merely guesses. In the areas that are barely legible, the letters marked with a *crux* (+) are described in the notes in the apparatus criticus (distinguished by asterisks), in which reference is also made to the most problematic incomplete letters deduced from the context (marked with a dot underneath) as well as certain palaeographic or composition singularities. Occasionally, grammatical comments are introduced to justify certain readings or corrections. We include also the supplements suggested by M. H. Crawford for the lost sections of §§ 1 (I.1–4), 12 (III.15–17 and 20) and 14 (III.34–6) that I have preferred not to introduce in the edition, but which are incorporated in his English translation and indicated with italics in square brackets. All other aspects are dealt with in the commentary (see IV, below).

III.1. EDITION

- o.1 [Lex (?) paganica(?)] pagi·Gallor[um pagi* (?) Be]l[sinonensis·pagi·Segardenensis riui
- §1a I.1 [---*] riuiom·Hiberiensem
 I.2 [---*] molem·riui·Hibe-
 I.3 [riensis ---*]e ad aliam·rem·a- (?)
 I.4 [---*i]mperauerint siue quid
 I.5 +c.4+* in eam rem fieri iusserint·denuntiauerintue
 I.6 pecuniamue conferre·imperauerint, ex·maioris·par-
 I.7 tis paganorum·sententia·dum·proportione quan-
 I.8 tum quique aquae·ius·habent·sententiam·dicant;
 §1b I.9 et si qui, arbitrato·eorum·aut·eius qui operis·prae-
 I.10 erit, operas·non·praestiterit alitue quid <quod>·ab eo·
 I.11 imperatum·denuntiatumue erit detractauerit
 I.12 moramue quo·setius·fiat·fecerit·pecuniamue·ad
 I.13 diem·non·soluerit, tum·quotiens·commiserit·to-
 I.14 tiens·in singula·imperata magistris·pagi (denarios) XXV
 I.15 d(are) d(ebet). Id·omne·magistri·pagi·in commune rediguntō.
- §2a I.16 Cuius·eorum·qui·operas·alitue quid·praestare de-
 I.17 bebant·magistri·pagi·curatoresue* praesentiam*
 I.18 habere* non·potueri<n>t*,·domo·familiaeue eius de-
 I.19 nuntie<n>t*·et·cuius·domo familiaeue eius denuntiat[i]-
 I.20 atum·erit·ut·s(upra)·s(cripta)·est·non·dederit·feceritue, [ean]-

Heading. For the *pagi* see IV.1.a, especially n. 29.

I.1–5. M. H. Crawford suggests: '[Quas operas alitue quid ad] riuiom·Hiberiensem / [praestare debeant quasue ad] / molem·riui·Hibe- / [riensis, praestare debent quasue] e ad aliam·rem·a- / [quae eius riui ergo magistris pagi i]mperauerint siue quid / aliud in eam rem ...'

I.5. The feet of only up to four letters are visible.

I.17. The reading *curatorisue* cannot be discounted. In *praesentiam* the letters *-sen-* are incomplete at the top, and *-tia-* extremely blurred.

I.18. The *H* of *habere* shows, to the right of the second vertical stroke, a horizontal stroke halfway up.

I.18–19. The correction of the verb forms *potueri<n>t* and *denuntie<n>t* seems to be required by the fact that the subject is *magistri·pagi·curatoresue*.

- §2b I.21 dem·poenam·quae·s(upra)·s(cripta)·est praestare·debeat. Ad ri-
 I.22 uoem·Hiberiensem·Capitonianum purgandum
 I.23 reficiendumue ab·summo usque ad molem·i-
 I.24 mam quae est·ad Recti·centurionis·omnes pa-
 I.25 gani·pro parte (vacant 4)·sua·quisque praestare debe-
 I.26 ant.
- §3a I.27 Riuos quibus·utentur·communitē purgent re-
 I.28 feciant·ita·ut·qua·fine quisque·aquam habet
 I.29 usque·eo·operas·praestet; perfectis riuīs, [a]b eā
 I.30 mole qua·quisque aquam deriuat·ad proxumam[m]
 I.31 molem·purgare*·anno bis·cum·ei·magistri pa-
 I.32 gi·diem·dixerint·denuntiauerint; id·adsidūe
 I.33 fieri·debeat·quod·ipsius dolo malo non·fiat.
- §3b I.34 Item·si quis·canalem·aut·pontem positum habet,
 I.35 tamquam·mole·obseruabitur·et·eum·locum is
 I.36 tueri·et·purgare debebit·et·quantum·ab ea re
 I.37 riuus·impeditus·erit·quominus·aquā iusta per-
 §3c I.38 fluat·Magistri·pagi·magisterium·gerent·ex k(alendis) Iun(is)
 I.39 in k(alendas) Iunias sequentes·et·ex quo magistri·suffec-
 I.40 ti·erunt diebus quinque proxumis pagum in
 I.41 concil[i]o h[abeant] maiorisque partis·paganor-
 I.42 um·sent[en]tia·ab riuo Hiberiensi·ex ea die
 I.43 quae pa[g]anis placuerit·aquam auertant dum
 I.44 imam·sortem·aurationis·auertant·operasque ad
 I.45 eum riuum·reficiendum·purgandumque ex·idi-
 I.46 bus Iulis·inducant.
- §4 I.47 Pagani·qui·in Belsinonensi·aut·in pago erunt
 I.48 cum pagi magistri·denuntiauerint ad termi-
 I.49 num·proximae uillae·Valeri·Auiani·hora secun-
 I.50 da·in concilio adesse debebunt·pro modo aqua-
 I.51 tionis·et nequis·a·concilio·discedat·ante quam
 II.1 concil[ium(?) ---] ad- (?)
 II.2 fuerit c+* [---]a
 II.3 non rec[---mag]is
 II.4 tris·pagi[---] qua
 II.5 ab riuo H[iberiensi---]erit
 II.6 siue quis·[---]a
 II.7 stercus +* [---] in-
 II.8 cilem·e+* [---]iue-
 II.9 rit·aquā[--- contra (?) m]aio-
 II.10 ris·part[is] paganorum sententiam ---f]ecerit
 II.11 X (denarios) CCL·m[ag(istris) pagi d(are) (?) d(ebet) (?)]
- §5 II.12 Riuo Hiber[iensi ---]
 II.13 per·liber[tum] (?) ---]
 II.14 um·in qu+* [---]

I.31. It should be understood that *purgare* depends on a missing verb, such as *debeat*.

II.2. Perhaps the left-hand part of a V.

II.7. Three horizontal strokes on top of each other – E?

II.8. A high horizontal stroke – T? on the edge of a patch.

II.14. Left-hand part of a circular letter – O? *quo?*

- II.15 perfecta+* [--- intra dies quinque pro- (?)]
 II.16 *xūmas eodem[---]
 II.17 ++*ATVM qu[---]
- §6 II.18 Si aquae dū[cendae (?)----]
 II.19 *Belsinōne[---]
 II.20 noque cae+* [---]
 II.21 idemque no+[c.4]+D+* [---]
 II.22 quibus·aqua in riuo defecerit +* [---]
 II.23 misue merentur riuos paganico[s (?)----]
 II.24 purgare·sarcireque debebit·in [diebus quinque (?)-pro-]
 §6bis II.25 xūmis (?).(?)*Quibus·riuus·Hiberien[sis ---]
 II.26 fuerit puros sartosque hab[---]
 II.27 sententia (?) purum sa[rtumque---]
 II.28 quid magistri·p[agi ---]
 II.29 iudicauerint·t+* [---]
 II.30 qui (?) riuom pu[rum (?)----]
 II.31 +um* d(are) d(ebeto) (denarios); quicum[que (?)---- post- (?)]
 II.32 quam usus fuerit[---]
 II.33 *obligauerit (denarios) XXV[---]
 II.34 quantum eius IN+++ [---]
- §7 II.35 Si quis liberum·tabu[larium (?)----]
 II.36 magistrī pagi sustu[---]
 II.37 quis quisque fecerit [---]
 II.38 magistrī pagi suō magi[sterio---]
 II.39 B+SATO+++++ERE* [---]
 II.40 SP+C+++++VAT++++* [---]
 II.41 decem (?) quibus magist[er] [---]

- II.15. After *perfecta*, the remains of a letter which might be O or Q: *perfecta* o[---] or even *perfecta* q[ue].
- II.16. The first two letters appear outside the margin.
- II.17. The first two letters appear outside the margin. QV? *qua tum qu*[---]?
- II.19. There might be two letters outside the margin. IN?
- II.20. Vertical stroke.
- II.21. What is left of the first incomplete letter looks like an L with the vertical stroke slanting slightly; the remains of the second incomplete letter consist of a vertical stroke; and only the foot is left of the third incomplete letter: perhaps *nol[ueri]t D+*.
- II.22. Foot of the letter.
- II.25. Probably a new section begins at *quibus*.
- II.29. The first two letters, IV, are larger and figure outside the margin probably due to an error. After *t*, the foot of a letter.
- II.31. Probably *-dum* or *tum*; if the latter, it might read [*tan*]tum; but it is not possible to rule out other readings as *-nam* ([*poe*]/*nam*?); in this case the previous text could be ‘pu[rum sartum]que(?) non(?) habuerit(?) *poe*-/nam ...’ (M. H. Crawford).
- II.33. Outside the margin there seems to be QV and the left half of an O: *quo*?
- II.34. TA++ cannot be completely discounted; after TA, two vertical strokes: + or +++
- II.39. After the B, a vertical stroke: I or E? After SATO, seven letters, which are, respectively: a vertical stroke from which three horizontal strokes emerge: E? (1); a semi-circle: O? (2); R? (3); O or V? (4); M? (5) — perhaps *eorum*; a vertical stroke with a horizontal one over it: T? (6); and a semi-circular stroke: C? (7). After that, the reading ERE is uncertain.
- II.40. After SP, a vertical stroke: I? After C, perhaps E, without discounting T or F, and then five further letters: the left-hand part of a V? (1); downward-sloping stroke (2); two vertical strokes (3); T? (4); O or X? (5). After VAT, four letters: V or M? (1); E, T or R? (2); V or N? (3); L? (4).

- II.42 paganorum pro portio [ne---]
- §8 II.43 Quorum rem suam agent [--- actio (?) perse-]
 II.44 cutioue est[o] in (?) eum (?)+++* [--- mag(istris) pagi pub-]
 II.45 licanoue quicumque+++* [---]
 II.46 pignoris capio* erit qu* [---]
 II.47 bus pignus dare noluer[it (?)---]
 II.48 PRO+++AVERIT* (?) aut dare no[luerit (?)--- (denarios) (?) XXV
 mag(istris) pagi]
 II.49 publicanoue is·d(are)·d(ebeto)·
- §9 II.50 In·his·rebus omnibus per[---]
 II.51 publicanos·duos·quos·u[---]
 II.52 quod·ex hac·lege pignus [---]
 II.53 captum·erit·in diebus·qui[nque proxumis in qui-]
 II.54 bus·captum·erit·luito (?) n+++* [--- mag(istris) pagi]
 III.1 publicanoue·eorum in paganico sub praecone uen-
 III.2 dere·liceto.
- §10 III.3 Si quis pignus indebite·a·se captum esse arbitrabitur, in
 III.4 diebus quinque proxumis·iudicium·cum·mag(istris)·pagi·pub-
 III.5 licanoue addicat qui·eo loco iuri dicundo praeerit,
 III.6 ex quo·is·erit·qui·contra·legem·fecisse dicetur, iudici-
 III.7 um·intra dies quinque·finiatur.
- §11a III.8 Si quis·suo magisterio quid earum rerum·quod aduersus
 III.9 hanc·legem factum·erit·persecutus non erit,·easdem poe-
 III.10 nas quas qui commiserunt·mag(istri)·pagi·paganis praesta-
 III.11 re debento eiusque rei·in magistros·pagi·actio·persecu-
 III.12 tione·omnibus·paganis·esto; persecutor·eius poenae
 III.13 [eius quod (?) exactum erit·dimidium·in commu[ne]* redigunto;
 III.14 [dimidium(?) habere(?) lice(?)to]
- §12a III.15 [Si (?) aquatio (?) ---*]naria·erit·et·alius·utitur·utiue
 III.16 [poterit (?), ---*]it auerteritue siue quid fecerit
 III.17 [quo (?) minus (?) ---*]e uti·possit,·ei·cuius·aqua·fuerit, (denarios)
 §12b III.18 [--- tum (?) quotien(?)s intererit·praestare·debeat.·Si·
 III.19 [quis (?) ad (?) iusiurandu(?)m·adigere maluerit dum·ipse·ca-
 III.20 [lumniae (?) causa (?)* no]n recuset,·is cum quo agetur·iura-
 III.21 [re debeat(?) et (?) si (?) non(?)] iurauerit,·eandem·poenam·quae
 III.22 [s(upra) (?) s(cripta) (?) est (?) praestare (?) debeat(?)].
- §13 III.23 [Si quis suo magis]terio quod ex hac·lege facere (*vacat*) o-
 III.24 [portet non f]ecerit, (denarios) XXV in singulas·res·paganis

II.44. After *eum* (?), three letters: X (*denarios*)? (1); R or B? (2); E or B? (3); *re-* (?).

II.45. Shapeless remains of two letters.

II.46. After *pignoris*, the word *capto* cannot be discounted. No appreciable dot after *erit*: *eritqu[e]*?
 II.48. Seems to read *profitauerit*, which cannot be a form of *profiteor*.

II.54. After N, three vertical strokes: *neu[e]*? The reading *luito* was suggested to me by M. H. Crawford, who wonders if the following text could be read ‘... *luito* (?) nisi [luerit...].’

III.13. Text lost because of a missing rectangular patch.

III.15–17. M. H. Crawford suggests: ‘[Si aquatio binaria siue ter]naria erit et alius utitur utiue / [poterit, si quis eorum interer]it auerteritue siue quid fecerit / [quo minus quis eorum liber]e uti possit, ei cuius aqua fuerit (denarios) / ...’ At the beginning perhaps ‘[Si aquatio extraordi]naria ...’

III.19–20. M. H. Crawford suggests: ‘...dum ipse ca-/[ueri sibi ab eo no]n recuset...’

- III.25 [praestare debeto eiu]§que poenae petitio persecutiou[e]*
 III.26 [in magistros pag]i omnibus paganis esto; persecutor
 III.27 [eius (?) quod (?) exactum(?)] erit·dimidium paganis·reddito;
 III.28 [dimidium (?) poen]ae habeto.
- § 14 III.29 [Si (?) quis (?) ab (?) aliquo (?) p]oenam·ex hac lege petet,·is·a quo poe-
 III.30 [na petita (?) fuerit (?)] uadimonium·ad eum·qui·proxumae
 III.31 [iurisdictio]n̄i(?)·municipi·aut·coloniae praeerit
 III.32 [promittat (?) --- pr]oxumae (?) rationis habita ex edicto·Mi-
 III.33 [nici / -nuci* (?) ---]an̄i (?) leg(ati) Aug(usti)·clarissim̄i uiri ut in
 III.34 [---*]+++* promitt̄i·oportebit·iudicem
 III.35 [---* inter] quos·controuersia·erit·extra ordi-
 III.36 [nem ---*] quā* secundum legem·intra dies quin-
 III.37 [que proxumas quibus (?)]datus erit pronuntiet.
- § 15 III.38 [Is (?) qui (?) cum (?) ali]quo hac lege·aget·petetue hanc·for-
 III.39 [mulam accipi]to (*vacat*) Iudex esto. Quiquit parret·e·lege
 III.40 [riui (?) Hiberiensis (?)] quae lex·est·ex conuentione paga-
 III.41 [nica(?) omnium(?) C]aesaraugustanorum·Gallorum Cas-
 III.42 [cantensium* Bels]inonensium·paganorum·illum
 III.43 [illi dare oportere], ++* iudex·illum·illi·c(ondemnato),
 ·s(i)·n(on)·p(arret)·a(bsolute).
- § 16 III.44 [Hanc legem -c.4-* Fu(?)]ndanus·Augustanus·Alpinus·leg(atus)
 III.45 [pr(o) (?) pr(aetore) (?) Imp(eratoris) Caes(aris) Tra]jani
 Hadriani·Aug(usti)·aditus a·magis-
 III.46 [tro pagi pagano]rum·Caesaraugustanorum·L(ucio)·Man-
 III.47 [lio(?) L(uci) f(ilio) (?) Ani(ensi) tribu (?) Mate(?)]rno
 sancxit(!)·ratamque·esse iussit.

III.2. TRANSLATION

[Lex (?) Paganica (?)] on the channel of the *pagus* of the Gauls, the [*pagus* (?)] *Belsinonensis* and the *pagus Segardenensis*.

§ 14 (I.1–8) [*Whatever labour or anything else for* (?)] the channel *Hiberiensis* [*they may be obliged to supply, or whatever (labour) for* (?)] the dam of the channel *Hiberiensis*, [*they are to be obliged to supply it, or whatever (labour) the magistri pagi* (?)] have commanded for any other matter [*in connection with the water of that stream* (?)], or whatever else they have ordered or notified to be done for that matter, or (if they have) commanded the contribution of money in accordance with the opinion of the majority of

III.25. *Persecutioum* (!).

III.33. On the possible identification of this governor with C. Minicius Fundanus, *cos.* 107, see IV.1.a and IV.6 n. 187: in this case the text should say *Mi-[/nici -c.5- Fund]ani...*

III.34. The feet of three letters.

III.36. Before *secundum*, the word *qui* cannot be discounted.

III.34–6. M. H Crawford suggests: ‘ut in / [edicto pr. urb.] promitti oportebit iudicem-/ [que is qui i. d. praeerit inter] quos controuersia erit extra ordi-/ [nem dato ea lege] qua secundum legem...’

III.42. The gentile noun for *Cascantum* is *Cascantensis* in Pliny the Elder (*NH* 3.24) and in the later letter from Pope Hilarius to Ascanius of Tarragona (*ep.* 16.1–2), but *Cascantini* in the *periochae* of Livy (*frag.* 91); the latter is less likely but cannot be discounted: *Cascantensium* or *Cascantinorum*.

III.43. Two letters: the first one could be V or perhaps I, and the second S or T: *is*?

III.44. Perhaps [*Hanc legem Ti. Cl. Fu*]ndanus *Augustanus Alpinus*; or [*Hanc legem Minic. Fu*]ndanus *Augustanus Alpinus*. On the identification of the legate, see IV.1.b.

the *pagani*, provided that they pronounce their votes in proportion to the extent of their individual water-rights.

§ 1b (I.9–15) And if anyone, in the judgement of those, or of him, who shall be in charge of the works, shall not provide the (required) works, or shall have declined anything else which shall have been commanded of him or notified to him, or shall have caused a delay so that it might be done later, or shall not have paid money on time, then, as often as he has committed (such acts), he must give to the *magistri pagi* 25 denarii per individual order (unfulfilled). All of that the *magistri pagi* are to pay to the common fund.

§ 2a (I.16–21) (If) the *magistri pagi* or *curatores* shall not be able to obtain the presence of anyone who is obliged to supply labour or anything else, they should notify his house or household, and (if) he whose house or household shall have been notified as written above shall not give or do it, he must pay the same penalty as that written above.

§ 2b (I.21–6) To the clearing and repairing of the channel Hiberiensis Capitonianus from its uppermost part as far as the bottom dam, which is at the (property) of the centurion Rectus, all the *pagani* must contribute each in proportion to his share.

§ 3a (I.27–33) The channels which they use in common they should clean and repair, in such a way that up to the limit of where each person has access to water, thus far he should supply his labour; once the channels are intact, from that dam from which each derives water, to the next dam, (he should) clean twice a year when the *magistri pagi* shall have named a day for him and notified it. Whatever it would be someone's *dolus malus* not to do must be done at all times.

§ 3b (I.34–8) Also if anyone has a canal or a bridge installed, that is to be looked after as if it were a dam, and he must protect and clean the place in question, in particular insofar as the channel has been blocked by that installation such that the proper flow of water is impeded.

§ 3c (I.38–46) The *magistri pagi* should hold their magistracy from the kalends of June to the kalends of the June following and from the time when they shall have been appointed *magistri*, during the next five days they should gather the *pagus* in council, and in accordance with the opinion of the majority of the *pagani* they should divert the water from the channel Hiberiensis starting from the day which shall have the approval of the *pagani*, until they divert the lowest apportionment of the water supply, and from the Ides of July they should organize the labour for the repair and cleaning of this channel.

§ 4 (I.47–II.1) The *pagani* who shall be in the (district) *Belsinonensis* or in the *pagus*, when the *magistri pagi* notify them, will be obliged to gather in council at the second hour at the boundary of the nearest villa of Valerius Avianus, in proportion to (their share of) the water supply; and no-one should leave the council before it . . .

§§ 4–6 (II.1–34) *Provisions regarding canals (especially their cleaning) whose meaning is unclear, including (§ 6) an unauthorized use of water by the Belsinonenses.*

§ 7 (II.35–42) *Paragraph of uncertain content regarding the magistri pagi and perhaps a libertus.*

§§ 8–9 (II.43–III.2) *Seizures and publicans: § 8 seems to establish the right of the magistri pagi and publicans to seize the goods of anyone who could not or would not pay the amounts they owed, and § 9 states that two publicans are to act in these matters, and that unless the debt is settled within five days, the seized goods may be sold by the magistri pagi or the publican at a public auction held in the pagus.*

§ 10 (III.3–7) If anyone shall think that a pledge has been seized from him unduly, within the next five days he who is in charge of jurisdiction in that place, from which the person comes who shall be said to have acted against the law, should set up a trial with the

magistri pagi or publican. The trial should be concluded within five days.

§ 11 (III.8–14) If anyone in his term of office shall not have sought restitution for any of those things which shall have been done against this law, the *magistri pagi* must pay the same penalties to the *pagani* as those who have committed the offence, and all the *pagani* shall have the right to take action against the *magistri pagi* or to sue for that thing; the person who sues for that penalty is to pay half [of what] has been exacted into the common treasury and is to [be allowed to have half].

§ 12 (III.15–22) [If the water supply is shared between two or three (?)]¹⁵ and someone else uses it or [can] use it, [if anyone of them blocks (?)] or diverts it or does anything [to prevent any of them (?)] being able to use it, he should be obliged to pay [---] denarii to the person whose water it is [for each time] that he blocks it. If [anyone] prefers to exact [an oath], provided that he [does] not refuse [the giving of security to himself (?)],¹⁶ the person who is sued [should be obliged] to swear, [and if] he does not swear [he should be obliged to pay] the penalty that [is written above].

§ 13 (III.23–8) [If anyone in his term of] office has [not] done what he is [obliged] to do under this *lex*, he [must pay] the *pagani* 25 denarii for each offence, and there is to be action and suit for that penalty for all the *pagani* [against the *magistri pagi*]; the person who sues is to pay half [of what has been exacted] to the *pagani*, and is to have [half of the penalty].

§ 14 (III.29–37) [If anyone] shall seek a penalty [from anyone] according to this law, the person from whom the penalty [is sought should promise] *uadimonium* (to appear) before the person who is in charge of the nearest [jurisdiction] of a *municipium* or colony, taking account of the next . . . (?) according to the edict of Mi[nicius(?) Fund]anus(?), legate of the emperor, senator, as it shall be obligatory for it to be promised in [the edict of the urban praetor(?)], and [the person who shall be in charge of jurisdiction is to assign(?)] a judge *extra ordinem* [to] those [between] whom there shall be a dispute, [on the condition] that he gives judgement according to the law in the five days [next following the one on which] he shall have been assigned.

§ 15 (III.38–43) [The person] who shall take anyone to court or sue under this law [is to accept] this formula: (Name) is to be judge; whatever it shall appear according to the law [of the channel Hiberiensis], which law is established by the paga[nic] agreement [of all] the *pagani*, the Galli of Caesaraugusta (and) the Belsinonenses of Cascantum, that he [is obliged to pay him], that *iudex* is to condemn him (to pay it) to him; if it shall not appear, he is to acquit (him).

§ 16 (III.44–7) [---]ndanus Augustanus Alpinus legate [pro praetore(?)] of the Emperor Caesar Traianus Hadrianus Augustus, approached by the *magister [pagi]* of the *pagani Caesaraugustani*, Lucius Man[lius(?) Mate]rnus(?), [the son of Lucius(?), from the Aniensi tribe(?)], established [this law] and ordered it to be binding.

IV COMMENTARY

IV.1. SUBJECTS AND NATURE OF THE DOCUMENT (Heading and §§ 15–16)

The parties in the document are, on the one hand, two or three rural districts making up the irrigation community and, on the other hand, a provincial authority who mediates between them.

¹⁵ Or alternatively, [If there was an extraordinary water supply (?)] and . . .

¹⁶ Or alternatively [due to calumnia(?)], the person . . .

IV.1.a. *The Pagani of Caesaraugusta and Cascantum (Heading, I.47, II.19 and III.40–2)*

In spite of the fragmentary nature of the document, the heading makes it quite clear that the clauses that follow it refer to a *riuus* exploited by several communities. The canal is unmistakably mentioned various times in the text as *riuus Hiberiensis* (I.1, 2, 42; II.5, 12, 25), in other words, the Ebro canal, whilst with regard to the communities that used it, two are featured as *pagi*, the *Galli* and *Segardenensis*; the term defining the third, of which only the name, [*Be*]sinonensis, survives, has been lost. The *pagus Segardenensis* is not mentioned again in the surviving part of the document, but the *pagus Gallorum*, as well as the *Belsinonensis* district, reappears in three further passages of the inscription: the first, in relation to the calling of a *concilium*, stipulates that all the *pagani* who are in *Belsinonensi aut in pago* (I.47) are required to attend; the second seems to refer to possible diversions of the flow by the *Belsinonenses* (II.19); and the third clarifies that the stipulations included in the inscription were taken ‘ex conuentione paga[nica(?) omnium(?)] [Ca]esaraugustanorum Gallorum Cas[––] Bels]inonensium paganorum’ (III.40–2), thus emphasizing the *pagus* connection with the agreement, probably with the aim of making it clear that it only applied to these rural districts of the two *ciuitates*, and not to the entire cities or to other irrigation communities that they might include.

Two contradictions arise from these passages. Firstly, while in the heading it appears that the number of communities affected was three (*Galli*, *Belsinonenses*, and *Segardenenses*), this number later seems to go down to two: the inhabitants of the *pagus Gallorum* and the *Belsinonenses* (III.40–2). Secondly, while the status of the former as *pagani* is established in the heading and in III.41, which also states that they belong to the colony of *Caesaraugusta*, the issue is not so clear with regard to the latter as the term that classifies them is missing in the heading: their status as *pagani* seems to be deduced from III.40–2 as well as from the document as a whole, which at all times refers to the parties with this term; however, some doubts arise from I.47, since the territory of *Belsino* is mentioned in contrast to the *pagus* and in the same form (*in Belsinonensi*) as was usually employed in cadastral documents to refer to the lands of a *ciuitas*.¹⁷

Let us look at these aspects in more detail. The omission of the *pagus Segardenensis* later in the document may be explained by the text of a small bronze plaque, of uncertain date, from El Razazol (Gallur), which reads: ‘Sextus Anininius / ludus(!) pago Gallo/rum et Segardine/nssium(!) fecit’.¹⁸ This seems to suggest that these two communities together formed a single *pagus* which, thanks to the Bronze of Agón, we now know depended on the distant colony of *Caesaraugusta*,¹⁹ situated 50 km down river; this shows that this city administered a vast amount of rural land along the right bank of the river (Fig. 1).²⁰ It is very likely that the integration of the two *Caesaraugusta pagi* into a single irrigation

¹⁷ *Tabula alimentaria* of *Veleia*: ‘in Veleiate, in Lucensi, ...’ (CIL XI.1147); *Tabula alimentaria* of the *Ligures Baebiani*: ‘in Beneuentano, ...’ (CIL IX.1455). In II.18ff. as well, there seems to be a certain contrast between the *Belsinonenses* (II.19) and the *riui paganici* (II.23).

¹⁸ ‘Sextus Aninius held games in the *pagus* of the *Galli* and *Segardinenses*’. Edited by M. Beltrán, ‘Una celebración de *ludi* en el territorio de Gallur’, in *XIV Congreso Nacional de Arqueología* (1977), 1061–70; for the interpretation of *ludus*, I. Rodá, ‘Bronces romanos de la Hispania Citerior’, in *Los Bronces romanos en España* (1990), 71–90, at 178, No. 30 (= *Hispania Epigraphica* 4 (1994), 950), who understands it as a *cognomen*, ‘*Ludus*, not attested elsewhere, and F. Beltrán, ‘Epigrafía romana’, *Caesaraugusta* 72 (1997), 275–333, at 306, who, like the first editor, takes *ludus* for *ludos*.

¹⁹ On *Caesaraugusta* in the imperial period, the latest study is by M. Beltrán and G. Fatás, *César Augusta, ciudad romana. Historia de Zaragoza* 2 (1998); in addition, F. Beltrán, ‘*Caesar Augusta*, ciudad de Augusto’, *Caesaraugusta* 69 (1992), 31–43, and forthcoming F. Beltrán (ed.), *Zaragoza. Colonia Caesar Augusta. Ciudades romanas de Hispania* 5.

²⁰ On the territory of *Caesaraugusta*, M. A. Magallón and F. Beltrán, ‘El territorio’, in F. Beltrán (ed.), op. cit. (n. 19); E. Ariño, *Catastros romanos en el convento jurídico caesaraugustano. La región aragonesa* (1990), 43–91. On the boundary stone of Fuentes de Ebro, 25 km east of Zaragoza, which has been considered to be the eastern limit of *Salduie*, the Iberian forerunner of *Caesaraugusta*, F. Beltrán, ‘El *terminus* republicano de Fuentes de Ebro (Zaragoza)’, in G. Paci (ed.), *Epigrafai. Miscellanea epigrafica in onore di Lidio Gasperini* (2000), 71–82.

community ended up effecting the merger of the two, as is borne out by the Gallur plaque. The place where the document was found and the survival of the name make it almost certain that the *pagus Gallorum* would have been in the neighbourhood of Gallur, with its population nucleus (*uicus*?) at the site of the El Razazol excavations.²¹ However, the exact location of the *pagus Segardinensis* or *Segardenensis*²² (apparently subordinate to the *Galli* according to the Bronze of Agón) cannot be precisely established, although it would almost certainly have been not far from Gallur, perhaps on the banks of the Ebro further west, between Gallur and Mallén.

With regard to *Belsino*, Ptolemy mentions it as a Celtiberian *polis* (Βέλσινον). As far as can be ascertained from the itineraries, which refer to it as *Balsione* or *Belsionem* and situate it 20 miles from *Turiaso* (Tarazona),²³ its location would have been near Mallén, which is less than 30 km as the crow flies from Tarazona and has a site dating from the imperial era;²⁴ or at any rate somewhere nearby²⁵ (Fig. 1). Although, judging by I.47 ('in Belsinonensi aut in pago'), one might think that *Belsino* was a *ciuitas*, III.40–2 suggests that while the *Galli* (and the *Segardenenses*) made up a rural district in the colony of *Caesaraugusta*, the *Belsinonenses* depended on a community called *Cas[—]*, whose most likely reading is *Cascantum* (Cascante) — a Latin *municipium* founded by Augustus, belonging to the *conuentus iuridicus* of *Caesaraugusta*,²⁶ situated 25 km north-west of Mallén. In that case, the *Belsinonensis* territory would be a rural district of *Cascantum*; its name would be explained either by its proximity to the lands of the former Celtiberian city of *Belsino*²⁷ or else by its coinciding with them, if this community had lost its autonomy in favour of *Cascantum*, after becoming, for example, a *ciuitas contributa* of this locality.²⁸ This circumstance might explain the ambiguity of the references to the *Belsinonenses*

²¹ In el Cabezuolo or Razazol de Gallur, the remains of at least two public buildings have been discovered, one rectangular (13 by 11.50 m), surrounded by a colonnade, and the other of large alabaster stones: M. Beltrán, 'Notas arqueológicas sobre Gallur y la comarca de las Cinco Villas de Aragón', *Caesaraugusta* 33–4 (1969–70), 89–117, at 104–5, and pls 8–9. On the origin of the *pagus Gallorum* see n. 204, below.

²² An adjective deriving from a place-name whose root would have been **Segardin-*.

²³ Ptol. 2.6, 57; *It. Ant.* 443.4; *Rav.* 310.18; 313.7 (*Belisarium*). For the road from *Turiaso* to *Caesaraugusta*, M. A. Magallón, *La red viaria romana en Aragón* (1987), 160ff.

²⁴ For the Convento of Mallén site, with important layers from the first century B.C.E. to the third century C.E., J. I. Royo, 'El Convento, Mallén', *Arqueología* 92 (1992), 242–4.

²⁵ The former name seems to have been preserved as *Belsune* in a Papal document dated 7 July 1260, which was drawn to my attention by I. Aguilera (to whom I am grateful for the reference), which lists the churches belonging to the see of Zaragoza, including the following parishes in the area that concerns us: '(...) de Novillas, de Cortes, de Acut, de Mayllem, de Agon, de Frescano, de Belsune, de Meçalcorach, de Gaynalur, de Magalon (...)'; instantly recognizable are Novillas, and tracing the course of the River Huecha, Cortes, Acut (which, if it is to be understood as Açut, in other words 'azud' or 'dam', might refer to a dam in this river), Mallén, Agón, turning back north, Fréscano, and then Belsune, Meçalcorach, Gañarul, and Magallón (A. Canellas, *Los cartularios de San Salvador de Zaragoza. Monumenta Diplomatica Aragonensia* (1990), III, 859, No. 1264). *Meçalcorach* would be la Granja de Muzalcoraz, near Magallón (see J. Lajusticia, *Agón* (2002), 67–8), and so it is likely that *Belsune* referred to the area of Bisimbre (a locality omitted from this list), where, however, there are no major Roman remains as far as is known; thus, for the time being, it is preferable to stick to El Convento of Mallén (see n. 24) as the most likely option for *Belsino* and to explain the reappearance of this name in the area of Bisimbre as a slip, without excluding other possibilities, such as the fact that it may have corresponded to a rural district of another community that took this name as it was near *Belsino*.

²⁶ Plin., *NH* 3.24; coins were struck with the legend *Municip. Cascantum* at the time of Tiberius: A. Burnett, M. Amandry and P. P. Ripollés, *Roman Provincial Coinage I* (1992), 133–4.

²⁷ This could also be the explanation for the twofold *Carbula* (Plin., *NH* 3.10) / *pagus Carbulensis* (CIL II/7.728) in Baetica, which some feel would indicate the reducing of the former *ciuitas* of *Carbula* to the status of a *pagus* after its *contributio* with *Corduba* (U. Laffi, *Adtributio e Contributio. Problemi del sistema politico-amministrativo dello stato romano* (1966), 156; L. Curchin, 'Vici and pagi in Roman Spain', *REA* 87 (1985), 327–43, at 338–9; M. L. Cortijo, 'El *pagus* en la administración territorial romana. Los *pagi* de la Bética', *Florentia Iliberritana* 2 (1991), 99–116, at 112–13), but it could also be a district of *Corduba* so named because of its proximity to the city of *Carbula*, as argued by A. U. Stylow, 'Epigrafía romana y paleocristiana de Palma del Río. Córdoba', *Ariadna* 5 (1988), 113–59, at 116–17; E. Melchor, 'El territorio', in X. Dupré (ed.), *Córdoba. Colonia Patricia. Ciudades romana de Hispania I* (2004), 105–17, at 107.

²⁸ On *contributio*, Laffi, op. cit. (n. 27), 158–65.

either as *pagani* or with similar references to those used for a *ciuitas* (in *Belsinonensi*). In that case, the term defining it in the heading, although the gap is, in principle, too big for this, could well have been *pagi*.²⁹

At any event, it is clear that those affected by the regulations, in spite of sharing the same irrigation system and forming to all effects an irrigation community with certain common institutions, still belonged to two different *ciuitates*, *Caesaraugusta* and *Cascantum*, as may be gathered not only from III.40–2 but also III.31, *municipi aut coloniae* (unless this is a generic reference), and from other passages.

IV.1.b. [---Fu?]ndanus Augustanus Alpinus, the Legate of Hadrian (III.44–5)

Together with these two communities of *pagani*, the third player in the document is the senator whose name and title are incomplete, who appears in the last paragraph of the text sanctioning and ratifying the agreement adopted by them (§ 16, III.44–7).

All that we have of his title is the abbreviation *leg(atus)* and in the next line, the end of the name of the emperor Hadrian, ‘[Imp(eratoris) Caes(aris) — or less probably Caesaris — Tra]jiani Hadriani Aug(usti)’ (III.44–5), which enables us to date the document between 117 and 138 C.E. At the beginning of III.45, before the name of the emperor, there is very little usable space left, although given the variability of the number of letters per line in this column, it is impossible to state whether there was any abbreviated word before the emperor’s name or not.³⁰ Thus, the senator in question could just as well have been the governor of the province, in other words the *leg(atus)Aug(usti) pr(o) pr(aetore)*, as his *legatus iuridicus*, known simply as *leg(atus) Aug(usti)* until the time of Trajan, which was when the term *iuridicus* began to be added; as there are very few examples of one designation or the other that have come down to us from this period, and even then with major variations, it is not easy to resolve this problem.³¹

In principle, both senators had powers in jurisdictional matters in the province, as the governor would delegate some of these tasks to the legate:³² indeed, during the reign of Hadrian, there is evidence of the intervention, in 119 C.E., of a *legatus iuridicus*, Ti. Claudius Quartinus,³³ in this very region, specifically in *Calagurris* (Calahorra).³⁴ Neither are the provincial *fasti* during Hadrian’s time much help in resolving the issue, as between 117 and 138 C.E. there were very few senators active in Hispania Citerior that we know

²⁹ The gap in the heading between Fragments 4 and 8 measures *c.* 17 cm, which leaves space for some six or seven letters once the adjoining words are completed (‘Gallor[um- *c.* 6/7 -Bel]sinonensis’), too much for *pagi*, but not big enough for other words such as *ciuitatis* or *municipii*. Although the wall-fixing system does not suggest it nor can any parallels be drawn from similar bronzes, it is always possible that there was, precisely at this point in the exact centre of the upper part of the bronze, an empty space (marked with a special interpunction, for example, or less likely, with a perforation), in which case, the reading *pagi*, which would have been expected, would indeed be possible.

³⁰ In the first lines of the column, which have come to us intact, the word count varies between forty and forty-nine, not counting interpunctuations. In the lost part of III.46, whose supplement is quite sure, there are twelve letters missing.

³¹ G. Alföldy, *Fasti Hispanienses* (1969), 212–15, 237–40: until the time of Trajan, *legati iuridici* were known simply as *legatus (Augusti) Hispaniae Citerioris*, but from then on the term *iuridicus* (*legatus Augusti iuridicus Hispaniae citerioris*) was added; from the time of Antoninus Pius their field of activity was limited to the north-west of the province (*per Asturiam et Callaeciam, Asturiae et Gallaeciae*, etc.). With regard to the titles of governors, it is very rare not to see the reference *pro praetore*, although there are exceptions (CIL VIII.24094; II.4121; etc.).

³² Strabo 3.4.20 on the duties of the governors of Hispania Citerior in the early days of the Principate.

³³ *cos.* 130 C.E.: PIR² C 990; Alföldy, *op. cit.* (n. 31), 79–81.

³⁴ CIL II.2959; A. D’Ors, *Epigrafía jurídica de la España romana* (1953), 353–5; F. Camacho-Evangelista, ‘La “epístula” de Claudio Quartino y el proceso en contumacia en las provincias (provincia Tarraconense)’, *Revue internationale des droits de l’Antiquité* 11 (1964), 299–319.

about.³⁵ The complexity of the matter that is settled in the *lex rivi Hiberiensis* might suggest that it was the governor himself who personally intervened, and so, in principle, he would be identified as being a mature consular senator, of over forty years of age, as against the younger age and praetorian rank of the *legati iuridici*.³⁶ This is backed up by the fact that it was usually governors who intervened in territorial or judicial disputes that were settled by means of a *conuentio* between the parties, as with the case that concerns us (III.40ff.).³⁷ In this respect, there would be no problem with the fact that this senator was not documented until now, as the percentage of known consuls between the end of the first and beginning of the second centuries C.E. is fairly limited,³⁸ and thus there is nothing unusual about discovering one who is unknown; however, it is true that one might have expected to find some information about his long prominent career, as befits a consular governor, and so the issue cannot be definitively dismissed.

As far as the name is concerned, [---]ndanus Augustanus Alpinus (III.44), it does not match any known senator. Judging by the end of paragraph § 16, ‘sancxit ratamque esse iussit’ (III.47), the beginning must have featured a complement such as ‘[Hanc legem ...]’ or something similar, and therefore in the missing part of III.44 there is barely room before ‘[---]ndanus’ for five or six letters.

The most likely reading for this name is [Fu]ndanus,³⁹ almost certainly a *cognomen*,⁴⁰ in which case there would only be room before it for *praenomen* and *nomen* if abbreviated. The loss of the *nomen* severely reduces the possibility of establishing his family ties, yet this circumstance is made up for by the characteristic final sequence, Augustanus Alpinus, also found in the onomastic formulae of five other second-century senators, with whom we might assume that he had family ties.

(i) The oldest of these was a *homo nouus*, Ti. Claudius Augustanus Alpinus L. Bellicius Sollers, son of the knight Ti. Claudius Ti. f. Quir. Augustanus⁴¹ and later adopted by the knight Bellicius Sollers, who became a consul at the beginning of the reign of Trajan.⁴² (ii)

³⁵ Governors: Iunius Omullus (*cos.* 130?), *c.* 133? C.E. (*PIR*² I 759; A. Degrassi, *I fasti consulari dell'impero romano dal 30 avanti Christo al 613 dopo Cristo* (1952), 127; R. Syme, review of Degrassi, *JRS* 43 (1953), 148–61, at 159; Alföldy, *op. cit.* (n. 31), 26–8; W. Eck, ‘Jahres- und Provinzialfasten der senatorischen Statthalter von 69/70 bis 138/139’, *Chiron* 13 (1983), 147–237, at 197; he is also probably mentioned in a fragmentary inscription from Cartagena: J. A. Abascal and S. F. Ramallo, *La ciudad de Cartago Noua: la documentación epigráfica* (1997), 185–6: ‘[--- Ho- or O]mull leg. Aug. / [pr. pr.]’; M. Lollius Paullinus D. Valerius Asiaticus Saturninus (*cos.* II 125; *PIR*² L 320), who should be mentioned as governor of Hispania Tarraconensis in an unpublished African inscription (according to a letter from H.-G. Pflaum in 1973 to Eck, *op. cit.*, 197 n. 543). As well as the previously-mentioned *legatus iuridicus*, Claudius Quartinus (see n. 34), there is also evidence of two *legati* from the VII Gemina legion: L. Attius Macro, *c.* 127 C.E. (Alföldy, *op. cit.* (n. 31), 119–20; *CIL* II.5083; *leg. Aug.*) and T. Vitrasius Pollio, *c.* 133 C.E. (Alföldy, *op. cit.* (n. 31), 120).

³⁶ On the age and rank of these senatorial posts, Alföldy, *op. cit.* (n. 30), 211, 246.

³⁷ *CIL* III.591 (Dalmatia; reign of Caligula); *AE* 1940, 70 (Africa; reign of Domitian); 1969/70, 635 (Crete; reign of Domitian); etc. See other cases in *Diz. Epigr. Di Ruggiero* (1886), *s.u. arbiter* 621ff. Note the parallel with III.35 of the Sardinian *tabula* *CIL* X.7852 (69 C.E.), which also includes an appeal to the governor: ‘et post ea Caecilium Simplex uir clarissimum ex eadem causa aditus a Gallilensibus’.

³⁸ Degrassi, *op. cit.* (n. 35), 29–39; W. Eck, *Senatoren von Vespasian bis Hadrian* (1970), 58 (Domitian); on the other hand, G. Alföldy, ‘Consuls and consulars under the Antonines’, *Ancient Society* 7 (1976), 263–99, at 270–1, assesses the percentage of consuls known about during the reign of Antoninus Pius as being 84 per cent; see also G. Alföldy, *Consul und Senatorenstand unter den Antoninen* (1977), especially 11ff.

³⁹ Documented with this ending as well are Facundanus, Secundanus, and Vndanus; H. Solin and O. Salomies, *Repertorium nominum gentilium et cognominum Latinorum* (1994), 455, but Fundanus is the only one known to have been used in senatorial families, I. Kajanto, *The Latin Cognomina* (1965), 182: C. Annius Fundanus (*PIR*² A 651), C. Minicius Fundanus (*PIR*² M 612); on the latter, who might be mentioned in III.32–3, see n. 188.

⁴⁰ There is evidence of the use of names ending in -anus as a *nomen* in three cases: Andanus (*CIL* VIII.5733), perhaps Fundanus (Th. Rizakis and G. Touratsoglou, *Epigraphes ano Makedonias* (1985), 179 no. 187, in a Greek inscription in which the onomastic formulae are highly irregular from the Latin point of view), and Secundanus (*CIL* XIII.11654); Solin and Salomies, *op. cit.* (n. 39), 276.

⁴¹ *PIR*² C 805.

⁴² *PIR*² B 103.

He would have been related to the consul of the year 151 C.E., P. Cassius Dexter,⁴³ *tria nomina* which would have been followed by the names Augus[tanus Alpin]us Bellicius Sollers Metiliu[s ---]us Rutilianus according to a Cilician inscription, although not everyone agrees as to its reading,⁴⁴ and (iii–iv) to another two Cassii documented in a Spanish inscription from *Legio VII* (León), dated sometime in the second century, L. Cassius Paullus Augustanus Alpinus Bellicius Sollers and M. Cassius Agrippa Sanctus Paullinus Augustanus Alpinu[s],⁴⁵ in whose formulae the *cognomen* Augustanus has been modified as a *nomen*. (v) Finally, we have the ordinary consul of the year 169 C.E., Q. Pompeius Senecio (...) Sosius Priscus, the longest Roman polynym we know about, with thirty-eight names, including Augustanus Alpinus Bellicius Sollers.⁴⁶

Although there must have been family ties between these five and [---Fu(?)]ndanus Augustanus Alpinus, it is not easy to say exactly what they were. In fact our character was governor of Hispania Citerior at the time of Hadrian, being then over forty years, we must assume that he would have become a consul not later than 100–121 C.E., if he did so *suo anno*, and therefore this could very well be a son (born around the year 80 C.E.) of Ti. Claudius Augustanus Alpinus, before he was adopted by Bellicius Sollers.⁴⁷ If this hypothesis is right, the reading for III.44–5 could be as follows: ‘[Hanc(?) legem(?) Ti.(?) Cl.(?) Fu(?)]ndanus Augustanus Alpinus leg./[pr.(?) pr.(?) Imp. Caes. Tra]jiani Hadriani Aug. (...) sancxit ratamque esse iussit’. Anyway we cannot rule out the possibility that he was an already attested senator whose name we knew only partially until now, as for instance C. Minicius Fundanus, *consul suffectus* in 107 and *proconsul Asiae* around 122–123(?) C.E.,⁴⁸ who might be also mentioned in III.32–3, ‘Mi-/ [nici(?) – c. 5 – Fund]ani(?)’: ‘[Hanc(?) legem(?) Minic.(?) Fu(?)]ndanus Augustanus ...’.

IV.1.c. *Characterization of the Document* (II.52, III.9, 23, 29, 38, 40–2, 45–7)

Several times the document refers to itself as a *lex* (II.52; III.9, 23, 29, 38), whose origin is explained in the *formula* that the governor gave to the *pagani* on how to procede in court: ‘quitquit parret e lege / [c. 13] quae lexs est ex conuentione paga/[nica(?) omnium(?) Ca]esaraugustanorum Gallorum Cas/[cantensium Bels]inonensium paganorum...’ (III.40–2). Naturally this is not a public law affecting everyone, but a *lex rei suae dicta*, or regulation drawn up regarding a particular matter, in this case by the irrigators themselves, similar to those that Mommsen classified as *leges dictae rebus communi sacroue*

⁴³ *PIR*² C 490; Degrassi, op. cit. (n. 35), 44 dating his consulship as being 155 C.E.

⁴⁴ *CIL* III.12116 includes in line 1 the reading by E. L. Hicks, ‘Recent discoveries in Eastern Cilicia’, *JHS* 11 (1890), 231–54, at 251, carried out ‘with much labour’ from a squeeze: ‘[---]cius T. f. Cl. Dexter’; Groag (*PIR*² C 490) suggested correcting this to ‘[---]sius P. f. Cla.’ in view of transcription errors; a less harsh treatment of Hicks was afforded by A. Dupont-Sommer and L. Robert, *La déesse de Hiérapolis Castabala (Cilicie)* (1964), 51–3; however, they concentrated on the Greek part of the text, and ignored the Latin. The photograph they publish (pl. XX) unfortunately sheds no light on the question.

⁴⁵ H.-G. Pflaum, ‘Augustanus Alpinus Bellicius Sollers membres de la gens Cassia’, *AEspA* 39 (1966), 3–23. The inscription is fragmentary after ‘Alpinu[s]’, and so the onomastic formula of the latter may be incomplete.

⁴⁶ *PIR*² P 651; W. C. McDermott, ‘Stemmata quid faciunt. The descendants of Frontinus’, *Ancient Society* 7 (1976), 229–61. The complete name is to be found in *CIL* XIV.3609.

⁴⁷ *PIR*² B 103; the adoption took place after he had obtained military decorations in Domitian’s Germanic War. The governorship of Hispania Tarraconensis was not usually taken before the age of approximately forty, Alföldy, op. cit. (n. 31), 211. On the consular *fasti* for 118–126 C.E., W. Eck and P. Weiss, ‘Hadrianische Konsuln. Neue Zeugnisse aus Militärdiplomen’, *Chiron* 32 (2002), 450–89, at 480–4.

⁴⁸ *PIR*² M 612.

usui destinatis (or laws concerning common matters or for sacred use)⁴⁹ or to the *leges* that regulated the functioning of the *collegia*.⁵⁰

However, several signs suggest that this *lex*, as well as regulating the functioning of the irrigation community, also aimed to settle the conflict (unspecified in the text) that brought about the intervention of the provincial authority; this intervention was not spontaneous but requested by L. Man[lius(?)] L. f.(?) Ani.(?) Mate(?)rnus,⁵¹ one of the *magistri pagi* of the irrigators of *Caesaraugusta* (III.46–7), who, because they were situated downstream, occupied a weaker position in the community:⁵² in fact, § 6 seems to deal with a cutting off or cutback in the supply in the *Belsinonensis* territory. But above all, III.40–1 explicitly states that the *lex* was the result of a *conuentio* between the *pagani* of *Caesaraugusta* and *Cascantum*, a term which, according to Ulpian's definition, designated an agreement that settled a dispute,⁵³ and therefore, its use in the *lex* presupposes a conflict prior to the pact obtained by the intervention of Augustanus Alpinus.

This can also be deduced from a good number of inscriptions that include agreements *ex conuentione*,⁵⁴ generally in boundary disputes, which either seem to affect the terms of the pact,⁵⁵ or else the person who is to act as arbitrator,⁵⁶ and which were sometimes resolved by the parties themselves,⁵⁷ but at others required, as in our case, the intervention of the governor⁵⁸ or some other provincial authority.⁵⁹ The nature of the conflict is not specified in the document, however, and may only be clarified hypothetically based on the analysis of certain clauses in the text, which we shall come back to later.⁶⁰

All that is left now is to clarify the name of the regulation, which is referred to in the heading in a different way to III.40: in the heading, there is room at the beginning for some eleven letters, corresponding almost certainly to the term *lex* followed by an adjective ending in [---]a (*paganica?*),⁶¹ and then the three rural districts in question, *pagi Gallor[um]*, *pagi (?) Belsinonensis*, *pagi Segardenensis*, and after that, *riui* in the genitive; on the other hand, in the *formula* after 'quitquit parret e lege', there is room at the beginning of III.40 for some thirteen letters, perhaps 'e lege [riui(?) Hiberiensis(?)] quae lex est ex conuentione paga[nica (?)]. . . '.

⁴⁹ In C. G. Bruns, Th. Mommsen, and O. Gradenwitz, *Fontes iuris Romani antiqui* (1909⁷ = FIRA), 282; they include, for example, the so-called *Lex a uicanis Furfensibus templo dicta* (No. 105) and a *Lex riui VI[---]* (No. 110 = CIL XII.2426) which fixes fines for those who throw waste matter into this *riuis*. For the notion of *lex*: G. Tibiletti, 'Sulle "leges" romane', *Studi in onore di Pietro di Francisci* 4 (1956), 593–645, at 596ff.; D'Ors, op. cit. (n. 34), 71; a definition of *lex rei suae dicta* may be found in V. Arangio-Ruiz, *Historia del derecho romano* (1974), 318 n. 1.

⁵⁰ FIRA 175 = CIL XIV.2112 (the burial college of *Lanuuium*: *Lex collegi*); FIRA 176 = CIL VI.10234 (*Lex collegi Aesculapi et Hygiae*), etc.

⁵¹ There is no evidence of the *nomen* Manlius in the area, but it was common in the eastern part of Hispania Tarraconensis (J. M. Abascal, *Los nombres personales en las inscripciones latinas de Hispania* (1994), 180–1); Maternus was also very common in the whole of Hispania (Abascal, 418–20), without forgetting Paternus and the less common Fraternus (Abascal, 449–50, 372); *Caesaraugusta*'s membership of the *Aniensis* tribe, unique in Hispania, is well documented in inscriptions, R. Wiegels, *Die Tribusinschriften des römischen Hispanien. Ein Katalog* (1985), 101–2.

⁵² Outside interventions in an irrigation system are exceptional (Th. Glick, *Regadío y sociedad en la Valencia medieval* (1988), 264–6 = *Irrigation and Society in Mediaeval Valencia* (1970)), which means that the arbitration by the provincial authority was due to extraordinary circumstances.

⁵³ 'Conuentionis uerbum generale est ad omnia pertinens, de quibus negotii contrahendi transigendi causa consentiunt qui inter se agunt' (*Dig.* 2.14.1.3); 'conuentio is a general term referring to everything agreed to by those who litigate to obtain an accord or transaction in a matter'.

⁵⁴ *Diz. Epigr. Di Ruggiero, s.u. arbirer* (1886), 613–3; *Epigraphische Datenbank Heidelberg, s.u. conuentio*. Other terms are also used, such as *consensus* (CIL VIII.4845).

⁵⁵ In Macedonia, between *Dienses* and *Olossonii* by Trajan (CIL III.591, 101 C.E.).

⁵⁶ CIL III.2882, 9832 (Dalmatia).

⁵⁷ AE 1901, 230 (Dalmatia): an agreement between *Ortoplini* and *Parentini* for an *aditus ad aquam*.

⁵⁸ AE 1910, 79 (c. *Corinium*, Dalmatia; 62–69 C.E.); AE 1940, 70 (Africa; *ex auctoritate* of Domitian).

⁵⁹ AE 1969/70, 635 (c. *Cnosus*, Crete; reign of Domitian) through a *procurator Caesaris*.

⁶⁰ See Section v.

⁶¹ Note that in III.40–2, the *pagus* nature of the regulation is repeated.

IV.2. THE *RIVVS HIBERIENSIS* AND THE FUNCTIONING OF THE IRRIGATION COMMUNITY (§§ 1–6, and 7)

The whole of Column I (§§ 14), as well as much of Column II (§§ 4–6), is devoted to regulating the functioning of the irrigation community, stating the obligations of the participants, how these are established, and who is to direct and check on their compliance, as well as the fines for infringements. The text has come to us intact in Column I, except for the first five lines, damaged on the left-hand side, and a few lines whose final words are difficult to read due to the wearing away of the surface, particularly I.17–38. On the other hand, there is a significant amount missing in Column II, nearly two thirds of the text, except for lines II.1–10, whose final letters have also survived, and II.22–7 where, thanks to Fragment 6, we have the left-hand half of the text; in addition, the defective condition of the surface makes it hard to read, particularly in II.13–33 and 39–49.

We do not have any ancient document that systematically describes the functioning of an irrigation community:⁶² the best we have at our disposal are documents concerning the sharing of water by hours, as the famous Algerian inscription of *Lamasba*⁶³ and a couple of inscriptions from around Rome,⁶⁴ as well as several random references, particularly with regard to North Africa,⁶⁵ and legal precepts connected to irrigation included in the *Digest*,⁶⁶ which we shall be referring to later. For this reason, in addition to this information, we shall be taking into account the particular traditions of the mid-Ebro valley, not only those documented in the Middle Ages, but also those in force today,⁶⁷ which often

⁶² For irrigation in the Roman world, the best summaries are those by A. T. Hodge, *Roman Aqueducts and Water Supply* (1992), 246–53 and P. Horden and N. Purcell, *The Corrupting Sea. A Study of Mediterranean History* (2000), 237–57 and 585–8 (with annotated bibliography).

⁶³ *CIL VIII.18587* = 4440; F. G. de Pachtère, 'Le règlement d'irrigation de Lamasba', *MEFRA* 28 (1908), 373–400; B. D. Shaw, 'Lamasba: an irrigation community', *Ant. Afr.* 18 (1982), 61–103; 'Water and society in the ancient Maghrib: technology, property and development', *Ant. Afr.* 20 (1984), 121–73; C. Meuret, 'Le règlement de Lamasba: des tables de conversion appliquées à l'irrigation', *Ant. Afr.* 32 (1996), 87–112. See also M. Barceló, 'La cuestión del hidraulismo andalusí', in M. Barceló, H. Kirchner and C. Navarro (eds), *El agua que no duerme. Fundamentos de la arqueología hidráulica andalusí* (1996), 11–47, at 27, where, by a comparison with the terminology of the *huerta* of Crevillente (Alicante), he explains the expressions *aqua ascendens* and *descendens* as meaning that the watering shifts run first upstream and then downstream.

⁶⁴ *CIL VI.1261*; XIV.3676; in this respect, Hodge, op. cit. (n. 62), 249–50; R. Thomas and A. Wilson, 'Water supply for Roman farms in Latium and South Etruria', *PBSR* 62 (1994), 139–96; A. Wilson, 'Villas, horticulture and irrigation infrastructure in the Tiber valley', in F. Coarelli and H. Patterson (eds), *Mercator Placidissimus: The Tiber Valley in Antiquity. New Research in the Upper and Middle River Valley* (forthcoming).

⁶⁵ See n. 63 and H. Pavis d'Escurac, 'Irrigation et la vie paysanne dans l'Afrique du Nord antique', *Ktéma* 5 (1980), 177–91; A. Wilson, *Water Management and Usage in Roman North Africa. A Social and Technological Study*, Ph.D. thesis, Oxford (1997); for particular irrigation systems in oases, P. Troussat, 'Les oasis présahariennes dans l'Antiquité: partage de l'eau et division du temps', *Ant. Afr.* 22 (1986), 163–93.

⁶⁶ Compiled by E. F. Ware, *Roman Water Law* (1985), 83–100.

⁶⁷ For irrigation in the mid-Ebro valley, see, for the Roman era, Beltrán and Viladés, op. cit. (n. 2); for the Middle Ages, the most complete study is by J. A. Sesma, J. F. Utrilla and C. Laliena, *Agua y paisaje social en el Aragón medieval. Los regadíos del río Aguasvivas en la Edad Media* (2001), with bibliography; in addition, for Moslem Spain, see, among many others, Barceló, Kirchner and Navarro, op. cit. (n. 63). The headquarters of the Confederación Hidrográfica del Ebro (Ebro River Board) in Zaragoza houses the irrigation *Ordenanzas y reglamentos* for various communities, prior to the 1986 reform and still dependent on the 1879 Water Resources Act, whose provisions mostly apply to all, but it does include local traditions and singularities. Of these, I have consulted those of Bisimbre and Agón (1949), Fréscano (1951 and 1977), Mallén and Novillas (1954), Gallur (1961), and Agón (1971). In the references, only the article will be mentioned, except when it includes local peculiarities, in which case the irrigation community will be indicated. Particularly useful has been my inspection of current irrigation installations and observations by the irrigators of Agón, with whom I discussed the text of the *lex riui Hiberiensis* on 30 October 2004; local irrigation is fed by the flow, irregular as it is, of the River Huecha, pumping from the Lodosa Canal, and the meagre flow of the Gañarul spring (Lajusticia, op. cit. (n. 25), 139).

strikingly coincide with the Bronze of Agón — a circumstance that should not really come as a surprise, given the ‘ultrastable nature’ of hydraulic spaces.⁶⁸

iv.2.a. *The Riuus Hiberiensis* (§§ 1, 2, 3, 4, 5, 6)

Of course, the key element in the irrigation system was the *riuus Hiberiensis*, about which, without systematically prospecting the land and studying mediaeval and modern documents, all we know is what the inscription says, which is very little, and what may be deduced from the topography. As stated previously, its name suggests that the canal was fed by the River Ebro, *Hiberus flumen*, or at least ran alongside it (or perhaps both) as is the case with the major irrigation canals that run through the district today — the Imperial Canal of Aragon and the Lodosa Canal, built at the end of the eighteenth and beginning of the twentieth centuries respectively (Figs 1 and 3). Both have forerunners, although it is true that the supply of water for irrigation from the Ebro itself and not from its tributaries has been rare between the Middle Ages and today.⁶⁹ Both of them, in spite of their water take-up points being a considerable distance from Gallur (over 120 km for Lodosa and nearly 50 km for the Imperial Canal), run through this territory at less than 300 m above sea level, supplying water to land on the banks of the Ebro between Mallén and Gallur, and this makes it more than probable that the same occurred with the *riuus Hiberiensis*.

In fact, the modern Canal of Lodosa has ancient precursors, since where it begins coincides with a major Roman irrigation canal, known as the Alcanadre-Lodosa canal,⁷⁰ which started on the left bank of the Ebro (perhaps at the confluence of the Odrón and the Linares) and crossed this river by means of an aqueduct supported by about a hundred arches exactly where the diversion dam of the modern canal is now, although 10 m higher. Six km further on the two channels come together to run at the same height towards the Roman *municipium* of *Calagurris* (Calahorra),⁷¹ situated less than 20 km away, and supplied with drinking water by another canal that started at a higher level and was adapted to cope with the difference in level of the Roman city.⁷² There is no evidence as to whether this conduit ended here or whether it followed the Ebro downstream to the *municipium Latinum* of *Gracchuris* (Alfaro), 20 km away, or even further.⁷³ At any event, it should be emphasized that the modern Lodosa Canal terminates precisely in the municipal limits of Mallén, very close to Gallur and the course of the Imperial Canal. As for the Imperial

⁶⁸ Th. F. Glick, ‘Las técnicas hidráulicas antes y después de la conquista’, *En torno al 750 aniversario: antecedentes y consecuencias de la conquista de Valencia* (1989), 53–71, at 55. Glick himself, *op. cit.* (n. 52), 264–6, summarizes the basics of Eastern and Mediterranean irrigation systems in four points that are perfectly applicable to the *lex riuus Hiberiensis*: distribution of water in proportion to the land; individual liability in looking after watercourses; compliance with shifts and liability for damage to other irrigators; and the politically autonomous nature of irrigation systems, in which outside intervention is exceptional.

⁶⁹ For irrigation in Spain, see the summary by Al-Mudayna, *Historia de los regadíos en España (... a. C. –1931)* (1991), with reference to the Ebro basin on pp. 15–16, 45–8, 137–40, 190–202, 313–17, and 504–12; see also J. Fernández, *El canal Imperial de Aragón* (1961).

⁷⁰ M. A. Mezquíriz, ‘El acueducto de Alcanadre-Lodosa’, *Trabajos de Arqueología Navarra* 1 (1979), 139–47 and P. Pascual, ‘El abastecimiento de agua a Calagurris’, *Arqueología de Calahorra* (1991), 55–104, at 85–5; its identification as an irrigation canal, suggested by N. Dupré, ‘Eau, ville et campagne dans l’Hispanie romaine. À propos des aqueducs du bassin de l’Ebre’, *Caesarodunum* 31 (1997), 715–43, seems to be confirmed by the great width of the conduit, which ranged between 1.8 and 2.5 m (Mezquíriz, 144). The name of Arabic origin, Alcanadre (< *al-Qanatir*, ‘aqueduct’), is undoubtedly an allusion to the Roman conduit.

⁷¹ For *Calagurris*, U. Espinosa, *Calagurris Iulia* (1984).

⁷² According to Pascual, *op. cit.* (n. 70), 86ff., this canal, called the Sorbán canal, was of the same type as the Alcanadre-Lodosa canal, and dated from the first or second centuries C.E.; the width of the conduit varies between 0.45 and 0.55 m.

⁷³ Dupré, *op. cit.* (n. 70), 730, thinks that its function was to irrigate the land between Lodosa and Alfaro. For *Gracchuris*, J. A. Hernández Vera, E. Ariño, J. Núñez and J. M. Martínez, *Gracchuris. Conjuntos monumentales en la periferia urbana: puentes, presas y ninfeos* (1995): the city had perhaps a centuriation system and two dams on the River Alhama — the Burgo and the Sotillo dams — interpreted as flow regulation works to irrigate the lower lands of the municipality; the width of the conduits was no greater than 0.59 m.

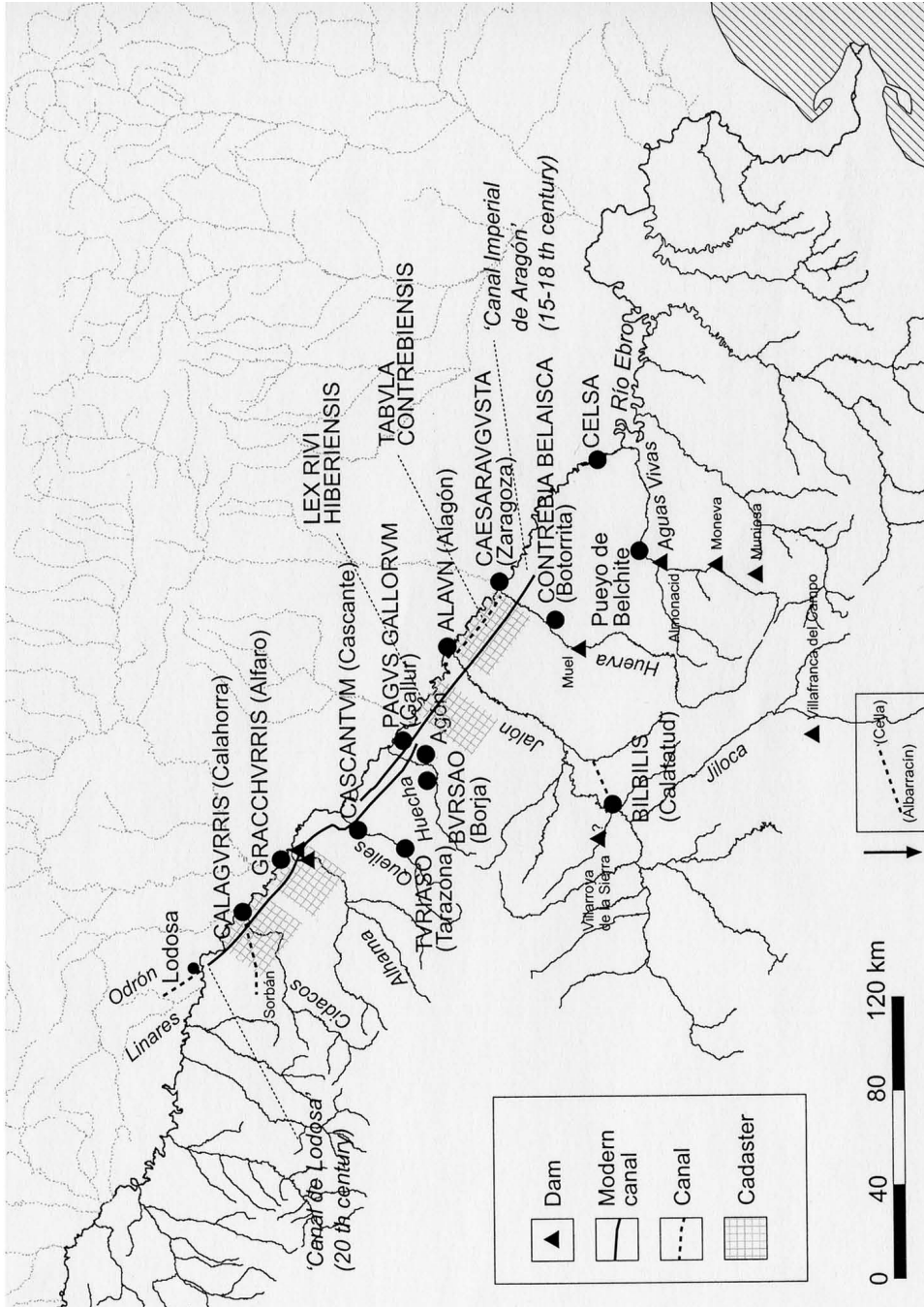


FIG. 3. Map showing irrigation features of various periods on mid-Ebro, right bank.

Canal, as stated previously, it takes up its water some 50 km from Gallur, between Tudela and Fontellas, from the diversion dam of a previously-existing watercourse that took water to Gallur. Thus they both follow suitable courses for irrigating the lands mentioned on the bronze, and in principle, the possibility cannot be discounted that their courses coincide, at least in part, with the Roman channels.

Thus, the name of the *riuus Hiberiensis*, the location of the communities that used it, the layout of the terrain, and the parallels from different periods shown by the local irrigation structure suggest that the channel referred to in the inscription ran parallel to the Ebro at under 300 m above sea level, probably making use of the waters of the river, and perhaps even of its tributaries, such as the Huecha.

In theory, one cannot discount the possibility that the *riuus Hiberiensis* was an extremely long canal, and might even have been the same as the Roman Alcanadre-Lodosa canal (in which case it would have been an astounding 150 km long and would have overcome considerable technical obstacles), but it is equally feasible that it was much shorter, and not the same, and that it ran at a lower level, like the Imperial Canal. The only local parallel that can be cited is the *riuus* built around 87 B.C.E. by the *Salluienses*, the inhabitants of the Iberian city, on the site of which *Caesaraugusta* was later founded, mentioned in the *Tabula Contrebiensis*:⁷⁴ the involvement of the city of *Alaun* (Alagón) in the conflict that it documents suggests that the channel ran for at least 20 km. At any event, the building of very long conduits was no problem for Roman engineering, as shown by the course of urban aqueducts such as the *Aqua Marcia* or the *Anio Nouus* in Rome (91 and 87 km), the Cologne aqueduct (95.4 km) or the *Carthago* aqueduct (98 km, later extended with branches to a total of 132 km), although it must be said that these are among the longest examples of Roman western canals hitherto known.⁷⁵

All this shows that the right bank of the Ebro had various irrigation channels, exploited at least by the lands situated between Lodosa and *Calagurris* (and perhaps *Gracchurris*), the district of Mallén and Gallur, which concerns us, and the stretch between *Alaun* and *Caesaraugusta*, without discounting the possibility that some of these stretches might have been connected to each other.

Indeed, the fact that I.22 defines the main irrigation canal as *riuus Hiberiensis Capitonianus* suggests that this was only one segment, known as *Capitonianus*, of a longer conduit that in its entirety received the name *riuus Hiberiensis*, and was perhaps exploited by other irrigation communities as well. The interpretation of other elements of the system mentioned in the inscription depends on the location of the *Capitonianus* channel in the *riuus Hiberiensis*. Thus, the *moles riui Hiberiensis*, mentioned in I.2, might refer to the diversion dam which fed the canal, in which case either the *Capitonianus* was the first stretch of the *riuus Hiberiensis* or else the lands it irrigated must have been a reasonable distance from it: remember that the old channel of Gallur and the Imperial Canal of Aragon were fed by the Ebro near Fontellas, situated barely 10 km from the urban nucleus of *Casquantum*. Nevertheless, given that the reference is fragmentary (*moles riui Hibe[riensis] --*), other explanations, for instance a regulation dam, cannot be ruled out. The document might be referring generically to this *moles* when it defines the upper part of the *riuus Hiberiensis Capitonianus* (I.23, *ab summo*), while, in the lower part, the 'moles ima quae est ad Recti centurionis' (I.23-4) might refer to an important sluice on the canal, which would not be the only one on this stretch, without ruling out other

⁷⁴ CIL I².2951a.

⁷⁵ Hodge, *op. cit.* (n. 62), 347-8; H. Fahlbusch, 'Roman long distance water conduits for irrigation and water supply', *International Commission on Irrigation and Drainage, XI Proceedings: Special Sessions on the History of Irrigation, Drainage and Flood Control* (1981), 61-75. At any event, it should be emphasized that the two modern canals running through the district had to overcome considerable technical problems: in fact, the Imperial Canal, although planned in the late fifteenth century, was not completed until the eighteenth century (Al-Mudayna, *op. cit.* (n. 69), 313ff., 415), whilst the Lodosa Canal, in its middle stretch, passes through several long tunnels (Confederación Hidrográfica del Ebro, *Canal de Lodosa* (1983)).

possibilities such as a regulation dam or an important junction. Later on, the term *moles* appears again when reference is made to secondary channels, which need to be cleaned out — '[a]b ea / mole qua quisque aquam deriuat ad proxuma[m] / molem' (I.29–31), which suggests that, in this case at least, the *moles* were nothing other than sluices whose opening and closing would direct the water into the fields.

The document provides very little additional data concerning the irrigation infrastructure. Apart from the main canal, the *riuus Hiberiensis (Capitonianus)* and the secondary channels taking the water to the fields (I.27, 'riuos quibus utentur communiter'), the inscription refers to the conduits and bridges that might have crossed the channels (I.34, 'canalem aut pontem'), which seems to suggest that the canal was open to the skies,⁷⁶ and in Column II, apart from new references to the *riuus Hiberiensis*, there is mention of a [---] *incilem* (II.7–8) and some *riui paganici* or secondary channels (II.23), which we shall examine later.

IV.2.b. Obligations of Irrigators, Checking Compliance and Fines for Infringements (§§ 1–2a)

§ 1a (I.1–8). Decision-taking in the irrigation community

Although Article 1 of the *lex* (I.1–8) is incomplete, it seems to attribute power to the assembly of the *pagani* to adopt the provisions it deems fit for the proper functioning of the irrigation community, provided they are agreed by the majority and respect the *aquae ius* or 'right to water' of each participant; it also states that the *pagani* are required to comply with any obligations arising therefrom, with regard to the *riuus Hiberiensis* and its *moles* as well as to any other matter that may affect the functioning of the irrigation community.

According to I.6–8, the relevant decisions for the functioning of the irrigation community are to be taken by the *pagani* in assembly (that is to say, *in concilio*, I.41, 50ff.) by a majority vote and in proportion to the right to water held by each member. This right was determined by the amount of land each one had to irrigate,⁷⁷ according to imperial provisions such as that decreed by Antoninus Pius and Lucius Verus around 161 C.E.,⁷⁸ as well as documents regarding the distribution of water among irrigators, such as the *Lamasba* inscription of 220 C.E.⁷⁹ What the Bronze of Agón stipulates with regard to the taking of decisions *in concilio* is that votes were not equally-weighted but were proportional to the *aquae ius*, and therefore to the area of each participant's holding, as is in fact established in modern Spanish irrigation regulations, where it is not only the number of votes that is proportional to the area of land each user irrigates, but also their contributions in levies and work:⁸⁰ this seems to be the case also with the irrigation community of

⁷⁶ As was the case with the Alcanadre-Lodosa canal, whose breadth was around 2 m, Mezquíriz, op. cit. (n. 70), 144.

⁷⁷ As is usual in irrigation systems, Glick, op. cit. (n. 52), 264–6. Roman jurisprudence made it quite clear that the right to water was linked to the land and not its owner (*Dig.* 8.3.20.3), who forfeited the right to transfer it.

⁷⁸ *Dig.* 8.3.17: 'Imperatores Antoninus et Verus Augusti rescipserunt aquam de flumine publico pro modo possessionum ad irrigandos agros dividi oportere'; 'Emperors Antoninus and Verus decreed that water from public streams ought to be divided for the irrigation of fields in proportion to the holdings', transl. Ware, op. cit. (n. 66), 94; A. D'Ors, F. Hernández-Tejero, P. Fuenteseca, M. García-Garrido and J. Burillo, *El Digesto de Justiniano* (1968), ad loc. Later on, in the time of Diocletian and Maximian (294 C.E.), it also depended on the type of crop — a circumstance explicitly excluded from modern local *Ordenanzas* § 32 — or the use given to the water, *Cod. Iust.* 3.34.12. In this respect, E. Costa, *Le acque nel diritto romano* (1919), 37.

⁷⁹ *CIL* VIII.4440 = 18587 (see n. 63), in which the irrigation time was in proportion to the area of the holding.

⁸⁰ e.g. *Ordenanzas* of Mallén-Novillas § 8: 'The rights and obligations of the irrigators and other water-consumers shall be calculated in terms of the exploitation or quantity they have an option on, as well as their contribution to the costs of the Community, in proportion to the area of the holding that they have the right to irrigate'; § 20 'All costs ... shall be borne by the various participants in fair proportion ...'; § 48 'The votes of the various participants of the Community who are land-owners or water-right holders shall be calculated as per article 239 of the Water Resources Act, in proportion to the holding they represent'.

the *riuus Hiberiensis*.⁸¹ In short, the assembly of *pagani*, which as we shall see was the basic body for deliberation and decision-making in the irrigation community,⁸² established tasks and contributions on the basis of a majority vote, although this vote was weighted in proportion to the size of the holding of each individual member.

§ 1 b–c (I.9–15). Fines for infringements

The contributions were set generically in I.3–6, in which most of the text is missing. However, we may deduce from the following lines (I.9–13) that they consisted basically of contributions in labour (*operae*) and money (*pecunia*), which were to be delivered on time and in the right amount under the control of the works directors (*qui operis praeerit*, I.9–10, who were almost certainly the same as those subsequently called *curatores*, I.17), with a fine of 25 denarii per infringement, payable to the *magistri pagi* and deposited by them *in commune*, that is to say, into the communal funds.⁸³

As regards the *operae*, judging by the surviving text, they consisted basically of the cleaning and periodic re-digging of the channels, but it is probably safe to assume that any other work of improvement, extension, road maintenance, etc. would have been envisaged as being part of the collective responsibility.⁸⁴ As far as the monetary contributions were concerned, these must have consisted essentially of a quota towards the community costs in proportion to the *aquae ius*, and perhaps a small fee depending on the actual amount of water used,⁸⁵ as well as extraordinary contributions, without excluding the possibility that if the canal did not belong to the irrigation community, but to the emperor, for example, compensation would need to be paid for use of the conduit. Other types of contribution cannot be discounted either, such as exchanging physical work for money.

§ 2a (I.16–21). The *curatores*. The *denuntiatio domo familiaeue*

Column I.16–21 sets out the procedure for notifying a participant of an order to carry out a task or to contribute with any type of service when the local authorities cannot advise him personally.

Those responsible for making sure that these contributions were carried out were the labour director, *qui operis praeerit*, according to the previous paragraph (I.9–10), here designated as *curatores*, or else the *magistri pagi*, the senior magistrates of the *pagi*,⁸⁶ who appear in the text for the first time, although they would probably have been mentioned in the missing part of § 1. It is probable that the *curatores*, about whom less is known, were

⁸¹ See later I.24–6: ‘omnes pagani pro parte sua quisque praestare debeant’; I.50–1 ‘pro modo aquationis’.

⁸² The same occurs in the modern *Ordenanzas* § 11: ‘The Annual General Meeting of the Community adopts all the power that exists therein’.

⁸³ This is the usual amount for fines, although II.11 sets a fine of 250 denarii. The figure of 25 denarii, i.e. 100 sestertii, according to prices reported by Martial, was enough to buy 700 l of wheat or 250 l of ordinary wine in *Bilbilis* around 100 C.E. (12.76), and, according to the *lex Vrsonensis* (CIL II²/ 5.1022, § 62; D’Ors, op. cit. (n. 34), 179–80), was equivalent to the monthly pay of the *scribae* of the *duumviri*; fines of this amount were also imposed in the more or less contemporary *lex metalli Vispascensis I* (CIL II.5181; D’Ors, op. cit. (n. 34), 91–5), for instance, for the illegal sale of firewood by leaseholders of public baths (§ 3). In the *lex Imitana* (J. González, ‘The *lex Imitana*: a new copy of the Flavian municipal law’, *JRS* 76 (1986), 147–238; A. D’Ors and J. D’Ors, *Lex Imitana* (1988)), the aediles were empowered to impose fines of up to 5,000 sestertii (1,250 denarii) (§ 19). For prices and salaries in the Western Roman world, S. Mrozek, *Prix et rémunération dans l’occident romain* (1975); R. Duncan-Jones, *The Economy of the Roman Empire* (1974; 2nd edn 1982). It is not clear whether the communal funds were administered by the irrigators or the *pagus*.

⁸⁴ As occurs with the modern *Ordenanzas* § 7.

⁸⁵ As occurred with the users of the aqueducts of Rome and its surroundings such as the well-known *Aqua Crabra* with which Cicero irrigated his villa in *Tusculum*, Frontin., *Aq.* 94.4; Cic., *de leg. agr.* 3.2.9; *ad fam.* 16.18.3; Ch. Bruun, ‘Water legislation in the ancient world’, in O. Wikander (ed.), *Handbook of Ancient Water Technology* (2000), 537–604, at 589; Thomas and Wilson, op. cit. (n. 64), 146.

⁸⁶ See later the commentary on § 3.c at IV.2.d and, for an overall view, M. Tarpin, *Vici et pagi dans l’occident romain* (2002), 285ff., 442.

common in the *pagi* administration, as suggested by other inscriptions,⁸⁷ and that their duties had something to do with the carrying out of community works.⁸⁸

What was regulated here must have been an exceptional case, since for infringements in general fines were set in § 1b. Although the text is not entirely coherent, what it seems to indicate is that if anyone who was supposed to make a contribution could not be informed personally of the fact, the *magistri pagi* or the *curatores* were to notify him *domo* or *familiae*, and if, in spite of this, he did not carry it out, he would have to pay the fine of 25 denarii. The *denuntiatio* consisted of an official warning⁸⁹ which, according to various passages in the *Digest*, was delivered *in domo*, that is to say 'to the home', when the addressee was away and, if he did not have a home, to his land, his place of residence, or else to his representatives, tenants, or friends;⁹⁰ this was a procedure that, in this case, seems to have been designed to protect the participant by ensuring that he received notification of the contribution he was liable for.⁹¹

Almost certainly this issue arose with the irrigators who were often away from the *pagus* because they lived in the city, a problem which would have been even greater with those living in *Caesaraugusta*, nearly 50 km away. In this case, the local authorities would have had to notify an individual of the contributions at his house (in the city?) or else to his slave family who presumably lived on the holding and therefore in the *pagus*.⁹² If this interpretation is correct, this circumstance incidentally provides valuable information on the manpower that worked on the lands of the *pagus*; furthermore, given their slave status, it is probable that production (or at least a part of it) was orientated towards the market, either supplying *Caesaraugusta* or other towns nearby (*Cascantum*, *Turiaso*, etc.) or else being transported to the coast, taking advantage of the fact that the Ebro, navigable from *Varea* (near Logroño), was nearby.⁹³

After formulating the obligations of the members of the irrigation community, establishing who was to define them, who was to check on their compliance, and the fines for infringements, the regulations deal with the various specific tasks that the irrigators were to carry out, with a clear progression from central elements of the system, affecting

⁸⁷ Above all the incomplete bronze of Verona (*CIL* V.3449), in which reference is made to a *pagus*, its *concilium*, and also a *curator*. The duties of the *curatores* who appear in various Italian inscriptions during the height of the Principate might have been different, perhaps related to the (financial?) control of the *pagi* by the municipality: thus, in 167 C.E., one individual was an *aedilis* and *decurio* of *Beneventum* and *curator pagi Veiani* (*CIL* IX.1503), another inscription from *Saturnia* (*CIL* XI.7265) related to a *duumvir quinquennalis* of this city and *curat. pagi Lucreti*, and another from *Beneventum* (*CIL* IX.1503) to a municipal *aedilis* and *pag. Vetani curat.* See V. Bonkoffsky, *Municipale curatores in Italia en de westelijke provincies tijdens het principaat* (2002) [www.thesis.net/curatores/].

⁸⁸ In fact, the two individuals in charge of some *decuriae* of nearly a hundred men were referred to as *curatores*, and, with the help of a *pignerator*, they directed the works to reinforce the banks of the Adige, according to two inscriptions from Ateste dating from around the turn of the Era (*AE* 1961, 60 and 61); see M. S. Bassignano, 'Regio X. Venetia et Histria. Ateste', *Supplementa Italica* 15 (1997), 9–376, at 177–80, Nos 34 and 35, although others do not discount the idea that they may have been involved in other works (E. Baggio Bernardoni and E. Zerbinati in 'Este', *Misurare la terra: centuriazioni e coloni nel mondo romano. Il caso veneto* (1984), 144–8, at 147, figs 113 and 114), such as roadworks (R. Duncan-Jones, 'An epigraphic survey of costs in Roman Italy', *PBSR* 33 (1965), 189–306, at 236).

⁸⁹ From an authority to an individual, or vice versa, or between individuals, A. Berger, *Encyclopedic Dictionary of Roman Law* (1953), 431.

⁹⁰ With regard to the warnings: 'dum ei, qui aberit, prius domum denuntiari iubeam (...) ut si in aliena domo habitet, ibi ei denuntietur. Quod si nec habitationem habeat, ad ipsum praedium erit denuntiandum uel procuratori eius uel certe inquilinis' (*Dig.* 39.2.4.5), 'so that, in the event of absence, the caution shall be delivered to his home (...) or if he lives in a different house, the caution shall be delivered there. If he has no dwelling, the caution shall be delivered to his holding, or one of his representatives, or even to the tenants of his house'; and, with regard to a task 'amicis denique aut procuratori aut ad domum denuntiandum est' (*Dig.* 43.2.4.5.2), i.e. 'the caution shall be delivered to his friends, or his representative or to his home'; see also *Dig.* 25.3.1.1–2.

⁹¹ As with the procedure *edere formulam*, see L. Murga, *Derecho romano clásico. II. El proceso* (1980), 249–52, 255.

⁹² Thus, this would be a similar case to that of the *praedium* in *Dig.* 39.2.4.5, see n. 90.

⁹³ Plin., *NH* 3.22. C. Aguarod and R. Erice, 'El puerto de Caesaraugusta', in *Puertos fluviales antiguos: ciudad, desarrollo e infraestructuras. Actas de las IV Jornadas de arqueología subacuática* (2003), 143–55.

all users, to secondary elements that concerned only a section of them.

IV.2.c. *Cleaning and Maintenance of Irrigation Infrastructure* (§§ 2b–3b)

§ 2b (I.1.21–6). The *rius Hiberiensis Capitonianus*

The description of the cleaning and maintenance tasks begins with the main channel, also called the ‘mother channel’ in some *Ordenanzas* and perhaps *matrix* in the *Lamasba* inscription.⁹⁴ *Purgare* and *reficere*, clean and repair, are the two typical operations in the maintenance of a canal, entirely borne out in texts and inscriptions,⁹⁵ particularly in the juridical literature;⁹⁶ these consist of getting rid of any material in the channel that might hinder the flow of water or cause its level to rise (sludge, vegetation, etc.), and in the case of an open channel, as the one we are concerned with almost certainly was,⁹⁷ repairing the walls and clearing any vegetation growing thereon. *Pro parte sua* probably refers, once again, to the proportional principle mentioned in I.7–8, meaning that in the cleaning work each irrigator would be required to undertake a task in proportion to his *ius aquae*, almost certainly calculated in terms of days.⁹⁸ In this case, it was probably not a question of repairing a section that only affected the owners of holdings alongside the banks of the canal, as with other provisions related to ensuring access to a river or water course, since it is clear that all the *pagani* are required to collaborate,⁹⁹ along the entire stretch which, to all appearances, would have ended in the territory of the *pagi* of *Caesaraugusta* downstream. This is also suggested by the name of the property that was taken as a reference to locate the lower *moles*, *ad Recti centurionis*,¹⁰⁰ since it should be remembered that *Caesaraugusta* was founded with veterans from the IV Macedonica, VI Victrix and X Gemina legions, and the name could have referred to one of them, later becoming entrenched as a place name.

⁹⁴ If we acknowledge that the *scalae* mentioned in the African inscription were terraces, then each one would have a *matrix*, see Meuret’s plan, op. cit. (n. 63), 87–112.

⁹⁵ For *purgare*, see the examples cited by M. Buonocuore, ‘Fra topografia ed epigrafia. L’acquedotto di *Amiternum* (L’Aquila)’, *Journal of Ancient Topography* 4 (1994), 185–94, based on his reinterpretation of the Republican inscription on the aqueduct of Amiternum (L’Aquila) (*CIL* I².1853), the first word of which would not have read *[a]rcatio*, but *[pu]rcatio*.

⁹⁶ Costa, op. cit. (n. 78), 51–4; Ware, op. cit. (n. 66), 95ff. ‘*Reficere est quod corruptum est in pristinum statum restituere. Verbo reficiendi tegere substruere sarcire aedificare item aduehere adportareque ea, quae ad eandem rem opus essent, continentur. Purgandi verbum plerique quidem putant ad eum riuum pertinere, qui integer est: et palam est ad eum pertinere, qui refectione indiget: plerumque enim et refectione et purgatione indiget*’ (*Dig.* 43.21.1.6–7). ‘To “repair” is to restore what is damaged to its former condition. It means to cover, to put in foundations, to make good, to construct; likewise to gather together there and bring there whatever is necessary to do the work. To “clean” is a word which many believe to pertain only to a water channel which is in repair. It is obvious that it also relates to one which needs repair. For the most part, they generally need both repairing and cleaning’ (transl. Ware).

⁹⁷ Note that I.34 mentions the cleaning of any bridges that might obstruct the water flow. Thomas and Wilson, op. cit. (n. 64), 139–96, at 148, take it as read that a *rius* was open, as opposed to a *specus*, which was covered, referring to *Dig.* 43.21.1.

⁹⁸ See IV.2.b §1.a.

⁹⁹ As with modern local *Ordenanzas* for Mallén and Novillas § 23, and the Rascanya canal (Valencia) in the fifteenth century (Arxiu del Regne de Valencia, Governació, Lituim 2208, 12th hand, fols 35r–37r; Th. F. Glick, ‘Conflict in irrigation communities: one decade in mediaeval Valencia (1407–1416)’, in *Irrigation and Hydraulic Technology* (1996), § XIII, 1–20, at 3).

¹⁰⁰ Expressions of this type can also be found in cadastral documents such as *CIL* IX.1455 or XI.1147 to specify the location of a property. The demarcation of the canal is remarkably similar to that used around 1960 to refer to the cleaning of a canal in the area of Caspe (Zaragoza): ‘Esguaz.’ ‘28 men were paid to eliminate the sludge by dredging an “arrobadera”, a wooden device for cleaning the bed, along just one part of the channel from the source to the *Puntarrón de Don Manuel*. The rest of the sludge was removed by hoes and scoops’ (transl. Douch); A. Barceló and A. Serrano, *Afanés cotidianos. Estampas de oficios y trabajos en el Bajo Aragón* (1999), 14–15.

The reference to the *riuus Hiberiensis* with the addition of *Capitonianus*,¹⁰¹ as we have seen,¹⁰² seems to imply that the cleaning and repair did not apply to the whole *riuus Hiberiensis*, but just to the stretch that was used to irrigate the communities that subscribed to the *lex*.

§ 3a (I.27–33). *Riui communes*

After the main canal, *riuus Hiberiensis Capitonianus*, the *lex* concerns itself with the secondary channels used by various irrigators — ‘riui quibus utentur communiter’ (I.27–9) — who are required to clean and repair them jointly. Specifically, although the text is difficult to interpret here in a couple of places, it seems to establish that each participant is to collaborate in repair and cleaning works up to the point where his land borders the channel¹⁰³ and that he is also to clean the stretch of channel that went from the *moles* (probably a simple sluice) via which he received the water, up to the next one, twice a year when ordered by the *magistri pagi*, and to do so carefully so as not to cause any damage.¹⁰⁴

§ 3b (I.34–8). *Canales aut pontes*

As well as the *moles*, there are other elements that might hinder the water flow, such as *canales* and *pontes* (I. 34–8), and so they would also need to be cleaned twice a year upon notification by the *magistri pagi*. It seems clear that in the case of bridges, the owner was responsible for making sure they were not clogged with vegetation or other material that would affect the water flow. Not so clear is the reference to *canalis*, an open or, more probably, closed conduit, which because of its comparison with bridges, seems to have crossed over the channel (or perhaps through it) in order to bring drinking-water, or water for recreational or sanitary purposes, to the villas in the area.

IV.2.d. *Timetable of Main Activities* (§§ 3c–4)

Starting at I.38, there is a series of time references for the carrying out of some of the main collective tasks described above, particularly the cleaning and repair of the *riuus Hiberiensis Capitonianus*, obviously the central element of the system, to the extent that, as we shall see, they determined the term of office of the *magistri pagi*.

§ 3c (I.38–9). Election of the *magistri pagi*

Although the authorities of the *pagi* are mentioned in very few inscriptions, the ones that most frequently appear are the *magistri*,¹⁰⁵ either singly or in pairs¹⁰⁶ (as was common for Roman magistrates), but rarely in greater numbers.¹⁰⁷ They are documented as enforcing

¹⁰¹ The adjective could have derived from the name *Capito*, very common in Hispania (Abascal, op. cit. (n. 51), 316–17), which literally means ‘person with a large head’, or else from a fish, the *capito*, *cephalos*, or gudgeon, mentioned by, among others (*Th. l. l. s. u.*), Cato (*de agric.* 158.1) as an ingredient for a laxative and by Ausonius (*Mosella* 85–7: ‘Squameus herbosus capito inter lucet arenas / uiscere praetenero, fartim congestus aristic, / nec duraturus post bina trihoraria mensis’ — ‘The scaly gudgeon shines in the marshes, with soft flesh, full of bones, and must be served within six hours’, although this fish really belongs to the sea or estuaries).

¹⁰² See IV.2.a.

¹⁰³ For example, the irrigators of Agón who use the Huecha today are obliged to clean the sections of the channel that run alongside their lands.

¹⁰⁴ Modern *Ordenanzas* also state that ‘two routine cleaning operations shall be carried out and as many extraordinary cleaning and vegetation clearing operations as considered essential in the seasons that the Syndicate deems necessary’ (Mallén and Novillas, § 25).

¹⁰⁵ Among others documented are *aediles* and *praefecti* both in the late Republic in Central Italy and in Narbonensis during the early Principate; Tarpin, op. cit. (n. 86), 287ff., 442, who also includes inscriptions mentioning *ministri pagi* (*Pompeii*) and a *flaminica* (*CIL* V.3928, *pagus Arusnatium*); H. Galsterer, ‘Il pagus Arusnatium e i suoi culti’, in A. Mastrocinque (ed.), *Culti pagani nell’Italia settentrionale* (1994), 53–62.

¹⁰⁶ For example, in *Polimartium* (Bomarzo), *CIL* XI.3040 during the reign of Augustus.

¹⁰⁷ E. Kornemann, ‘pagus’, *RE* 18 (1942), cols 2318–39, at 2324.

communal decisions,¹⁰⁸ directing the construction of buildings or monuments,¹⁰⁹ dedicating inscriptions to gods or emperors,¹¹⁰ holding *ludi*,¹¹¹ and donating *tesserae paganicae*¹¹² — activities that went with their position as the most senior local authorities¹¹³ and their membership of the municipal élite in some cases.¹¹⁴ In addition, the *agrimensores* mention their responsibility for organizing communal works, such as the maintenance of roads,¹¹⁵ and they were probably also responsible for designating services (*annona*) for military units passing through¹¹⁶ and supervising censuses and tax-gathering, in which the *pagus* played an important role.¹¹⁷ They also acted as the highest religious authority, especially at the annual purification ceremony in the *pagus*,¹¹⁸ which possibly coincided with the celebration of the *Paganalia* or with some other festivity of an agricultural nature,¹¹⁹ possibly referred to in the *tesserae paganicae* that document the celebration of sacrifices and, perhaps, in one case, *ludi* during the month of May.¹²⁰

The Bronze of Agón stresses this central role of the *magistri pagi*, to whom it attributes several duties and responsibilities in the irrigation community, understandably delegated in certain cases to others, such as the *curatores* or *publicani*: imposing fines of up to 250 denarii (§ 4), collecting them and probably supervising the communal funds (§ 1b–c); notifying the participants in the irrigation community of works to be carried out (§§ 2a, 3b, 3c), the monitoring of which was delegated to the *curatores* (§§ 1b, 2a); summoning the *pagani* to the *concilium* and almost certainly running the meetings (§§ 3c, 4) and enforcing the decisions taken (§ 1a?); distraining upon defaulters (§ 8), under the orders of the municipal magistrates (§ 10), and auctioning the seized chattels (§ 10); appointing *publicani* to collect money (§ 9); and complying with the provisions of the *lex* and ensuring they were complied with, being answerable, in this case too, to the municipal magistrates (§§ 11, 13). Such was their autonomy that it was a *magister pagi* of *Caesaraugusta* (not the

¹⁰⁸ CIL V.4148 (Cremona-Brescia); CIL VI.2219, 2220; CIL IX.3521 (Furfo); AE (1914), 270 (Secinaro); CIL X.721 (*Larinum*), 853 (*Pompeii*), 3772 (*Capua*).

¹⁰⁹ CIL V.4148 (Cremona-Brescia); CIL VI.2219, 2220; CIL X.3772 (*Capua*); CIL XII.5370 (Moux, Aude), etc.

¹¹⁰ Gods: CIL XI.2921 (*Visentium*), 3196 (*Nepet*); CIL XIII.412 (Dax), 604 (*Burdigala*), 1670 (*Lugdunum*); etc. Emperors: CIL VI.251; CIL IX.5814 (Montorio al Vomano); CIL XI.3040 (Soriano), etc.

¹¹¹ CIL X.853 (*Pompeii*).

¹¹² CIL VIII.25423 (Bizerta); CIL XI.1947 (Perugia); H. de Villefosse, 'La tessère de Bizerte', *Comptes rendus des séances de l'Académie des Inscriptions et Belles Lettres* 21 (1893), 319–25.

¹¹³ On one inscription from Pompeii regarding a *magister pagi* there is an engraving of two *fasces*, CIL IX.1042.

¹¹⁴ M. Tarpin, 'Les magistrats des *uici* et des *pagi* et les élites sociales des cités', in M. Cèbeillac-Gervasoni and L. Lamoine (eds), *Les élites et leurs facettes. Les élites locales dans le monde hellénistique et romain* (2003), 257–68, at 262–4.

¹¹⁵ Sic. Flac., *de cond. agr.* 107: 'Vicinales autem (sc. uiae), de publicis quae deuertuntur in agris et saepe ipsae ad alteras publicas perueniunt, aliter muniuntur, per pagos, id est per magistratos pagorum, qui operas a possessoribus ad eas tuendas exigere soliti sunt', 'As for the local roads leading off the public roads to give access to the fields, and which often join up with other public roads, these are built in a different way, by the *pagi*, that is to say, by the *magistri pagi*, who require the owners to work for their maintenance.'

¹¹⁶ Sic. Flac., *de cond. agr.* 304.

¹¹⁷ This is suggested not only by cadastral documents such as the *tabulae alimentariae* (CIL IX.1455, XI.1147) but also by legal texts (*Dig.* 50.15.4).

¹¹⁸ Sic. Flac., *de cond. agr.* 301: 'magistri pagorum quod pagos lustrare soliti sunt', 'since the *magistri pagi* usually celebrate the purification ceremony of the *pagi*'.

¹¹⁹ Ovid, *Fast.* 1.657ff. assimilates this festivity with the *Feriae Sementinae* (22–26 January), but Varro, *l. l.* 6.26 seems to think they are different.

¹²⁰ The *lustratio* of the fields, according to Cato (*de agric.* 141), was accompanied by *suouetaurilia* and the chanting of certain formulae; the *tessera* of Tolentino (CIL IX.5565) mentions the *lustratio* of some victims dated 11 May; the celebration of *ludi* would be confirmed by the previously-mentioned (see n. 18) Gallur tablet, if, as seems likely, it is a document similar to the *tesserae paganicae*. It was precisely the month of May that saw the celebration of the purification of the fields mentioned in the *Menologium rusticum Colotianum* (CIL VI.2305) and the *fratres Aruales* (J. Scheid, *Commentarii fratrum Arvalium qui supersunt. Les copies épigraphiques des protocoles annuels de la confrérie arvale* (21 av.–304 ap. J.-C.) (1998)), coinciding with the private *Ambarualia* (Cat., *de agric.* 141; Verg., *Georg.* 1.345ff.; Macrobi., *Sat.* 3.5.7); G. Vaccai, *Le feste di Roma antica* (1902), 127ff., 258ff.

magistrates of the colony) who would appeal to Hadrian's legate to intervene in the irrigation community (§ 16).

The *magistri pagi*, almost certainly two in number,¹²¹ would have been chosen by all the *pagani*, including those who had full rights and resided in the *pagus* but were not irrigators, and would have served for one year, as we already knew through Festus¹²² and is now confirmed by the Bronze of Agón. What is surprising is that this document establishes the take-over date as 1 June, when the usual practice in the Roman world was for magistrates to begin their term of office on 1 January: without doubt, this date is conditioned by the obligation to call, within five days,¹²³ an assembly of the *pagani* to decide the date for cutting off the supply of water to the *riuus Hiberiensis*, provided that this gives enough time to begin the general cleaning of the canal, referred to in § 2b, before 15 July. Thus, in this respect, the organization of the *pagus* fitted in with the calendar of the irrigation community, which seems to have influenced and conditioned the work of the *magistri pagi*, and certainly occupied a great deal of their time. As we have seen, this integration of the irrigation community into the organization of the *pagi* might have caused the merging of the two *pagi* of *Caesaraugusta*, as suggested by the Gallur tablet,¹²⁴ and even a strengthening of links between them and the *Belsinonenses*, the extent of which is hard to judge from the text.

If, as we have stated previously, the purification of the fields took place in May, it is very possible that this festival coincided with the end of the term of office of the *magistri pagi*, to allow their successors to begin the new cycle with the general cleaning of the canal and the organization of irrigation referred to in §§ 3c and 4.

§ 3c (I.39–46). The *concilium* on cleaning the canal

Paragraphs §§ 1a, 3c and 4 make it clear that the main decisions concerning the irrigation community were to be taken by the majority of the *pagani* (as always, in proportion to each person's *aquae ius*) at a meeting called by the *magistri pagi*. In §§ 3c and 4, these meetings are referred to as *in concilio* (I.40–1, 50), a term which hitherto had not been used in connection with *pagus* institutions,¹²⁵ although the existence of a body to bring together all the *pagani* is suggested by certain expressions in some inscriptions, such as (*ex*) *pagi decreto*, *lex pagana*, *ex pagei scitu*, or *de pagi sententia*,¹²⁶ the latter term being similar to those used in I.7 and I.41–2 (*paganorum sententia*). In fact, there are at least two inscriptions which, in spite of their being incomplete, clearly show the link between *pagus* and *concilium*,¹²⁷ and this enables us to discount the possibility that these meetings were exclusively concerned with the operating of the irrigation community, regardless of the fact that, given the nature of the provisions in the Bronze of Agón, the irrigators were in principle the interested party: almost certainly, the *pagani* would have met *in concilio* to deal with matters other than irrigation as well.

The meeting that the *magistri pagi* were required to call after taking office was for deciding the date when the water would be diverted from the canal, leaving it dry, in order to repair and clean it. The provision stresses the need for the flow interruption to be carried out in such a way that the *ima sors aquationis*, that is to say, the lowest irrigation

¹²¹ Although the text does not enable us to be absolutely certain, the *pagani* of *Caesaraugusta* — *Galli* and *Segardenenses* — and the *Belsinonenses* were probably each governed by colleges of two *magistri*; III.1 seems to exclude the possibility that each community might have appointed just one *magister pagi*.

¹²² 'Magistri pagi quotannis fiunt', 371 M; 'the *magistri pagi* are appointed each year'.

¹²³ The *lex Imitana* (see n. 83) also sets a deadline of five days for magistrates to make their public oath (§ 26), assign duties to the municipal slaves (§ 78), and select judges (§ 86). This five-day period is also established in the *lex Imitana* (see n. 83) for election of judges by the *duoviri* (§ 86).

¹²⁴ See IV.1.a.

¹²⁵ Not included in Tarpin, op. cit. (n. 86), 443.

¹²⁶ Tarpin, op. cit. (n. 86), 443.

¹²⁷ These are two bronze fragments, and thus particularly relevant, one from Verona (*CIL* V.3449) and the other, usually interpreted as a record of timed water supply for a mill, attributed to *Promona*, in Dalmatia (*CIL* III.14969); B. Ilakovac, *Rimski akuedukti na području sjeverne Dalmacije* (1982), 26–7; Bruun, op. cit. (n. 85), 537–604, at 581.

shift,¹²⁸ the one that was most at risk of being affected by the supply cut, was guaranteed.¹²⁹ The period of just over one month from the meeting of the assembly (at the beginning of June) until the interruption of the flow (before 15 July) might show the duration of the irrigation cycles, which could have been a fortnight, thereby enabling two cycles, or a month if the canal was very long.

The term *aquatio* is used in Latin literature above all to mean a place to extract water,¹³⁰ but not as a technical irrigation term, for which this inscription is its oldest and only usage, apart from two very similar passages¹³¹ by the late Imperial agricultural essayist, Palladius.¹³² Thus, the technical expression *sors aquationis* should be understood here as meaning irrigation shift.

The date set for cleaning the canal, starting 15 July, coincides with the beginning of the Ebro's low-water period, with its lowest level in August,¹³³ and today separates the irrigation period for cereals and that for olives, vines and vegetable crops.¹³⁴

§ 4 (I.47–II.11). The second *concilium*

The second meeting of the *pagani* referred to in § 4¹³⁵ was required to be held after the previous actions (the taking of office of the *magistri pagi* (1 June), the *concilium* to establish the interruption of the water flow (2–6 June),¹³⁶ the interruption itself (6 June–14 July), and the beginning of the cleaning and repair of the *riuus Hiberiensis* (15 July)), although no specific date is mentioned. The importance and the potential for conflict of this *concilium* is seen in the fact that all the *pagani* in the *Belsionensis* territory or the *pagus* (i.e. of *Caesaraugusta*) were required to attend, in the designation of the venue — the boundary stone next to the villa of Valerius Avianus, almost certainly situated on the boundary between the *pagani Belsionenses* and those of *Caesaraugusta* — and also in the early time of the day for the meeting, *hora secunda*, and the stipulation that no one was to leave the meeting until presumably (it is here that the incomplete Column II begins) a decision *pro modo aquationis*, that is in proportion to the share of the water supply, had been taken.

The text, at least in the part that has come down to us, does not explain what this *concilium* dealt with, and neither do the modern *Ordenanzas* which generically define the purpose of the second general meeting as to discuss ‘everything that will benefit the best

¹²⁸ This would not necessarily have always been the last shift; in Agón, for example, the order for irrigating with water from the Huecha is fixed (always beginning at the head), but on the other hand, there are rolling shifts for irrigation from the Lodosa Canal.

¹²⁹ Similar safeguards are established in modern *Ordenanzas*, by ensuring, for example, the presence in the irrigation Syndicate of a spokesman representing the holdings that, because of their location or order in the shifts, are the last to receive irrigation (§ 58).

¹³⁰ See *Tb.I.L.* III, 367 and E. Forcellini, *Lexicon totius Latinitatis* (1940) I, 296–7, *s.u. aquatio* (on its exact meaning in a disputed passage by Cicero: W. H. Alexander, ‘Hic aquatio. Cicero, *De officiis* III 14, 59’, *The Classical Journal* 36 (1941), 290–3; J. P. Turley, ‘Hic aquatio. Cicero, *De officiis* III 14, 59’, *The Classical Journal* 37 (1942), 485–9).

¹³¹ ‘Et saelices aquationibus adiuuandas’ (*opus agriculturae* 3.17.8), or ‘the willows must be helped with irrigation’; ‘ubi regio siccor est, aquationibus adiuuentur’ (*op. agric.* 3.18.3), or ‘in the driest part of the region, irrigation must be used’; see R. H. Rodgers, *Palladii Rutilii Tauri Aemiliani uiri inlustris opus agriculturae, de ueterinaria medicina, de insitione* (1975), 304. It is also used in *de ueter. medic.* 14.29, and by Columella (7.5.2), but in the sense of a watering place or a place to water animals.

¹³² On Palladius, see R. Martin, *Palladius. Traité d’agriculture. I (livres I et II)* (1976), viiff.

¹³³ J. M. Marín *et al.*, ‘El marco natural aragonés’, in L. M. Frutos (ed.), *Enciclopedia temática de Aragón. 5. Geografía* (1987), 27–146, at 116. In addition, modern irrigation *Ordenanzas* for the area set not one, but two ordinary cleaning operations and as many extraordinary operations as deemed necessary (§ 25), some with fixed dates and some without: for example, in May and June (Bisimbre-Agón) or March and September (Fréscano), both pertaining to irrigation from the Lodosa Canal.

¹³⁴ According to modern *Ordenanzas* § 25, irrigation in Bisimbre-Agón is scheduled between December and April for planting, 1 April to 10 June for cereals, and 11 June to 15 August for vegetable crops, olives and vines of less than two years old; in Fréscano the dates are similar: 25 November to 1 March for planting, 1 March to 10 June for cereals and fruit trees, and 10 June to 15 September for vegetable crops, olives and vines of less than two years old.

¹³⁵ The modern *Ordenanzas* also set two general meetings (§§ 52 and 53).

¹³⁶ Unless the dates were inclusive and also included 1 June, in which case it would refer to 1 to 5 June.

use of water and the distribution of irrigation in the current year'.¹³⁷ Probably it did not involve the volume of water available for each irrigator, or the irrigation sequence, since the former tends to depend on the surface area each individual needs to irrigate, and the latter depends on the location of his holdings in the irrigation system, although they are almost certainly issues that are potentially highly controversial, as shown in the *Lamasba* inscription.¹³⁸ However, what did need to be decided was where to begin the irrigation cycle, since in order to ensure that the last to receive the water were not always the same irrigators, this was done by rotation.¹³⁹ This circumstance would probably have been complicated by the fact that the irrigators belonged to two different municipalities, which might have had conflicting criteria regarding irrigation priority as well as, perhaps, the number of days assigned to each one, although this issue even today is usually settled in advance.¹⁴⁰ Irrigation priority for certain crops, among other issues, might also have caused disagreements, although the document does not give any clues on this.

IV.2.e. Provisions Regarding Canals whose Meaning is Unclear

§§ 4–6 (II.1–34)

At one point in § 4, the provisions once more seem to concentrate on the care of the irrigation installations, as far as can be deduced from the recognizable words in a series of incomplete conditional sentences, culminating in the imposition of a fine. They are orientated towards preventing infringements related to the *rius Hiberiensis* (II.5), which seem to include the dumping of refuse (II.7 *stercus*), and something to do with an *incilis* conduit (II.7–8), a term which often referred to drainage channels but which had other meanings as well.¹⁴¹ Whatever the case, these infringements were particularly serious, as they were punished with the highest fine recorded in the surviving part of the text, 250 denarii,¹⁴² payable as in the other cases to the *magistri pagi* (II.11). The last infringement mentioned seems to refer to using water in a way that was contrary to that agreed by the majority of the *pagani* (II.9–10).

§ 5 (II.12–17)

Even less clear is the beginning of § 5, where the surface of the bronze is extremely worn, although there is initially a reference to the *rius Hiberiensis* (II.12) and then perhaps to a *libertus* and the completion of works(?) (II.15, *perfecta*).

§ 6 and 6 bis (II.18–34). Unauthorized use of water by the *Belsinonenses*

The beginning of § 6 seems to deal with a drop in flow (II.22 'aqua in riuo defecerit . . .') as a result of the diverting of water (II.18 'aquae du[cendae(?)])' in the territory of the *Belsinonenses*, cutting off the flow of water which should have gone to the *riui paganici*,

¹³⁷ § 53.

¹³⁸ *CIL* VIII.18587 = 4440. In this case, as also occurred in the outskirts of Rome (*CIL* VI.1261; XIV.3676), the volume of water was fixed and measured by hours; however, on other occasions, the use of water was not subject to time restraints, and it could be used until the flooding of the holding was completed, as is the case today with irrigation in Agón, with water from the Huecha as well as, by pumping, from the Canal de Lodosa; however, the use of water from the fuente de Gañarul is time-regulated.

¹³⁹ See the commentary on § 3.c, particularly nn. 128 and 129.

¹⁴⁰ For example, in Agón, irrigation with water from the Huecha originating in the Ador dam is permanently distributed between Agón (four days), Bisimbre (two), and Gañarul (two).

¹⁴¹ *Cat., de agric.* 155, 1–2: *fossae inciles*, which Festus defined as 'quae in uis fiunt ad deducendam aquam', 'which serve to remove water from the roads' but also as 'deriuationes de riuo commune factae', 'diversions from a common canal'; Ulpian, however, defined it as 'locus depressus ad latus fluminis, ex eo dictus, quod incidatur; inciditur enim uel lapis uel terra, unde primum aqua ex flumine agi possit' (*Dig.* 43.21.1.5: 'a place sunk at the side of a river, so called because it is cut. The cutting is made into stone or earth so that through it water may first be brought from the river', Th. Mommsen and P. Krüger, *The Digest of Justinian IV* (1985), transl. A. Watson).

¹⁴² That is to say, 1000 HS, the maximum fine that could be imposed by magistrates in the Flavian municipalities, *Im.* § 84. See n. 83.

in other words, those of *Caesaraugusta* (II.23 ‘merentur riuos paganico[s]’). Here, it seems that those responsible were required to carry out cleaning and repair operations in the channels over the next five days (II.24 ‘purgare sarcireque debebit in [diebus quinque(?) pro]xumis’), following which the document makes more references to the repair and cleaning of the watercourses (II.26 ‘puros sartosque’, II.27 ‘purum sa[r]tumque(?)’). At *quibus* (II.25) there may be a new paragraph starting (§ 6 bis). At *iudicauerint* (II.29) the first two letters are indented and larger due to an error, as happens elsewhere in the column (II.16–17, 19?, 33?, 38). At any event, it refers to the handing down of a judgement with regard to the cleaning of a channel(?) (II.30 ‘riuom pu[rum]’) and a fine of 25 denarii (II.33), which is to be paid to whoever had use of the water (II.32).

IV.2.f. A Paragraph of Uncertain Content

§ 7, II.35–42

Little can be said about the content of § 7, in view of the state of conservation of the text, affected as it is by the wearing of the surface, particularly in II.39–42. There is clear reference to an action by the *magistri pagi* when carrying out their duty (II.38) which might refer to the administrative staff in their service, if II.35 is talking about a *libertum tabu[larium?]* or person in charge of the records (cf. II 13), which were essential not only for the proper functioning of the irrigation community, but also for monitoring the activity of the publicans, explained immediately afterwards. At the end, if *pro port[ione]* is the right reading in II.42, it probably refers to any of the duties or rights of the *pagani* in proportion to their *ius aquae*.

IV.3. SEIZURES AND PUBLICANS (§§ 8–10)

§ 8 (II.43–9)

In the lower part of the column, starting at § 8, the text once more begins to make sense to us, introducing the topic of seizure or *pignoris capio*, also dealt with in §§ 9 and 10. In the context of legal proceedings (II.43–44 ‘agent, [actio(?) perse]cutioe’) and the payment of money (*denarios*) to the *magistri pagi* or the publicans (II.44–5, cf. III.4–5), reference is made to seizure (II.46) and apparently the fine imposed on anyone who opposed it (II.47–8), an action which is clearly echoed, albeit with a different formulation, in the contemporary *lex metallis Vipascensis I*.¹⁴³

§ 9 (II.50–III.2)

After the paragraph which seems to establish the right of the *magistri pagi* and publicans to seize the goods of anyone who could not or would not pay the amounts they owed, § 9 states that two publicans are to act in these matters, and that unless the debt is settled within five days, the seized goods may be sold by the *magistri pagi* or the publican at a public auction held in the *pagus*.

§ 10 (III.3–7)

Paragraph § 10, in Column III of which the text becomes fully legible again (in fact it is the only complete paragraph in the entire text), establishes that when anyone considers that

¹⁴³ *CIL* II.5181 § 5 ‘Qui pignus capientem prohibuerit, [in singulas prohi]bitiones X (denarios) V d(are) d(ebet)’, ‘Whoever prevents the seizure of a pledge shall pay 5 denarii for each time he prevents it’; D’Ors, *op. cit.* (n. 34), 98. For the *lex metallis Vipascensis II*, see now S. Lazzarini, *Lex metallis dicta. Studi sulla seconda tavola di Vipasca* (2001).

he has been unduly (*indebite*)¹⁴⁴ subjected to seizure, the municipal jurisdictional authorities¹⁴⁵ have five days to bring an action against the *magistri pagi* or publicans accused of the incorrect seizure, and this should also be resolved within five days from the time when there is a defendant. Whoever wrote the paragraph seems to have opted for synthesis and conciseness, as in other passages,¹⁴⁶ since it has to be assumed that the magistrates would examine beforehand the existing evidence and, on the basis of that, state whether there was a case to answer in an action against the *magistri pagi* or publicans involved in the seizure.

Thus, the *lex*, after stating the obligations of the irrigators and the fines for anyone breaching them, goes on to give details of the consequences to be faced by those who cannot or will not pay their dues to the community, in other words the contributions decided upon by the *concilium*, or the fines for infringements — the two types of payment referred to in the surviving part of the text. Naturally, as we have seen, one cannot discount the possibility that the irrigators also had to pay for the water they used or even a fee if the hydraulic infrastructures belonged to the emperor.

At any event, the payment of levies and fines is enough to justify the unexpected presence of publicans in this document. As no city (or *pagus*) had specific personnel to collect these payments, these tasks would be entrusted to local publicans, according to a recent suggestion which seems to be borne out by this inscription.¹⁴⁷ This reference to the employment of publicans in municipal rural districts shows, according to ideas defended in the last twenty years,¹⁴⁸ that the hiring of public services, in spite of the clear tendency by the emperor to take on directly more and more power, not only existed at various levels of the Imperial administration during the Principate, but that it was also used at a local level by cities and even their rural districts. One might ask oneself whether the duties of these publicans were limited to the collection of fines and *pagus* levies, probably in return for a percentage of the funds collected,¹⁴⁹ or whether they would have had other municipal duties, such as, for example, the collection of rates or taxes,¹⁵⁰ or even whether they were involved in any other type of activity, such as the maintenance of the *riuus Hiberiensis*, if it were a question of a major hydraulic infrastructure.¹⁵¹ If we limit ourselves to the definition Ulpian gives of a publican, any of these duties alone would justify designating

¹⁴⁴ *Th. l. L. XVI*, 1123 and Forcellini, *op. cit.* (n. 130), II, 797, *s. u. indebite*. This is the earliest instance of the use of the uncommon adverb *indebite*, found only in legal sources (*Dig.* 22.3.25.4; *Cod. Iust.* 4.31.10, from the time of Diocletian; *Cod. Theod.* 11.7.1) and, in the fifth century, in a work by Petrus from Ravenna (*Chrysolog., serm.* 161).

¹⁴⁵ Presumably the magistrates of the city of the debtor.

¹⁴⁶ Thus, for example, § 10 as well as § 12, regarding the request for fines against any *magistri pagi* who fail to comply with their obligations, omit, obviously for the sake of brevity, the possibility that they may be found not guilty, and move straight on to state who the fine is to be paid to in the event that they were found guilty.

¹⁴⁷ This view regarding the *tributum* is suggested by P. A. Brunt in his seminal work 'Publicans in the Principate', *Roman Imperial Themes* (1990), 354–432, especially 354, 389.

¹⁴⁸ Particularly since the work by M. R. Cimma, *Ricerche sulle società de publicani* (1981), 99–162, in answer to the views held since the beginning of the twentieth century by Rostovtzeff and rectifying various aspects of the theories of Hirschfeld, Cagnat and De Laet among others, and the previously-mentioned contribution by Brunt, *op. cit.* (n. 147), 354–432.

¹⁴⁹ A system which seems to have been imposed in a good many fund collection contexts in the Principate, according to Brunt, *op. cit.* (n. 147), 831ff.

¹⁵⁰ According to the *lex Malacitana* § 63 the collection of municipal *uectigalia* and *tributa* was contracted out. For this law, see T. Spitzl, *Lex Municipii Malacitani* (1984).

¹⁵¹ Frontin., *de aquaed.* 119.3 suggests the possibility of the leasing of the maintenance of an aqueduct; for the leasing of other public works, see Cimma, *op. cit.* (n. 148), 120ff.

him with this term.¹⁵² At any event, the mere administration of the irrigation community seems to be sufficient justification for contracting two publicans.¹⁵³

One item that is worthy of mention with regard to the publicans is the fact that whilst § 9 refers to the existence of two in the service of the *magistri pagi*, at the end of this paragraph and in the next one, only one is mentioned. Due to the state of the text this question cannot be resolved categorically, but it might mean that the two collectives making up the irrigation community each had one levy and fines collector in the service of their two(?) respective *magistri pagi*.

To carry out their duties effectively, the publicans had recourse to the *pignoris capio* (an enforcement seizure with, as we shall see, the right of sale), which was an old procedure similar to the *legis actiones*¹⁵⁴ exercised by the publicans responsible for collecting *uectigalia publica populi Romani* since the Republican era.¹⁵⁵ The majority of scholars have tended to date its disappearance to the end of the Republic or the early days of the Principate,¹⁵⁶ in spite of clear signs that it was used into the second century C.E. as the *lex metalli Vipascensis I* bears out,¹⁵⁷ now joined by this document. The *Vipasca* law grants this recourse to the *conductores* or leaseholders of various services in the mining area (shoemaking or *sutrinum*, § 4; hairdressing or *tonstrinum*, § 5;¹⁵⁸ etc.) as well as their partners and representatives, even for the collection of very small amounts.¹⁵⁹ Although this example is not always taken into account in connection with the issue of publicans and the *pignoris capio*, it is true to say that these *conductores*, although not called publicans, were so in practice.¹⁶⁰ The Bronze of Agón now shows that *Vipasca I* was not an isolated example, and that during the reign of Hadrian the *pignoris capio* was still being conceded to leasers of public services, at local level and in the imperial administration, whether they were called *conductores* or *publicani*, to aid them in their collection duties. It is worth remembering that the irrigators of Valencia, whose regulations are the oldest in Spain, paid a fee towards the costs of maintenance, repair, and cleaning of the irrigation system (i.e. what was envisaged in § 1 of the law) and any default granted the 'Tribunal de las Aguas' full powers over the possessions of the defaulter. In fact, enforcement collection procedures are typical of irrigation communities even today, since in Spain they are

¹⁵² 'Publicani sunt, qui publico fruuntur (nam inde nomen habent), siue fisco uectigal pendant uel tributum consequantur: et omnes, qui quod a fisco conducunt, recte publicani appellantur' (*Dig.* 39.4.1.1), in other words 'Publicans are those who are involved in public matters (hence their name) whether they pay a levy to the tax authorities or collect one: and all lease-holders of the tax authorities have the right to call themselves publicans'. And he completes the definition with: 'Sed et hi, qui salinas et cretifodinas et metalla habent, publicanorum loco sunt' (*Dig.* 39.4.13.1), 'Publicans are also those who lease saltworks or claypits or quarries/mines'.

¹⁵³ *Ordenanzas* of Agón § 27: 'There will be a collector and executive agent responsible for collecting all the amounts owed to the Syndicate and the fines and indemnities imposed by the Court' (now defunct).

¹⁵⁴ Gaius, *Inst.* 4.29, almost certainly because they were accompanied by the pronouncement of certain ceremonial words.

¹⁵⁵ Gaius, *Inst.* 4.28.

¹⁵⁶ For one view of this issue, see F. De Martino, 'La storia dei publicani e gli scritti dei giuristi', *Labeo* 1 (1955), 5–41, at 8ff., who is inclined to consider that it was abolished like the *legis actiones* by one of the *leges Iuliae*.

¹⁵⁷ *FIRA* 1.104 = D'Ors, op. cit. (n. 34), 71ff. = *CIL* II.5181. It is not clear whether there was any connection between the *pignoris capio* and the *pigneratores* who acted with the teams working on the channelling of the Adige towards the end of the first century B.C.E. (*AE* 1916, 60 and 61 = *CIL* V.2603; see n. 88 above); as opposed to the traditional understanding of this term as 'ingaggiatore di operai' (with misgivings by Costa, op. cit. (n. 78), 79 n. 1, but accepted by Bassignano, op. cit. (n. 88), 178), others prefer to give it a more financial sense: 'financial trustees' (Shaw, op. cit. (n. 63, 1984), 121–73, at 144), 'financial backers' (Thomas and Wilson, op. cit. (n. 64), 191), 'a man who pledged property for the due completion of the work' (L. Keppie, *Colonisation and Veteran Settlement in Italy* 47–14 B.C. (1983), 199).

¹⁵⁸ In this case, the *conductor* was also authorized to collect a fine each time the *pignoris capio* was opposed.

¹⁵⁹ For example, *Vipasca I* § 7: 3 denarii.

¹⁶⁰ *Dig.* 39.4.1.1; Cimma, op. cit. (n. 148), 154ff.; Brunt, op. cit. (n. 147), 359.

authorized to claim payment using distraint procedure, otherwise only available to public bodies (city councils, tax authorities, etc.).¹⁶¹

The *magistri pagi* could also carry out seizures, a prerogative they shared with the municipal magistrates.¹⁶²

Finally, a hitherto unsatisfactorily documented aspect of the *pignoris capio* on which the text throws light is the question of what eventually happened to the seized goods.¹⁶³ Various possibilities have been discussed (destruction, usufruct, transfer, *usucapio*), among which sale by auction is now confirmed, and, what is more, within a much shorter time-scale than previously thought¹⁶⁴ (five days) in line with the expeditious nature established by this law for legal procedures.

IV.4. RESPONSIBILITY OF THE *MAGISTRI PAGI* REGARDING THE FUNCTIONING OF THE LAW AND 'ACTIONS FOR THE BENEFIT OF THE *POPVLVS*'¹⁶⁵ (§§ 11 and 13, III.8–14, 23–8)

In spite of the gaps caused by the missing left-hand side of Column III after III.13, the content of paragraphs §§ 11 and 13 is quite clear. It lists the sanctions for breaches of the law, in compliance with which it makes the *magistri pagi* responsible if they do not sue infringers (§ 11) or carry out the provisions of the law (§ 13), instead of establishing a generic obligation for all those involved, as set out, for example, in the Flavian municipal laws.¹⁶⁶ Probably, as occurred with other regulations connected with small collectives,¹⁶⁷ it was considered preferable to make the local authorities responsible for compliance with the law under pressure of an *actio popularis*¹⁶⁸ or 'popular action'¹⁶⁹ against any *magistri pagi* who were not pulling their weight in their posts; any *paganus* was given the right to bring an action against them, that is to say, bring a *multae* or *poenae petitio*, if they did

¹⁶¹ *Ordenanzas* art. 16.2: Adoption by the Syndicate of suitable measures 'to collect individual contributions ... and special levies ... To collect any indemnities or fines imposed by the Irrigation Court ... In either case the distraint procedure may be used against defaulters after ten days' (*Real Orden* 9–IV–1872, *Real Decreto* 18–XII–1928). For the 'Tribunal de las Aguas', see n. 198.

¹⁶² *Irñ.* § 19, concerning the *aediles* (the previous sections on the *duoviri* are missing), who in this Flavian *municipium* could take action for up to 10,000 sesterii ('pignus capiendi a municipibus incolisque, in homines diesque singulos, quot sit non pluris quam HS (sestertium) X (milia) nummorum'; 'seizing a pledge from *municipes* and *incolae*, which may not be more than 10,000 sesterces per person per day'), that is to say, 2,500 denarii, ten times the maximum fine that could be imposed by the *magistri pagi* (II.11); they were also empowered to impose fines of up to 5,000 sesterii (that is to say, 1,250 denarii, five times that of the *magistri pagi*) and had jurisdiction up to 200 sesterii (the *duoviri*, up to 1,000, *Irñ.* § 84).

¹⁶³ Gaius, *Inst.* 4.32, has a *formula* whereby the publican could require the redemption of the pledge: 'Contra in ea forma, quae publicano proponitur, talis fictio est, ut quanta pecunia olim, si pignus captum esset, id pignus is, a quo captum erat, luere deberet, tantam pecuniam condemnetur' ('On the other hand, in the formula which is issued to a tax gatherer the fiction is that the debtor is condemned to pay as much as he would have had to pay to ransom it from its taker, had the pledge been seized in times past'; transl. W. M. Gordon and O. F. Robinson, *The Institutes of Gaius* (1988)).

¹⁶⁴ G. Humbert s. u. *pignus*, *DS* IV (1907), 472–5, at 475, suggests that it was two months. See one aspect of the issue in De Martino, op. cit. (n. 156), 6–7.

¹⁶⁵ M. H. Crawford, *Roman Statutes* (= *RS*) (1996), I, 21 prefers to use the widespread expression *actio popularis* only for a private action in which anyone can plead, and to call 'actions for the benefit of the *populus*' those aiming at the enforcement of a statute.

¹⁶⁶ § 96; see also the *lex de prouinciis praetoriis* (*RS* 12) or the *lex de imperio Vespasiani* (*RS* 39).

¹⁶⁷ The *lex collegii Aesculapii et Hygiae* of 153 C.E. (*FIRA* III.36).

¹⁶⁸ *Dig.* 47.23: 'Eam popularem actionem dicitur, quae suum ius populi tuetur', 'a popular action is one that affects the very right of the people'.

¹⁶⁹ For the popular action, as well as classic studies, such as the one by C. Fadda, *L'azione popolare. Studio di diritto romano ed attuale* (1894) (concerning this, F. Casavola, 'Fadda e la dottrina delle azioni popolari', *Labeo* 1 (1955), 131–53), see F. Casavola, *Studi sulle azioni popolari. Le "actiones populares"* (1958), J. Danilovic, 'Observations sur les "actiones populares"', *Studi in onore di G. Grosso* 6 (1974), 15–43, and also D'Ors, op. cit. (n. 34), 160ff. regarding the Hispanic municipal laws, with the state of the debate up to then, and the updates by L. Murga, 'Las acciones populares en el municipio de Irni', *BIDR* 88 (1985), 210–60, on the *lex Irnitana*, and 'Las acciones populares en la *lex Genetivae Iuliae*', *Seminarios Complutenses* 1 (1989), 103ff., on the *lex Vrsonensis*.

not comply with their obligations. ‘Popular actions’ were common when the claim affected the interests of the collective¹⁷⁰ and especially when it was directed against the magistrates, as shown by the Flavian municipal laws¹⁷¹ or the *lex Vrsonensis*,¹⁷² albeit with certain singularities in our case: firstly, the formal expression of this ‘popular action’ was not the usual *qui volet* . . .; secondly, instead of ordering the fine to be paid into the community funds, the claimant was given half the amount, a procedure that is well documented,¹⁷³ although not in the Hispanic municipal laws, probably in an attempt to stimulate the control of the *pagani* over the *magistri*; finally, the text is somewhat inconsistent, since in these two paragraphs it expresses differently the claim for half the fine and the paying of the other half into the community funds (‘in commu[ne] redigunto / paganis reddito’), as well as the bringing of the action, referred to as ‘actio persecutioe’ in § 11 as opposed to ‘petitio persecutio’ in § 13, in spite of the fact that this does not imply a different procedure, in view of the redundancy that seems to be contained in the expression *actio petitio persecutio*¹⁷⁴ and the fact that there is no effective difference between the two expressions:¹⁷⁵ at any event, this diversity is in marked contrast to the homogeneous nature of the expression of the ‘popular action’ in, for example, the Flavian municipal laws.¹⁷⁶

Almost certainly, the granting of half the fine to the plaintiff and the responsibility of the *magistri pagi* with regard to compliance with the law is connected with the small size of the *pagus* community in comparison with municipal communities; the discrepancies in §§ 10 and 12 may be due to the use of different legal sources in the drafting of this particular part of the *lex*; and finally, the difference in the expression of popular action may have something to do with its later date in comparison with the municipal laws.

IV.5. ANOMALOUS PARAGRAPH (§ 12)

Between the two paragraphs we have just commented on, there is § 12, whose content, despite what one might have expected from its position in the text, not only has no connection with the provisions in §§ 11 and 13, but also features two very distinct parts that apparently have no bearing on one another.

§ 12a (III.15–18)

The first part, judging by the text that has survived, refers to certain situations in which an irrigator, probably during an extraordinary irrigation cycle,¹⁷⁷ or various irrigators sharing the water supply might be deprived of legitimate access to the water by another

¹⁷⁰ Flavian municipal laws §§ 45, 47, 62, 67, 72, 74, 75, 96.

¹⁷¹ §§ 26, 48, 90.

¹⁷² § 97.

¹⁷³ Although with different formulations: *lex agraria* (RS 2), *senatus consultum de aquaeductibus* (FIRA I.41 § 127), *lex riui incerta* (FIRA III.71c).

¹⁷⁴ D’Ors, op. cit. (n. 34), 163ff.

¹⁷⁵ Berger, op. cit. (n. 89), 629; see M. Kaser, *Das römische Zivilprozessrecht* (1966), 174–5, n. 32 with bibliography. The Bronze of Agón shows how the use of the term *actio petitio persecutio* does not imply that the plaintiff received all of the sum claimed as was thought by F. Casavola, *Actio petitio persecutio* (1965) (see the opposing arguments of F. Sturm, *ZSS* (1966), 485–91 and A. D’Ors, *Studi Senesi* (1968), 119–20 in their respective reviews) and Dalinovic, op. cit. (n. 169), 42; in this respect, see also P. Fuenteseca, ‘Reflexiones sobre la tricotomía “actio petitio persecutio”’, *AHDE* 40 (1970), 139–226 and *Investigaciones de derecho procesal romano* (1969), 93; A. D’Ors, ‘Nuevos datos de la ley Irnitana sobre jurisdicción municipal’, *SDHI* 49 (1983), 18–50, at 28.

¹⁷⁶ *Irn.* §§ 26, 45, 47, 48, 62, 67, 72, 74, 75, 90, 96: ‘eiusque pecuniae deque ea pecunia municipi eius municipi qui uolet cuique per h. l. licebit, actio petitio persecutio esto’ (‘and for this amount and because of it, any citizen of this municipality may present an action under the terms of this law’); it is expressed similarly in the *lex Vrsonensis* § 97: ‘eiusque pecuniae colonorum eius colon(iae) cui uolet petitio esto’ (‘and for this amount any inhabitant of this colony may present a petition’).

¹⁷⁷ ‘[Si aquatio extraordi]naria . . .?’ The document does not specify the nature of this extraordinary cycle: perhaps in times of water shortage extraordinary irrigation sessions might have been decreed for certain crops that required it, or when there was a surplus, the extra water in the canal was made use of.

person who had diverted or reduced the flow, and this person would then have to pay compensation (25 denarii?), the details of which are missing.

§ 12b (III.18–22)

The second part, on the other hand, seems to anticipate the procedural aspects dealt with in §§ 14–15, as it is concerned with the oath or *iusiurandum*, perhaps as a way of speeding up an action in the *in iure* phase,¹⁷⁸ in cases in which the plaintiff requires it from the defendant, who must give it under penalty of being constrained by the jurisdictional authority to satisfy the amount under dispute.¹⁷⁹ The sentence linking III.19–20 could refer to *calumnia*, ‘a malicious vexation’,¹⁸⁰ aimed at upsetting the opponent¹⁸¹ or to false accusation,¹⁸² as shown by Ulpian *ad edict.* 26, ‘qui iusiurandum defert, prior de calumnia debet iurare, si hoc exigitur, deinde sic ei iurabitur’ (*Dig.* 12.2.34.4), that is to say ‘one who tenders an oath ought first to swear against vexatiousness, if he is asked to’. In fact, both litigants have the right to require the other party to swear that they are not acting with *calumnia*,¹⁸³ according to Gaius,¹⁸⁴ although what § 12b aims to regulate is not entirely clear: it seems to say something like ‘dum ipse ca/[lumniae? causa? id? no]n recuset’ (III.19–20), or ‘unless the plaintiff waives the *calumniae causa* oath(?)’. Anyway other supplements such as those suggested by M. H. Crawford cannot be ruled out: ‘dum ipse ca-/[ueri sibi ab eo no]n recuset’.

In short, the positioning of § 12 is entirely incongruous; not only does it separate §§ 11 and 13, which should go together because they are complementary (albeit, as we have seen, with different wording), but it also has miscellaneous content, with the first part (III.15–18) having more to do with the first section devoted to the management of the irrigation system (§§ 1–6) and seeming out of place here, and the second part (III.18–22) referring to the *iusiurandum*, that is to say, procedural aspects deriving from the law itself, which the document deals with in §§ 14–15.

IV.6. APPEALING AGAINST A FINE: PROCEDURAL ASPECTS (§§ 14, 15)

In the surviving part of the text, the *lex* specifically refers to various cases in which the *pagani* can approach the local jurisdictional authorities either to appeal against a seizure that they may consider unwarranted (§ 10) or to bring an action against *magistri pagi* who fail to accuse infringers of the law (§ 11) or fail to comply with the law (§ 13), or in connection with other items (maybe related to the non-payment of contributions or fines), which due to missing sections of the text are not clear (§ 8). Although the text does not say

¹⁷⁸ See *Dig.* 12.2; Kaser, *op. cit.* (n. 175), 197ff. According to Paulus, *ad edict.* 18: ‘iusiurandum speciem transactionis continet maioremque habet auctoritatem quam res iudicata’ (*Dig.* 12.2.2) (‘The oath consists of a type of transaction and has more weight than a judgement’) and Gaius, *ad edict. prouinc.* 5: ‘Maximum remedium expediendarum litium in usum uenit iusiurandi religio’ (*Dig.* 12.2.1) (‘As a final remedy to end actions, respect for the oath has been introduced’). L. Wenger, *Institutes of the Roman Law of Civil Procedure* (1940), 119ff.; for the various procedural contexts in which the *iusiurandum* could be used, Mommsen, Krueger and Watson, *op. cit.* (n. 141), xxi.

¹⁷⁹ *Dig.* 12.2.34.6: ‘eum a quo iusiurandum petetur, soluere aut iurare cogam’ (‘I order whoever is required to tender an oath to pay or tender the oath’).

¹⁸⁰ Berger, *op. cit.* (n. 89), 378; on *calumnia*, S. Serangeli, ‘C. 7, 16, 31 e le azioni contro il litigante temerario’, *BIDR* 71 (1968), 199–226; J. G. Camiñas, ‘Presupuestos textuales para una aproximación al concepto de calumnia en el derecho privado romano’, *Seminarios Complutenses* 3 (1991), 27ff. and *Ensayo de reconstrucción del título IX del Edicto Perpetuo: De calumniatoribus* (1994), 97–113; D. A. Centola, *Il crimen calumniae. Contributo allo studio del processo criminale romano* (1999).

¹⁸¹ Gaius, *Inst.* 4.178.

¹⁸² Centola, *op. cit.* (n. 180), 1.

¹⁸³ Wenger, *op. cit.* (n. 178), 102–3; Kaser, *op. cit.* (n. 175), 519.

¹⁸⁴ *Instit.* 4.172 and 176: the plaintiff may require the defendant to swear ‘non calumniae causa infitias ire’ (‘that you do not deny liability in order to be vexatious’) and, in the other direction, that ‘non calumniae causa agere’ (‘that the action is not brought vexatiously’; transl. Gordon and Robinson, *op. cit.* (n. 163)).

anything in this respect, it seems reasonable to suppose that the *magistri pagi*, or those that they had delegated duties to, would have directly enforced the *poenae* imposed on infringers by their authority, but it also seems reasonable to assume that the *pagani* would have been able to lodge some sort of appeal against the fines, probably before their jurisdictional magistrates. Thus, paragraphs §§ 14 and 15 give details of the right procedure for the correct running of these judicial processes. The second of these paragraphs (§ 15) obviously refers to the *formula* that the *iudex* has to apply in the *apud iudicem* phase, that is to say, the trial itself. On the other hand, the previous paragraph (§ 14) deals with the *in iure* phase, the carrying out of proceedings, which is what paragraph § 12b might have been referring to with regard to the *iusiurandum*.

§ 14 (III.29–37). The *uadimonium*

Paragraph § 14 begins with a clear reference to the *uadimonium* that a person from whom a fine was demanded was to give to the nearest jurisdictional authority (III.29–32), an expression which is not entirely clear as the town of *Cascantum* was obviously much nearer the *pagani* territories than the distant *Caesaraugusta*. Yet this is what seems to be stated in the law which, on the other hand, in § 10 probably attributes jurisdiction to the magistrates of the city of residence of the person who believes he has been the victim of an unwarranted seizure. This *uadimonium* is obviously the promise to appear before the court referred to in legal sources¹⁸⁵ in which the *duumvir* would have summonsed the defendant to appear on the specified date at the time and place for the initial hearing.¹⁸⁶ Perhaps the *summa uadimonii*, which had to be paid in the event of non-appearance,¹⁸⁷ is referred to in the text that follows, which is difficult to read because of the extremely worn surface and the break between Fragments 10 and 11 (III.33–4). It appears to talk about the calculation of an amount(?) with regard to an edict, with the author's name appearing between lines III.32–3, 'edictum Mi/[---]ani', perhaps Minicius Fundanus, *cos. suf.* 107 C.E.,¹⁸⁸ 'leg(ati) Aug(usti), clarissimi uiri', and in III.34 about the need to make a promise

¹⁸⁵ On the *uadimonium*, G. Camodeca, *L'archivio puteolano dei Sulpicii* (1992), I, 42–6, who makes a distinction between this promise to appear made before the magistrate or judge, from the so-called extrajudicial *uadimonium*, before the *ius uocatio* established between the parties, which would have been reflected, for example, in the tablets of the Sulpicii from Puteoli; but see the dissenting view of E. Metzger, 'The current view of the extra-judicial *uadimonium*', *ZSS* (2000), 133–78; in addition, J. Platscheck, '*Vadimonium factum Numero Negidio*', *ZPE* 137 (2001), 281–91; T. Jiménez-Candela, 'Notas en torno al *uadimonium*', *SDHI* 48 (1982), 126–66; E. Metzger, *A New Outline of the Roman Civil Trial* (1997), 21, 25, 87–8, 97–9; Kaser, *op. cit.* (n. 175), 167–70; Wenger, *op. cit.* (n. 178), 98–9. See also *Irn.* § 84.

¹⁸⁶ What Kaser, *op. cit.* (n. 175), 167 n. 2, calls '*Zitationsvadimonium*' to distinguish it from what was requested when the trial had to be postponed until another day, '*Dilationsvadimonium*', referred to by Gaius, *Inst.* 4.184.

¹⁸⁷ cf. Gaius, *Inst.* 4.186; Kaser, *op. cit.* (n. 175), 167; Murga, *op. cit.* (n. 91), 264.

¹⁸⁸ There were several senators at the beginning of the second century C.E., some of them Hispanic, whose *nomina* began with Mi-: C. Minicius Fundanus (*PIR*² M 612, *cos.* 107); L. Minucius Natalis (*PIR*² M 619, *cos.* 106); T. Saluius Rufinus Minicius Opianus (*PIR*² M 623, *cos.* 123), see W. Eck, 'Jahres- und Provinzialfasten der senatorischen Statthalter von 69/70 bis 138/139', *Chiron* 12 (1982), 281–362 and *op. cit.* (n. 35), 234; L. Minicius Natalis Quadronius Verus (*PIR*² M 620, *cos.* 139). Perhaps the name is that of a previous governor of Hispania Citerior, hitherto unknown (Alföldy, *op. cit.* (n. 31), 303), whose decrees could have been exhibited publicly in *Caesaraugusta* and *Cascantum* together with others related to the jurisdiction of the municipal magistrates; this, at least, is what is stipulated in the *lex Irnitana* § 85: 'Quaecumque edicta, quasue formulas iudiciorum (...) quaeque interdita is qui ei prouinciae praerit in ea prouincia proposita habebit, quae eorum ad iuris dictionem eius magistratus qui <in> municipio Flauio Irnitano i. d. p. pertinebunt, ea omnia is in eo municipio, in suo magistratu, quotidie maiorem partem cuiusque diei proposita proscriptaque habeto ut d. p. r. l. p.', 'Whatever edicts or formulae for trials (...) or interdicts the person who governs that province has displayed in that province, whichever of them relates to the jurisdiction of that magistrate who is in charge of the administration of justice in the Municipium Flauium Irnitano, he is to have all of them displayed and published in that *municipium* in his magistracy every day from the greater part of each day so that they may be properly read from ground level' (translation Crawford). Among the senators mentioned above, C. Minicius Fundanus, *cos.* 107 C.E. and *procos. Asiae* during Hadrian's reign, is the most likely to be referred to here; on his identification with the provincial authority in III.44, see above IV.1.b.

of *uadimonium*(?) after which there is mention of a *iudex* and the settling of a *controversia* within five days, outside the usual procedural order (*extra ordi[nem]*), to establish who has acted lawfully(?) or otherwise (III.34–7) — a procedure that seems to seek the settlement of these legal matters as speedily as possible.

§ 15 (III.38–43 *cf.* IV.1.a, c). The judicial *formula*

In § 15, Augustanus Alpinus, as the provincial jurisdictional authority, provides the *formula* for those who wish to bring an action or demand a fine under any of the terms of the law,¹⁸⁹ by referring judges to the regulations contained in the *lex riui Hiberiensis*, characterized as a *conuentio* between two *pagus* communities,¹⁹⁰ almost certainly in order to ensure that the *pagani* receive justice under the same conditions in *Casaraugusta* as in *Caesaraugusta*. The *formula* is perfectly in line with the model supplied by Gaius,¹⁹¹ where the traditional clause for designating a judge, *iudex esto*, is followed by the two essential parts: the *intentio* (*Inst.* 4.41), in this case *incerta*, ‘quidquid paret Numerium Negidium Aulo Agerio dare facere oportere’,¹⁹² and finally the *condemnatio* (*Inst.* 4.43), ‘iudex Numerium Negidium Aulo Agerio dumtaxat X milia condemnato, si non paret absoluto’,¹⁹³ with, in the middle, a reference to the origin of the *lex* as the result of the *conuentio* of the *pagani* involved, which defines its scope.

IV.7. SANCTION AND RATIFICATION OF THE *LEX* (§ 16, III.44–7; *cf.* IV.1.b, c)

The final paragraph contains the sanction and ratification of the *lex* that originated with an agreement of the *pagani* by the provincial governor or his *legatus iuridicus* [—Fu]ndanus Augustanus Alpinus.¹⁹⁴ This senator and his legal advisors would have played an essential role in the drafting of the second part of the *lex*, which regulates the activity and prerogatives of the publicans, the monitoring of the *magistri pagi* by the *pagani* through *actiones populares*, and the procedural aspects linked to the functioning of the *lex*, while the first part, devoted to the functioning of the irrigation community, would have been made up of the agreement reached by the *pagani* through the intervention of Augustanus Alpinus. At any event, it should not be forgotten that his intervention was not on his own initiative but was requested by the *pagani* of *Caesaraugusta*, showing how accessible the provincial authorities were, who took into account demands made by even the rural districts of the cities, as well as the influence wielded by *Caesaraugusta* in the province and the importance of the irrigation areas affected by the conflict.¹⁹⁵

¹⁸⁹ In general, Kaser, *op. cit.* (n. 175), 238ff.

¹⁹⁰ See IV.1.c.

¹⁹¹ *Inst.* 4.39. See, for example, Berger’s definition, *op. cit.* (n. 89), 474; Gordon and Robinson, *op. cit.* (n. 163).

¹⁹² ‘Whatever it appears that Numerius Nigidius is under duty to give or do for Aulus Agerius’ (transl. Gordon and Robinson, *op. cit.* (n. 163)). Also in the *Fragmenta Augustodumensia* 108 (Riccobono, *FIRA* 2, 237): ‘quidquid te dare facere praestare oportet’, although Kaser, *op. cit.* (n. 175), 239 n. 8 states that ‘Im hadrianischen Edikt scheinen Formeln mit *quidquid paret* nicht vorzukommen, dort heißt es bei den Formeln auf *incertum* ständig “*quidquid ob eam rem Nm. Nm. Ao. Ao. Dare facere (praestare) oportet*”’.

¹⁹³ ‘Judge, condemn Numerius Negidius to pay not more than ten thousand to Aulus Negidius. If it does not so appear, exonerate him’ (transl. Gordon and Robinson, *op. cit.* (n. 184)). *Cf.* D. Mantovani, *Le formule del processo privato romano* (1999).

¹⁹⁴ See IV.1.b and c, and n. 188.

¹⁹⁵ The *lex* that concerns us may not have been the only documented case of the intervention of a governor in an irrigation issue: a lost inscription from the provincial capital, *Tarraco* (Tarragona), documents a decree, with the date 11 February 193 C.E., by L. Nouius Rufus about the dispute ‘inter compaganos riui Larensis et Val. Faentinam’ (*CIL* II.4125; G. Alföldy, *Die römischen Inschriften von Tarraco* (1975), No. 143), details of which are not known due to the fragmentary nature of the text. Although the dispute has traditionally been considered to have been over boundaries (D’Ors, *op. cit.* (n. 31), 361–5), one cannot discount the possibility that it might have been over water, if the *compagani riui Larensis* were not a collective of peasants near a river known as *Larensis*, but members of an irrigation community that used the waters of a canal named *Larensis*. See now F. Beltrán, ‘Rural Principate,’ in F. Marco, F. Pina and J. Remesal (eds), *Repúblicas y ciudadanos: modelos de participación cívica en el mundo antiguo* (2006), 267ff.

As the *lex* arose from a conflict, it must be assumed that it envisaged measures to resolve it that met with the consent of both parties, without discounting the fact that one party may have come out of it better than the other. The problem lies in the fact that the document specifies neither the points at issue nor the measures adopted to settle the dispute.

V THE CONFLICT AND ITS SETTLEMENT

Water is a scarce and variable resource in dry regions, and therefore its distribution is in itself a source of conflict.¹⁹⁶ This is why the most important objective of irrigation communities, apart from the efficient management of water, is ‘to avoid issues and disputes between the various users’,¹⁹⁷ and why they usually avail themselves of the mechanisms required to settle disputes arising in the community.¹⁹⁸ Only when the conflicts become more complex and serious, and thus beyond the settlement capacity of these mechanisms, is a higher authority called in. Obviously, in a city-based state such as the Roman Empire, the municipal institutions were the first level of reference for the irrigation communities based in their territory. This is borne out, for example, by the well-known case of the users of the *aqua Claudiana* in the Numidian city of *Lamasba*, whose differences regarding the duration of irrigation shifts were settled in the reign of Elagabalus through the arbitration of various local dignitaries appointed by the city’s senate.¹⁹⁹ The fact that in the case that concerns us the intervention of the provincial authority was requested is almost certainly because of the intermunicipal nature of the dispute, which was beyond the powers of the magistrates of the cities involved.

As we have seen, the conflict involved a stretch of irrigated lands, no broader than 10 km, along the right bank of the Ebro at under 300 m above sea level (Fig. 1). To the east, around Gallur, were the rural districts, probably unified in a single *pagus*, of the *Galli* and the *Segardenenses*, belonging to the territory of the Roman colony of *Caesaraugusta*, whose urban centre was 40 km downstream. To the west, around Mallén, was the *Belsinonensis* district, jurisdictionally dependent, according to all indications, on the Latin municipality of *Cascantum* (Cascante), 25 km from Mallén.

Both were rural districts, although they had centres of population, such as the alleged *uici* of ‘El Razazol’ (Gallur) or ‘El Convento’ (Mallén), if indeed the latter coincided with the former *Belsino* and it (not the land around it) was referred to with the adjective *Belsinonensis*. And both were quite some distance from their urban centres, especially the *pagi* of *Caesaraugusta*. We do not know what the relationship was between the *Caesaraugusta* and the *Belsinonensis* irrigators before the *conuentio* that gave rise to the *lex*. Probably, since they belonged to different municipalities, their only links were the fact that they were neighbours and their common use of the *riuus Hiberiensis*, with regard to which, judging by the claim lodged by them, the *pagani* of *Caesaraugusta* saw themselves as wronged by the *Belsinonenses*. But even if that were not the case, if there had been a closer relationship previously between the irrigators of the two cities, it was obviously not overly formal or else it did not work to the satisfaction of everyone.

Although the text does not specify the reasons for the dissatisfaction that caused the claim of the irrigators of *Caesaraugusta*, it is obvious from the content of the *lex* that the governor did not limit himself to settling the issue with a specific measure to satisfy one side or the other, but that he also designed an organizational framework for the irrigators,

¹⁹⁶ For irrigation conflicts, see the bibliography compiled by Shaw, *op. cit.* (n. 63, 1982), 69 n. 1, and the cases commented on by Glick, *op. cit.* (n. 99), 1–19.

¹⁹⁷ *Ordenanzas* § 5.

¹⁹⁸ The modern *Ordenanzas* order, for this purpose, the appointment of an ‘Irrigation jury’ (§ 68); Valencia is famous for its ‘Tribunal de las Aguas’, V. Fairén, *El Tribunal de las Aguas de Valencia y su proceso* (1975).

¹⁹⁹ *CIL VIII.18587*; Shaw, *op. cit.* (n. 63, 1982), 68ff.

compatible with their membership of two different municipalities, which could thenceforth settle on its own any disputes thanks to a series of mechanisms related to decision-making, enforcement, collection and jurisdiction; at the same time, it systematized the basic regulations for the proper functioning of the irrigation community. Therefore, the *lex* appears to have four basic objectives: (i) to settle a water conflict; (ii) to systematize the regulations for the functioning of irrigation; (iii) to unite all the irrigators into one community; and (iv) to harmonize the functioning of this community with that of the two cities that the irrigators belonged to.

With regard to the irrigation regulations (§§ 2, 3, 4 and 5), they do not seem to include specific provisions for settling a pre-existing conflict, just technical regulations for which there are a good many ancient and modern parallels. In view of the immense importance attached to tradition in irrigation communities,²⁰⁰ clearly acknowledged by Roman jurisprudence,²⁰¹ the regulations, arising from an agreement between the *pagani* themselves, would have matched local customs, of which, unfortunately, only some are contained in the *lex*. It should be remembered that there is evidence of irrigation along the right bank of the Ebro from at least two hundred years earlier, when the Iberians of *Salduie*, according to the *tabula Contrebiensis*, built a canal (for irrigation purposes according to all indications)²⁰² to bring water to their lands.²⁰³ Later, Augustus settled new colonists in the district, drawn from the IV Macedonica, VI Victrix and X Gemina legions (including perhaps the *centurio* Rectus mentioned in I.24) and this almost certainly resulted in the expansion of the irrigation area and introduced new methods into water management, either Roman or brought by the veterans from their countries of origin.²⁰⁴

We are not sure how far the use of writing in the region (known since the second century B.C.E., but very widespread from the reign of Augustus onwards²⁰⁵) could have favoured the systematization and putting in writing of the traditional usages of irrigation. Although it is possible that this occurred occasionally and might have generated documents related to irrigation (for example, registering the volumes of water that individuals had a right to or the order of irrigation), it does not seem to have been a widespread practice, especially when bearing in mind that these communities were located in rural areas, where the use of writing was less common than in the cities.²⁰⁶ This would help to explain, among other things, the paucity of inscriptions related to irrigation.²⁰⁷ Thus, in this field, the work of the provincial authority would have been limited to registering and shaping the local traditions that the *pagani* agreed to abide by.

²⁰⁰ Glick, *op. cit.* (n. 68), 55.

²⁰¹ For example, in the *Digest*, the use of water during a particular year is considered as a precedent for determining rights for the following year (*Dig.* 43.20.1.15, 20, 21, 29 etc.).

²⁰² There is no reason to think that the conduit was meant to supply drinking-water to *Salduie*, which was on the banks of the Ebro, Huerva, and Gállego (the latter supplying drinking-water in the Imperial era; A. Vázquez and I. González, 'El abastecimiento de agua romano a Caesaraugusta', *Anas* 1 (1998), 35–65), nor for sanitary or recreational purposes in the city, which at the time had very few monumental buildings, and whose baths, if indeed there were any, did not use a great deal of water, judging from parallels, such as nearby Azaila, whose small baths were supplied with rainwater from a cistern (M. Beltrán, *Arqueología e historia de las ciudades antiguas del Cabezo de Alcalá de Azaila (Teruel)* (1976), 147).

²⁰³ CIL I².3951a.

²⁰⁴ The name *pagus Gallorum* seems to document a settlement of people from Gaul in the area, probably related to the settlement of the Roman colony of *Caesaraugusta* (F. Beltrán, 'Galos en Hispania', *Acta Archaeologica Academiae Scientiarum Hungaricae* 57 (2006), 179–95).

²⁰⁵ For inscriptions, see F. Beltrán (ed.), *Roma y el nacimiento de la cultura epigráfica en occidente* (1995), especially 169ff.

²⁰⁶ In spite of the somewhat pessimistic view of the use of writing in the Roman world expressed by W. V. Harris, *Ancient Literacy* (1989), its presence in daily life was significant in comparison with other periods, even in illiterate or semi-literate environments: see M. Beard *et al.*, *Literacy in the Ancient World* (1991), which underlines the marked presence of writing even in rural environments such as Egypt, where it is true, there was a remarkable written tradition, although the use of written documents expanded above all with the Romans (A. E. Hanson, 'Ancient illiteracy', in Beard *et al.*, 159–98).

²⁰⁷ Shaw, *op. cit.* (n. 63, 1982), 68.

However, there are also more specific measures that might have been aimed at resolving the conflict that the irrigators of *Caesaraugusta* had brought before the governor. There are many issues that can provoke discord in an irrigation community. The *Lamasba* inscription reminds us that the distribution of water can cause serious disputes and the legal texts in the *Digest* suggest different types of disagreement with regard to irrigation, although most of them are related to problems between individuals and not between irrigation communities.²⁰⁸ Given the scarcity of Roman parallels, it might be instructive to glance at other scenarios that are better documented, such as fifteenth-century Valencia, where there is evidence of various conflicts among irrigators that were serious enough to warrant the intervention of the courts of the kingdom: differences in the supply of water from a common canal, resorting to violence to prevent the exercise of a right, the refusal of a group of irrigators to take part in the annual cleaning of the main channel, the improper action of a *sequier* (an irrigation community official), discrepancies between irrigators situated in neighbouring stretches of the canal, and so on.²⁰⁹ All these situations could well apply to the case that concerns us, and in fact the *lex* takes measures, for example, to control the activity of the *magistri pagi*, and precisely defines the length of canal that all the *pagani* are required to clean. Furthermore, there are two undeniably obvious characteristics that are also to be found in the case that concerns us: those who initiate an appeal before a higher authority are usually those who consider themselves the injured party (the other party, obviously, does not usually show so much interest in having the matter settled) and they are the ones who are usually downstream in the irrigation system, and therefore in a weaker position.

And this is precisely what occurred with the irrigators of *Caesaraugusta*, who were in the lower reaches of the canal, and were the ones who appealed to the governor. In fact, the only unilateral provision that seems to be established in the text of the *lex* is the one contained in § 6, which seems to take measures against undue water usage by the *Belsinonenses* that could be damaging to the interests of the irrigators of *Caesaraugusta*. And this is almost certainly the root of one of the aspects of the conflict that the *lex* attempted to settle.

Other aspects of the document, less obvious to us, may also have responded to specific demands from one party or the other, but it is not easy to determine what they are with the information available. One of these might have been § 2a, which states that the notification of contributions to be made to each participant, if it could not be delivered personally, probably because the habitual residence was outside the *pagus* territory, was to be delivered *domo familiaeue*. This provision has an ambiguous interpretation, since it could be a measure to pressurize users who were reluctant to meet their obligations, using the excuse that their residence was far away, but it would more likely have been a guarantee for those farmers, probably influential landowners who used slave labour on their holdings, that their obligations would be communicated to them on time, thus saving them from being liable to sanctions. Almost certainly, the distance between these irrigation lands and their urban centres (particularly in the case of *Caesaraugusta*) made for an additional element of conflict. It is also possible that the fixing of the date for interrupting the flow and the cleaning of the *Capitonianus* canal was requested by one party or the other, although the content of the *lex* does not make this clear.

We do not know how the two irrigation communities were organized prior to the intervention of the governor. As we have pointed out previously, they would probably have had a wealth of traditions administered by the irrigation assembly and almost certainly officers to carry out and monitor their decisions under the authority of the local magistrates of their respective districts. However, the intervention of the provincial authority engendered a new organizational structure, with its own regulations, based on the decision-taking power of the irrigation assembly (at all times in accordance with each participant's *ius*

²⁰⁸ See Ware's compilation, op. cit. (n. 66), 83ff., especially *Dig.* 43.20.1.23.

²⁰⁹ Glick, op. cit. (n. 99), 2–10.

aquae) to whom the *lex* entrusted the task of adopting the main resolutions related to irrigation, such as determining the contributions in work and money of each participant, or establishing the date of the flow interruption in order to carry out the annual canal cleaning. In addition, all the participants were required to collaborate in the cleaning of the mother channel, the *riuuus Hiberiensis Capitonianus*, and ensure that the *lex* was observed by the local *magistri pagi*.

The *magistri pagi* were the cornerstone of the proper functioning of this new community. These local magistrates, almost certainly a two-man college for each district making up the irrigation association, would continue with their specific duties related to the settling of minor local disputes, the organization of collective tasks, the calling of elections, the celebration of rituals related to the purification of the fields, collaboration in the updating of censuses and almost certainly in the collection of taxes, as well as any other powers they might have had. However, they were now also responsible for the administration of an irrigation community was now more complex than the two that existed before because two municipalities were involved. Thus, the *lex* changed the official calendar, setting the date for the taking of office of the two sets of *magistri pagi* on the same day, 1 June, and requiring them to act jointly in the calling of irrigation assemblies and carrying out their decisions. In fact, the new date for the taking of office underlined the importance of irrigation administration for these rural communities, thereby affecting the life of the *pagus* and symbolically establishing the beginning of a new irrigation cycle that started with an immediate meeting of the irrigation assembly to set the date of the flow interruption, followed a month and a half later, on 15 July, by the general cleaning of the *riuuus Hiberiensis Capitonianus*; the determination of this date could well have been a source of disagreement previously between the *Belsinonenses* and the *Caesaraugustani*, but in any event it fitted in with local agricultural routines, coinciding with the cereal crop cycle. They were also made responsible for calling a second meeting, which all the irrigators were required to attend to establish the organization of irrigation during the following cycle, a meeting for which the law took a series of precautionary measures by declaring a set time and venue in order to ensure the maximum attendance and effectiveness possible: the fact that it was held near a boundary marker, situated next to the ‘proxuma uilla Valeri Auiani’, suggests that the venue was a neutral point, situated on the boundary between *Belsinonenses* and *Caesaraugustani*, to facilitate the attendance of both districts. In addition, the early hour, the second, would have left the whole working day free, if required, to adopt the relevant decisions, and the irrigators were not permitted to break up the meeting until an agreement was reached. All these circumstances emphasize the potential tension that the taking of these decisions was capable of causing.

The *magistri pagi*, as well as calling meetings and enforcing their decisions, were also responsible for imposing the corresponding fines for infringements, paying them into the community funds, and ensuring that the *lex* was complied with. In view of this, and the fact that the text of the *lex riuu Hiberiensis* says nothing about the existence of a specific body to settle issues arising from irrigation, such as the ‘Tribunal de Aguas’ in Valencia or the Irrigation Courts set up by modern Ordenanzas, it must be assumed that the *magistri pagi* were also responsible for clearing up these problems, unless there was some other customary procedure not mentioned by the *lex*; and even if there were, the *magistri pagi* would still have been responsible for enforcing it. In order to prevent all this activity, which was in addition to the administration of all the other affairs in the *pagus*, going beyond the enforcement powers of the *magistri pagi*, the *lex* envisaged the collaboration of *curatores* to run the collective works, perhaps a *tabularius* to keep the accounts and administer the community funds, and two *publicani*, almost certainly one per district, who were responsible for collecting contributions and fines, with the power of distraint if necessary.

Although the executive tasks were the responsibility of the *magistri pagi*, the *lex* made it quite clear that it was the assembly of irrigators, each one with a vote according to his *ius aquae*, that was collectively responsible for the administration of the community.

Hence each member was given the right to bring an action against any of the *magistri pagi* suspected of failing to comply with or not upholding the *lex*, through the medium of the *actio popularis*, and to take similar precautions to prevent the publicans or *magistri pagi* from exceeding their remit in the question of seizures.

Thus the *lex*, while respecting the irrigators' membership of two distinct civic communities, created mechanisms that were common to both collectives (general cleaning, meetings, *curatores*, *publicani*, community funds, etc.) which ensured the functioning of this intermunicipal body under the authority of the *magistri pagi* of both districts, who were required by the *lex* to act jointly in matters related to irrigation.

One of the most delicate aspects of the entire *lex* was the overlapping of these local systems with the functioning of their respective *ciuitates*, particularly as far as jurisdiction was concerned. Augustanus Alpinus would have played a highly significant role in the design of the connection of the irrigation community with the *pagi*, as well as in the settling of jurisdictional issues that might have been posed by the *lex*, whose wording in those paragraphs (§§ 11–13) reveals certain inconsistencies that might have been due to using miscellaneous sources. He attempted to ensure that any judicial issues raised by its application would be clarified quickly²¹⁰ (within five days) by the jurisdictional authorities of the two cities that the irrigators belonged to, *Cascantum* and *Caesaraugusta*, by harmonizing the procedures through a *formula* that referred them and the judges to the text of the *lex*, and enabling anyone who felt that they had been wronged, for example with regard to a seizure, to appeal to his own municipal magistrates; while in the case of those from whom the payment of a fine was being claimed, it seems to establish that the nearest jurisdictional magistrates would act, which strictly speaking would assign the case to the *Cascantum* magistrates, although it might have implied the right of the defendant to choose the jurisdiction.

VI THE BRONZE OF AGÓN: IRRIGATION AND RURAL ORGANIZATION IN THE WESTERN ROMAN EMPIRE

The precedence of the city as a framework for studying classical societies, specifically the Roman Empire, is due not only to its dominant role as a seat of power, source of culture and economic hub, but also, above all, to the massive concentration therein of the historical information supplied by literary, archaeological, and epigraphic sources, which found their ideal setting in the city.²¹¹ In comparison with urban environments, peasant communities, largely illiterate and with less scope to figure in the archaeological register, are clearly under-represented in documents, and thus much less accessible to the historian. However, all this should not detract from the fact, equally undeniable, that the vast majority of the population of the Roman Empire, however much it was influenced by the way of life of the cities, lived in the country and their lives revolved around the rural environment.²¹² The fact that these peasant communities not only existed, but also boasted a remarkable vitality, is precisely what is shown, with regard to Hadrian's Hispania, by the Bronze of Agón, an undeniably exceptional document, but exceptional for the fact that it is preserved, something rare in rural environments, not because of the realities it documents. Naturally, it is not a question of generalizing this state of affairs indiscriminately, since regional diversity is something equally evident in the Roman Empire, but it does emphasize that these realities should not be undervalued merely for being inadequately documented.

²¹⁰ Probably this was what was intended in article § 12b with regard to the *iusiurandum*.

²¹¹ On inscriptions as monuments, see especially G. Woolf, 'Monumental writing and the expansion of Roman society in the early empire', *JRS* 86 (1996), 22–39, especially 30ff.

²¹² Note, in this respect, the observations of Horden and Purcell, *op. cit.* (n. 62), 89ff. in which they question the predominance of the city in Mediterranean historiography.

And this is precisely what has occurred to a large extent with irrigation in the Western Roman Empire, specifically in Hispania. The geographical conditions in the southern and eastern parts of the Iberian Peninsula have made it historically necessary to use irrigation to compensate for the typical shortage of water in the region, so that ever since the Middle Ages (particularly in Al-Andalus, enriched by the importation of North African and Eastern water management techniques)²¹³ irrigated territories have become a habitual element of the agricultural landscape in the Ebro Basin, Levante or Andalusia; and even today the supply of water to the South-East, for which a transfer of water from the Ebro was planned, is a key matter in the Spanish political agenda.²¹⁴ In these conditions, it was only to be expected that a culture such as Rome's, well-known precisely for its technical capacity for water management (clearly demonstrated, for example, in monumental aqueducts and baths)²¹⁵ would have offered its technology to agriculture, whose effectiveness was largely responsible for the flourishing urban network developed in many regions in Spain at the beginning of the Principate.

It is precisely for this reason that it is so surprising that the role of Roman irrigation in the West is still clearly undervalued in much of the recent bibliography,²¹⁶ in spite of well-documented examples in North Africa²¹⁷ and, more recently, around Rome.²¹⁸ In Hispania, specifically, although there have been few general studies on the subject, the archaeological evidence has been growing constantly over the last few years, in spite of the frail condition of irrigation infrastructures, and the fact that they are difficult to date accurately. This evidence fits well with the geographical conditions of the different regions: in some cases, such as in Levante, they lead to the channelling of small water courses, while in others, such as the drier areas of the Meseta, water was to be dammed or big canals built, as in the mid-Ebro valley.²¹⁹ Naturally, only the larger-scale works can easily be detected and identified as being Roman: thus, many of the dams located around *Emerita*, the province of Toledo, the mid-Ebro valley, South Portugal, the Guadalquivir Basin, and, to a lesser extent, Levante, have been interpreted as being probably for

²¹³ With regard to which, however, the importance of classical contributions should not be underestimated: A. Wilson, 'Classical water technology in the early Islamic world', in Ch. Bruun and A. Saastamoinen (eds), *Technology, Ideology, Water: from Frontinus to the Renaissance and Beyond* (2003), 115–41.

²¹⁴ In general, Al-Mudayna, op. cit. (n. 69); for irrigation in Al-Andalus, see, among others, Glick, op. cit. (n. 52) and Barceló, Kirchner and Navarro, op. cit. (n. 63).

²¹⁵ For aqueducts, see, among others, Hodge, op. cit. (n. 62); for baths, *Les thermes romains* (1991). An extensive bibliography in R. J. A. Wilson, 'Recent studies on aqueducts and water supply', *JRA* 9 (1996), 5–29.

²¹⁶ Especially in the references that approach the issue from a technological perspective. Although this undervaluation is clearly seen in the fundamental works of K. D. White, *Roman Farming* (1970), in which, nevertheless, he devotes a chapter to irrigation (146–72), and particularly in *Greek and Roman Technology* (1984), 168–9 ('Irrigation. Uncommon in Greece and Italy . . .', but underlining its importance in the north of Africa), it has become more intense in recent works such as Wikander's *Handbook*, op. cit. (n. 85) — Ö. Wikander, 'The Roman Empire', 649–60, at 655 ('In the western Empire, as in the Aegean world, irrigation was rather uncommon, apart from gardens and orchards') — or in the summary by A. Malissard, *Les romains et l'eau* (1994), which does not even mention irrigation. For irrigation, see a complete annotated bibliography in Horden and Purcell, op. cit. (n. 62), 585–8, which also echoes the neglect of this topic and its undervaluation in specialist bibliography.

²¹⁷ De Pachtère, op. cit. (n. 63); J. Birebent, *Aquae Romanae. Recherches d'hydraulique romaine dans l'est algérien* (1962); Pavis d'Escurac, op. cit. (n. 65); Shaw, op. cit. (n. 63); Troussset, op. cit. (n. 65); M. Euzennat, 'Grande et petite hydraulique dans l'Afrique romaine', in G. Argoud, L. Marangou, V. Panayatopoulos and Ch. Villain-Gandossi (eds), *L'eau et les hommes en Méditerranée et en Mer Noire dans l'Antiquité* (1992), 75–94; Wilson, op. cit. (n. 65); M. De Vos (ed.), *Rus Africum. Terra acqua olio nell'Africa settentrionale. Scavo e ricognizione nei dintorni di Dougga (Alto Tell tunisino)* (2000).

²¹⁸ Thomas and Wilson, op. cit. (n. 64); Wilson, op. cit. (n. 64).

²¹⁹ See, in this respect, the enlightening pages of the classic study by J. Brunhes, *L'irrigation. Ses conditions géographiques, ses modes et son organisation dans la Péninsule Ibérique et dans l'Afrique du Nord* (1902), especially 69ff., 113–24.

irrigation purposes, as have other hydraulic structures in these and other regions.²²⁰ As stated previously,²²¹ there is a large number of these infrastructures in the mid-Ebro valley, not only on the right bank, but also at the inflows on the left bank,²²² which helped to alleviate the low, irregular rainfall (usually below 400 mm a year). Thus it is not surprising that in the riverside areas, such as the stretch between Calahorra and Zaragoza, there is evidence of dams and irrigation channels on all the major water courses, and that the only two large-scale Latin bronzes found in the area, the *Tabula Contrebiensis* and the *lex riui Hiberiensis*, address irrigation issues (Fig. 3). In spite of the scant attention given to these documents, it is true to say that they show that the expansion of irrigation is one of the most significant aspects of the Roman presence in Hispania, and in the region that concerns us, they explain the proliferation at the time of Caesar and Augustus of cities with a privileged legal status along the banks of the Ebro, such as the colonies of *Celsa* (Velilla de Ebro, Zaragoza) and *Caesaraugusta*, or the *municipia* of *Cascantum*, *Graccurris* or *Calagurris*, which together with nearby *Turiaso* (Tarazona), *Bilbilis* (Calatayud), and *Oscá* (Huesca) made up one of the earliest areas to be promoted to Roman and Latin citizenship of the entire Empire.²²³

In addition, the *lex riui Hiberiensis* has much to say on the controversy surrounding the question of how long irrigation had been practised in Spain. It is generally thought that it started during the Islamic Middle Ages rather than Roman times, but the *lex* suggests that some revision may be necessary with regard to the weight of ancient traditions in the shaping of mediaeval irrigation in Al-Andalus, which are usually undervalued (although acknowledging the existence of hydraulic infrastructures going back to the Empire) using the argument that during Late Antiquity the old agricultural system all but disappeared,

²²⁰ L. Caballero and F. J. Sánchez-Palencia, 'Presas romanas y datos sobre poblamiento romano y medieval en la provincia de Toledo', *Noticiario Arqueológico Hispánico* 14 (1983), 379–425, at 409ff., which compiles the information available for Spain, and P. Sillières, 'La péninsule Ibérique', in Ph. Leveau, P. Sillières and J.-P. Vallat, *Campagnes de la Méditerranée romaine* (1993), 201–49, especially 208–13; to which may be added P. J. Lacort, 'Infraestructura hidráulica rural de época romana en la Campiña de Córdoba', *Memorias de Historia Antigua* 9 (1988), 51–82. For Lusitania, A. de Carvalho Quintela, J. L. Cardoso and J. M. Mascarenhas, *Aproveitamentos hidráulicos romanos a sul do Tejo* (1987); J.-G. Gorges, 'La place de l'eau dans les villas luso-romaines: de l'hydraulique domestique à l'hydraulique rurale', in J.-G. Gorges and M. Salinas (eds), *Les campagnes de Lusitanie romaine* (1994), 253–72, and several papers in J.-G. Gorges and F. G. Rodríguez, *Économie et territoire en Lusitanie romaine* (1999) (J.-G. Gorges and Chr. Rico, 'Barrages ruraux d'époque romaine en moyenne vallée du Guadiana', 157–95, A. Carvalho Quintela, J. M. Mascarenhas and J. L. Cardoso, 'Barrages romains au sud du Tage (Portugal)', 197–226, and J.-G. Gorges and F. G. Rodríguez, 'Un exemple de grande hydraulique rurale dans l'Espagne du Bas-Empire. La villa romaine de Correio Mor (Élvas, Portugal)', 227–40). For the Valencia area, Glick, *op. cit.* (n. 68), 53–71 which includes references to Roman canals in the Mijares, Palancia, Turia, Serpis, and Segura basins, and G. M. Cano, 'Sobre una posible *centuriatio* en el regadío de la acequia de Montcada', in A. López (ed.), *Estudios sobre centuriaciones romanas en España* (1974), 115–27. In addition, F. Beltrán, 'Nuevas perspectivas sobre el riego en Hispania: la *Lex riui Hiberiensis*', *II Congreso Internacional 'La Hispania de los Antoninos (98–180)'* (2005), 129–39.

²²¹ See IV.2.a.

²²² See the summary by M. Beltrán and Viladés, *op. cit.* (n. 2), especially the map on p. 240; on the right bank, as well as the infrastructures mentioned in IV.2.a, we should also mention a large dam on the Huerva, whose purpose was perhaps the irrigation of the land to the south of *Caesaraugusta*, and the Aguas Vivas complex, with the immense dam at Almonacid de la Cuba, which would have enabled 6,000 ha in the Belchite district to be irrigated; see Fig. 3.

²²³ On the region at the beginning of the Principate, see the summary by F. Beltrán, M. Martín-Bueno and F. Pina, *Roma en la cuenca media del Ebro* (2000), 73ff.

with the Arabs finding merely the skeleton.²²⁴ Given the widely-acknowledged ultra-stable nature of these hydraulic systems, it is very unlikely that this circumstance would have obtained everywhere (although it undoubtedly would have in many cases) eliminating the old irrigation traditions, because even if the more complex systems had collapsed, the simpler systems would almost certainly have survived. The fact that the pre-existing structure was readapted and modified by the Arabs to tailor it to the new social conditions is another matter. Obviously, from an overall historical perspective, the mere survival of the irrigation infrastructures is not the most significant aspect of this question, as it is much more important to specify the social relationships that determined it. However, just as the continuity of Arab traditions in Christian mediaeval Spain is acknowledged,²²⁵ it seems necessary to take into consideration also the ancient traditions, despite the relative discontinuity that might have arisen in the late Roman and Visigothic periods, when dealing with irrigation in Arab Al-Andalus. In fact, although the *lex riui Hiberiensis* reveals only a few details on the functioning of the irrigation community, and omits many others (crops, shifts, cycles, etc.), it does show, for example, that the *pagi* it applied to made up an autonomous body of a kind that in Arab Spain was classified as 'tribal' because of family solidarity within Berber or Arab communities.²²⁶ The Bronze of Agón shows that the *pagus* provided a similar framework of solidarity without having to resort to tribal links, something clearly distinct, for example, from the Christian municipal model, in which it was the city authorities who controlled the irrigation system, or other models with greater state intervention: in spite of the importance of municipal institutions in the Roman world, the *lex riui Hiberiensis* reveals the manifest autonomy of these irrigation communities.

Thus, to bring this reasoning to its logical conclusion, the question we should be asking ourselves now is not so much whether Spanish irrigation systems had Roman or Arab origins, but rather to what extent irrigation in the Roman era integrated local native traditions, since their relevance was acknowledged in the shaping of certain Roman legal regulations,²²⁷ is considered essential in North Africa,²²⁸ and, in the case that concerns us, is shown by the involvement, back in 87 B.C.E., of two native communities in irrigation affairs, as documented by the *Tabula Contrebiensis*, barely a century after the Roman conquest and independently of the provincial administration.²²⁹

The second general issue arising from the Bronze of Agón is the organization of the municipal rural districts, specifically the *pagi*, which the scant historical documentation available, as well as modern interpretation, agree as being a rural territory. However,

²²⁴ cf. Glick, op. cit. (n. 52) and 'Hydraulic technology in Al-Andalus' in *The Legacy of Muslim Spain* (1992), 974–86; A. Bazzana, M. Bertrand, P. Cressier, P. Guichard and Y. De Montmessin, 'L'hydraulique agraire dans l'Espagne médiévale', in A. De Reparaz (ed.), *L'eau et les hommes en Méditerranée* (1987), 43–66, especially 44–7; and, particularly, Barceló, op. cit. (n. 63), 13–47 reacting against the theory of the Roman origin of the irrigation systems in Valencia posited by K. W. Butzer, J. F. Mateu, E. K. Butzer and P. Kraus, 'Irrigation agrosystems in eastern Spain: Roman or Islamic origins?', *Annals of the Association of American Geographers* 75 (1985), 479–509, with a certain undervaluing of the importance of agricultural irrigation in Roman times; for example, with regard to the dams of Toledo and Mérida, only three of them are acknowledged as being mainly for irrigation purposes (Barceló, op. cit., 21), while Caballero and Sánchez-Palencia, op. cit. (n. 220), 410, state that this was the purpose of most of them; see also the observations by Lacort, op. cit. (n. 220), 72–4, and more recently, Wilson, op. cit. (n. 213), especially 117–19, 138–40.

²²⁵ Th. Glick, 'Irrigation and hydraulic technology', in *Mediaeval Spain and its Legacy* (1984), 1–17, at 13: 'The nature of post-conquest Christian institutions has direct bearing on its Islamic predecessor because of the ultra-stable nature of this kind of institution. Post-conquest evidence can therefore be used as if it were an archaeological artifact'.

²²⁶ Glick, op. cit. (n. 225), 12. See the comments on this matter by Horden and Purcell, op. cit. (n. 62), 251.

²²⁷ P. Crone, *Roman, Provincial and Islamic Law: the Origins of the Islamic Patronate* (1987), 1, 15, etc.

²²⁸ Perhaps even excessively, since I am not fully convinced by the essentially indigenous nature that, for example, Shaw, op. cit. (n. 62), attributes the community of *Lamasba*.

²²⁹ *CIL* P.2951a: the intervention of the provincial governor was limited to sanctioning a local arbitration procedure, giving it a Roman legal status. Possible evidence of pre-Roman irrigation has been compiled by Al-Mudayna, op. cit. (n. 69), 45–107.

beyond this generic characterization, a detailed review of the specialist bibliography,²³⁰ or just a quick look at the most recent reference works, produces a certain sense of puzzlement in view of the various realities that the term *pagus* seems to represent in the Roman world: 'subdivisions of the territories of "tribal" peoples as in Transalpine Gaul', 'communities of dispersed settlement in Italy which had no urban nucleus', 'the constituent subdivisions of the territory of a full city' such as *Veleia* or Rome,²³¹ to which might be added the different types of African *pagi* which included various *ciuitates stipendiariae*, those of Carthage where Roman citizens lived (often in symbiosis with a *ciuitas stipendiaria*) and, perhaps, the *uiritim* settlements of veterans.²³²

In the final analysis, this apparent variety is the result in all the cases mentioned of a common denominator that makes the *pagus* a rural territory endowed with a certain autonomy, although usually integrated into a *ciuitas*. Perhaps the understanding of its nature has been hampered by the tendency, with a long historiographic tradition,²³³ to consider it as a typical element of tribal societies or *Stammstaat*, asphyxiated by Roman expansion until it became a mere fiscal district of the city, which would have developed at its expense, including exploiting it through taxation.²³⁴ Nevertheless, if we ignore *a priori* arguments, all the available evidence shows that the *pagus* was a Roman institution that had a long history, and whether or not it went back as far as the time of Servius Tullius, as Dionysius of Halicarnassus would have it,²³⁵ it was reliably documented in the *Vrbs* at the end of the Republic,²³⁶ when these types of districts (*Auentinensis*, *Ianiculensis*, *Montanus*, *Succusanus*, etc.²³⁷), rural as opposed to urban areas,²³⁸ were absorbed by the urban expansion of Rome. As a result they figured in the epigraphic register as very active communities, almost always through the activity of their *magistri*, carrying out duties decided *de sententia pagi*, celebrating spectacles or appointing priests *suffragio pagi*, among other activities,²³⁹ until they disappeared in 7 B.C.E. with the Augustan reform that introduced the urban *regiones* and *uici*.

From this perspective, it seems unnecessary to use tribal arguments to explain the appearance of similar documents in rural areas such as those that made up what was to be *regio IV* in Italy, where after the War of the Allies, it was the rural districts, the *pagi*, that took on the civic duties that in more urbanized areas were carried out by city bodies.²⁴⁰ The city model exported by Rome throughout Italy almost certainly included these rural elements of the population which, in normal circumstances, would have been overshadowed by the predominance of the civic institutions, but which, in the absence of developed urban centres, had more chance of flourishing and were also more in harmony

²³⁰ The most recent study is by Tarpin, op. cit. (n. 114), especially 23–49, which includes Western European evidence.

²³¹ N. Purcell, 'Pagus', *Oxford Classical Dictionary* (1996³), 1092; in similar terms, H. Galsterer, 'Pagus', *Der Neue Pauly* 9 (2000), 146–7.

²³² J. Gascou, 'Les pagi carthaginois', in *Villes et campagnes dans l'empire romain* (1982), 139–75, at 139.

²³³ Particularly, E. Kornemann, *RE* 18 (1942), s. u. cols 2318–39, especially 2318ff. and E. Sereni, *Comunità rurali nell'Italia antica* (1955); see also Berger's definition, op. cit. (n. 89), 616.

²³⁴ This point of view was vigorously defended by M. Frederiksen, 'Changes in the patterns of settlement', in P. Zanker (ed.), *Hellenismus in Mittelitalien* (1976), 341–55, especially 343 and 353.

²³⁵ *Ant. Rom.* 4.15.2.

²³⁶ The oldest mention is the fragmentary Senate decree *de pago Montano*, from the second half of the second century B.C.E.; F. Coarelli, 'Pagus Montanus', in M. Steinby (ed.), *Lexicon topographicum urbis Romae* 4 (1999), 10.

²³⁷ A. Fraschetti, 'Pagus' in Steinby, op. cit. (n. 236), 8–9.

²³⁸ Th. Mommsen, *Le droit public romain* 6 (1896), 130.

²³⁹ *CIL* I.894; I².1000, 1001; VI.30888; XIV.2105.

²⁴⁰ On this matter, see, among others, C. Letta, 'L'epigrafia pubblica di *vici* et *pagi* nella *regio IV*: imitazione del modello urbano e peculiarità del villaggio' and M. Buonocuore, 'Problemi di amministrazione paganico-vicana nell'Italia repubblicana del I secolo a. C.', in A. Calbi, A. Donati and G. Poma (eds), *L'epigrafia del villaggio* (1993), 33–48 and 49–59; U. Laffi, 'Problemi dell'organizzazione paganico-vicana nelle aree abruzzesi e molisane', *Athenaeum* 52 (1974), 336–9.

with local rural traditions. This is more or less what happened with Capua, converted after the Second Punic War into an ‘*urbs trunca sine senatu, sine plebe, sine magistratibus*’,²⁴¹ which Rome governed through *praefecti*, where bodies such as the *pagus Herculanus* would have taken on duties which in other circumstances would have been performed by civic bodies, such as the repair of a portico, in accordance with a *lex pagana*.²⁴²

The great flexibility of the *pagus* as a framework and its capacity to adapt itself to different social contexts was borne out in Roman Africa where, following the incorporation of vast rural territories dependent on Carthage and other Punic cities, the term was used first to refer to the former Punic districts (*rst*) such as the *Gurzensis*, which contained various *ciuitates stipendiariae*,²⁴³ and then to the communities of Roman citizens who had settled in the territory, naturally known as *pagi ciuium Romanorum*.²⁴⁴ With regard to the Celtic context, the use by Livy or Caesar of the term *pagus* to denote the various communities making up the *Heluetii*²⁴⁵ or the *Aeduui*²⁴⁶ seems to be different from what we have seen hitherto, but not so much as it may seem if we take into consideration that Caesar, for example, used the term *ciuitas* to define the *Heluetii* and that the *pagus* was the typical Roman rural subdivision of the *ciuitas*. Of course, this does not mean that certain particular features, to be observed, for example, in the magistratures of the *pagi* in the north of the Narbonensis, were not due to pre-Roman (not necessarily ‘tribal’) forms of local organization,²⁴⁷ even though, judging by the inscriptions of the Imperial era, the organization of the *pagi* of the Gauls was not substantially different from what we know about other places in the West at this time.²⁴⁸ The fact that the *pagi*, precisely because of their rural nature, might have kept native traditions following their incorporation into the Roman Empire is perfectly understandable, but that does not necessarily mean that the *pagus*, in itself, was a fossilized pre-Roman form of organization.²⁴⁹

It seems that the issue might be better addressed from a different perspective. Judging by the scant literary sources referring to the *pagus*, and also by certain inscriptions of a more general nature, this had been the usual way of organizing the territory of a Roman municipality since the late Republican era.²⁵⁰ The fact that only a very few inscriptions mention them (for example, barely a dozen in Roman Hispania)²⁵¹ was only to be expected in view of their rural nature, hardly conducive to the development of epigraphic culture, which was closely linked to urban monumental environments. Actually, what is surprising is the proliferation of inscriptions in late Republican Rome and Italy, as well as in Africa

²⁴¹ Livy 31.29.1.

²⁴² CIL I².682 = X.3772; cf. M. Pobjoy, ‘The decree of the Pagus Herculanus and the Romanization of Oscan Capua’, *Arctos* 22 (1998), 175–95; here, even Frederiksen, op. cit. (n. 234), 351, was forced to admit, reluctantly, that this type of *pagus* was a Roman contribution.

²⁴³ CIL VIII.68; G. Ch. Picard, ‘L’administration territoriale de Carthage’, *Mélanges d’archéologie et d’histoire offerts à André Piganiol* 3 (1966), 1257–65.

²⁴⁴ For the various types of African *pagi*, Gascou, op. cit. (n. 232), 139–56; L. Maurin, ‘Pagus Mercurialis veteranorum Medelitanorum. Implantations vétéraines dans la vallée de Oued Miliane. Le dossier épigraphique’, *MEFRA* 107 (1995), 97–135.

²⁴⁵ e.g. ‘pagus Tigorinus’, Caes., *BG* 1.112.

²⁴⁶ e.g. ‘cognomine Insubribus, pago Haeduorum’, Livy 5.34.9.

²⁴⁷ Tarpin, op. cit. (n. 86), 220–32.

²⁴⁸ M. Tarpin, ‘Inscriptions des *vici* et des *pagi* dans les Trois Gaules et les Germanies: remarques et problèmes’, in Calbi, Donati and Poma, op. cit. (n. 240), 217–36; Y. Burnand, ‘Remarques sur quelques problèmes institutionnels du pagus et du vicus en Narbonnaise et dans les trois Gaules’, *Latomus* 53 (1994), 733–47.

²⁴⁹ Tarpin, op. cit. (n. 86), especially 23–49.

²⁵⁰ This is the conclusion drawn by Tarpin, op. cit. (n. 86) and the literary sources, particularly agricultural and legal, suggest as much: for example, the passage by Ulpian which states that in the *forma censualis* properties must be inscribed with reference to the *pagus* and the *ciuitas* in which they are located (*Dig.* 50.15.4), or inscriptions such as the trust agreement formula from Bonanza (*CIL* II.5042; D’Ors, op. cit. (n. 34), 431–46), or the *tabulae alimentariae* of *Veleia* or the *Ligures Baebiani* (*CIL* XI.1147; IX.1455), which suggest the same.

²⁵¹ Curchin, op. cit. (n. 27), which however does not include the bronze of Gallur (see n. 18).

and certain regions of the Gauls, something which can be explained, above all, by the specific conditions to be found in all of these cases: Rome's urban expansion which ended up by absorbing the surrounding rural districts, the municipalization of regions in Central Italy that lacked an urban structure, the abolition of municipal institutions in Capua, the vast extension of the territory of Carthage, and less obvious reasons for the Gauls.²⁵² What all these cases had in common was the penetration of urban practices into the rural environment, which facilitated the implantation of the epigraphic habit, and in most of the cases, a certain degree of autonomy as a result of the non-proximity, weakness, or non-existence of municipal institutions.

In normal circumstances, what would have been expected, as we stated previously, was that the *pagus* would feature hardly at all in the epigraphic register, something which would be due, above all, to the singularities of Roman epigraphic culture and which, therefore, would certainly not imply that the *pagus* was a rare institution. In the case that concerns us, the *pagi*, of which we had some knowledge previously thanks to the small bronze *tabula* of Gallur,²⁵³ have been documented due to the exceptional fact that a provincial authority intervened to settle a dispute between the irrigators of two different municipalities and decided to provide them with common regulations. It was this fact that led to the engraving of the text on bronze.²⁵⁴

Naturally, we might ask ourselves to what extent the way of life of the *pagi* as reflected in the *lex riui Hiberiensis* might have been influenced by the relative distance from their urban centres and by the incorporation of an irrigation community into their local institutions. In the absence of other parallels, this is a difficult question to answer. However, I do not see any cause to consider this case an exception: on the contrary, everything suggests that these rural districts were a basic element in the functioning of municipal communities, whose prosperity was to a large extent linked to that of their rural territory and that, far from being mere census and tax districts,²⁵⁵ they were entities endowed with considerable autonomy, channelling all aspects of the social life of peasant communities living in the municipal territories, through institutions that reproduced, on a small scale, the civic model with its magistrates and assemblies: a model that would also have been the one applied to the irrigation community when it was incorporated into the institutional framework of the *pagus*, so that also in this case, the 'hydraulic space' is a faithful reflection of the society that engendered it.²⁵⁶

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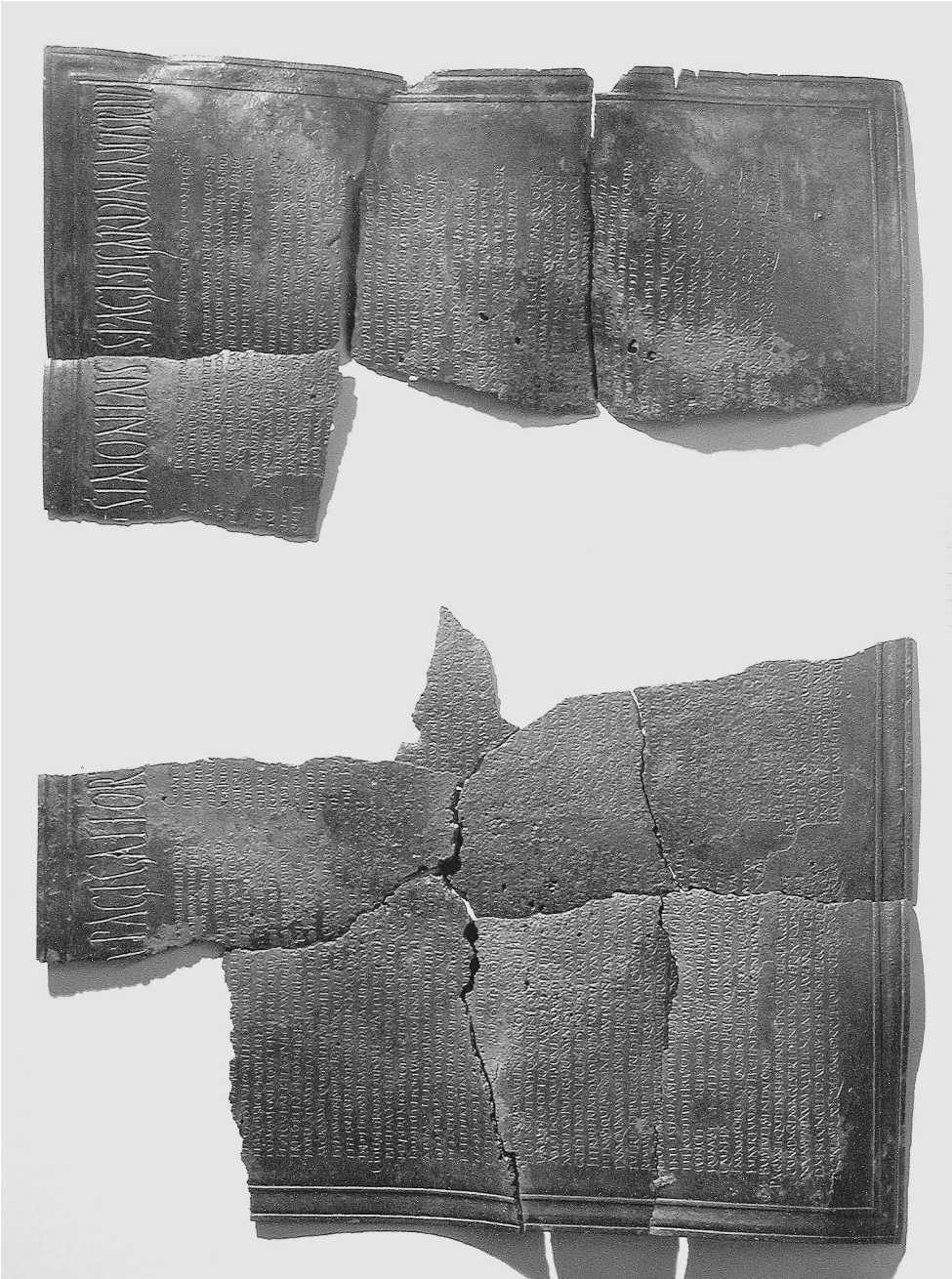
²⁵² For the Gauls, Tarpin, op. cit. (n. 86), 220–32.

²⁵³ See n. 18.

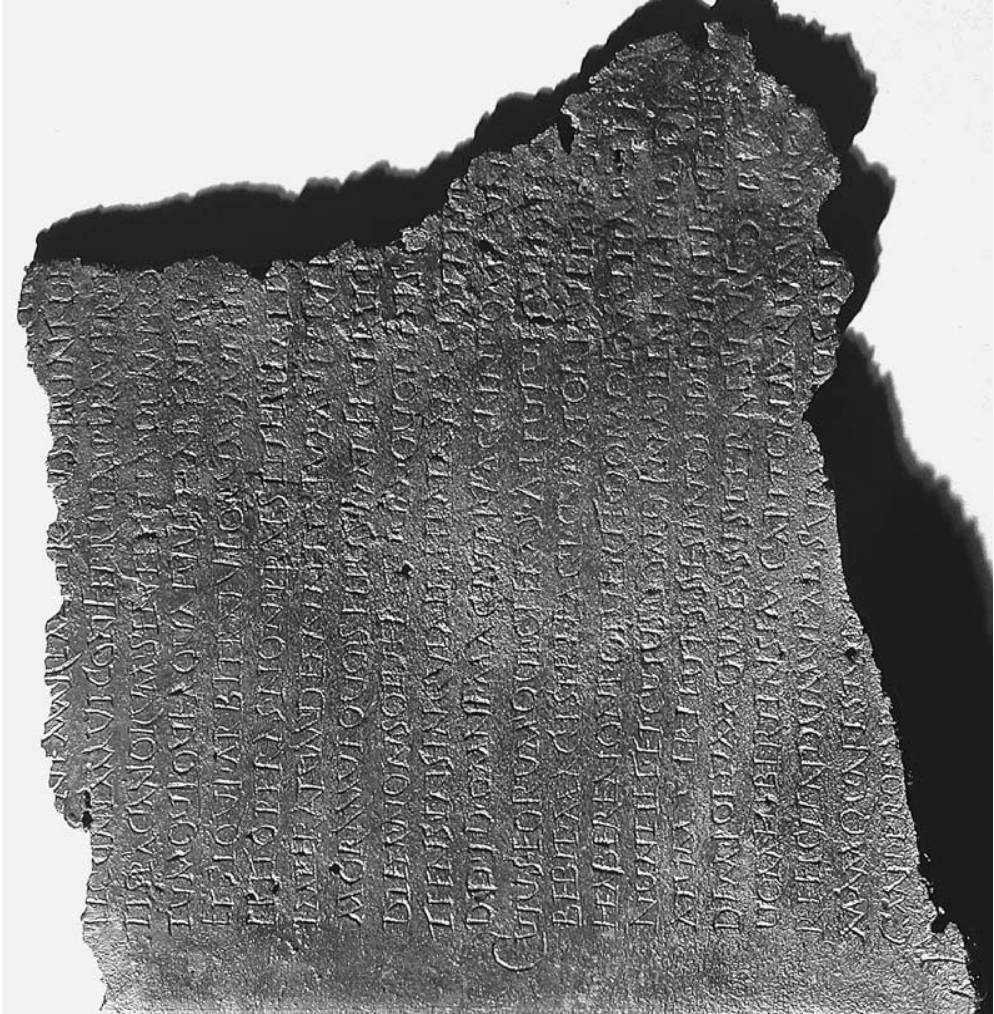
²⁵⁴ On Roman bronze inscriptions, F. Beltrán, op. cit. (n. 1).

²⁵⁵ An aspect particularly emphasized by Tarpin, op. cit. (n. 86), 193–211, 220.

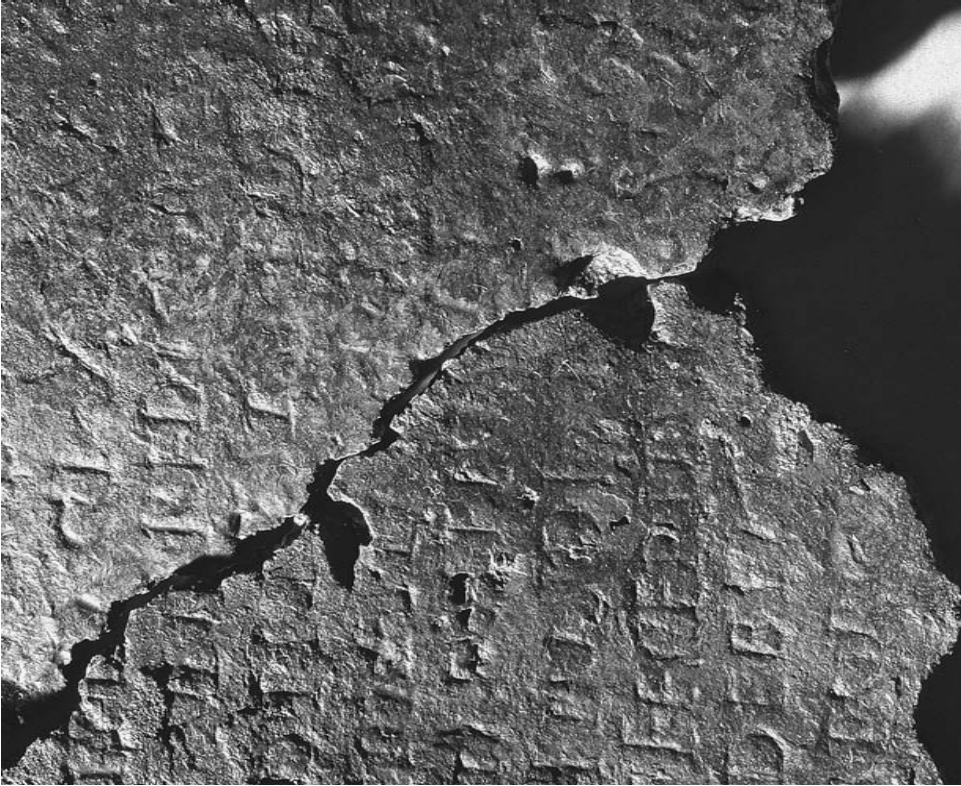
²⁵⁶ Glick, op. cit. (n. 52), 245.



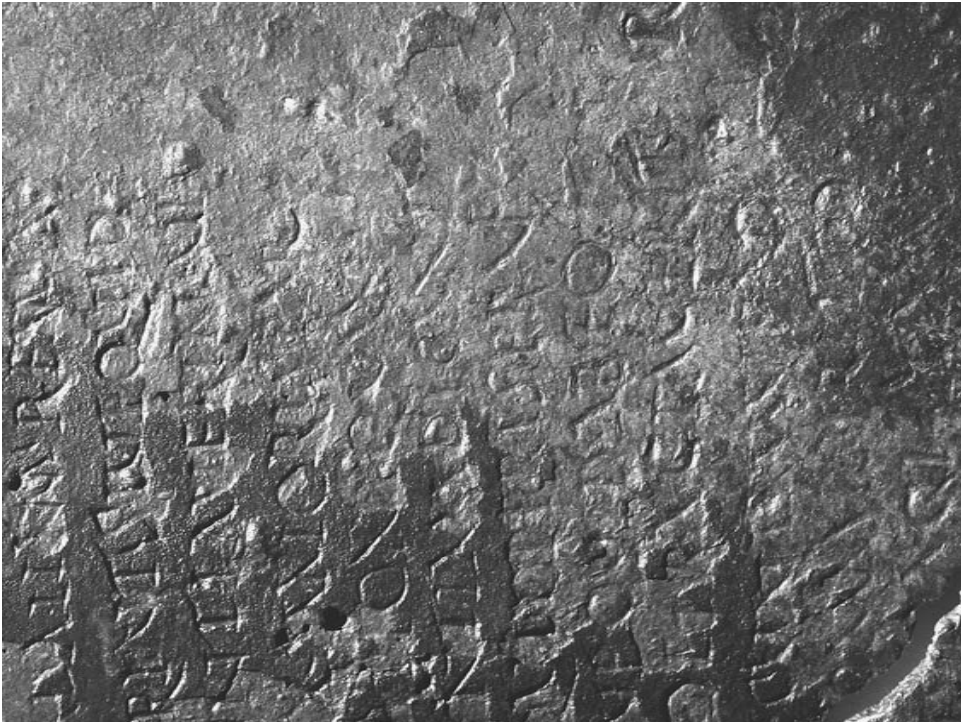
The eleven fragments of the 'Bronze of Agón': the *lex viii Hibernensis*.



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 1, lines I.14–26.



2. 'Bronze of Agón': the *lex rivi Hibernensis*: Fragment 1, detail of lines I.14-22 (right side).



1. 'Bronze of Agón': the *lex rivi Hibernensis*: Fragment 1, detail of lines I.3-14 (right side).



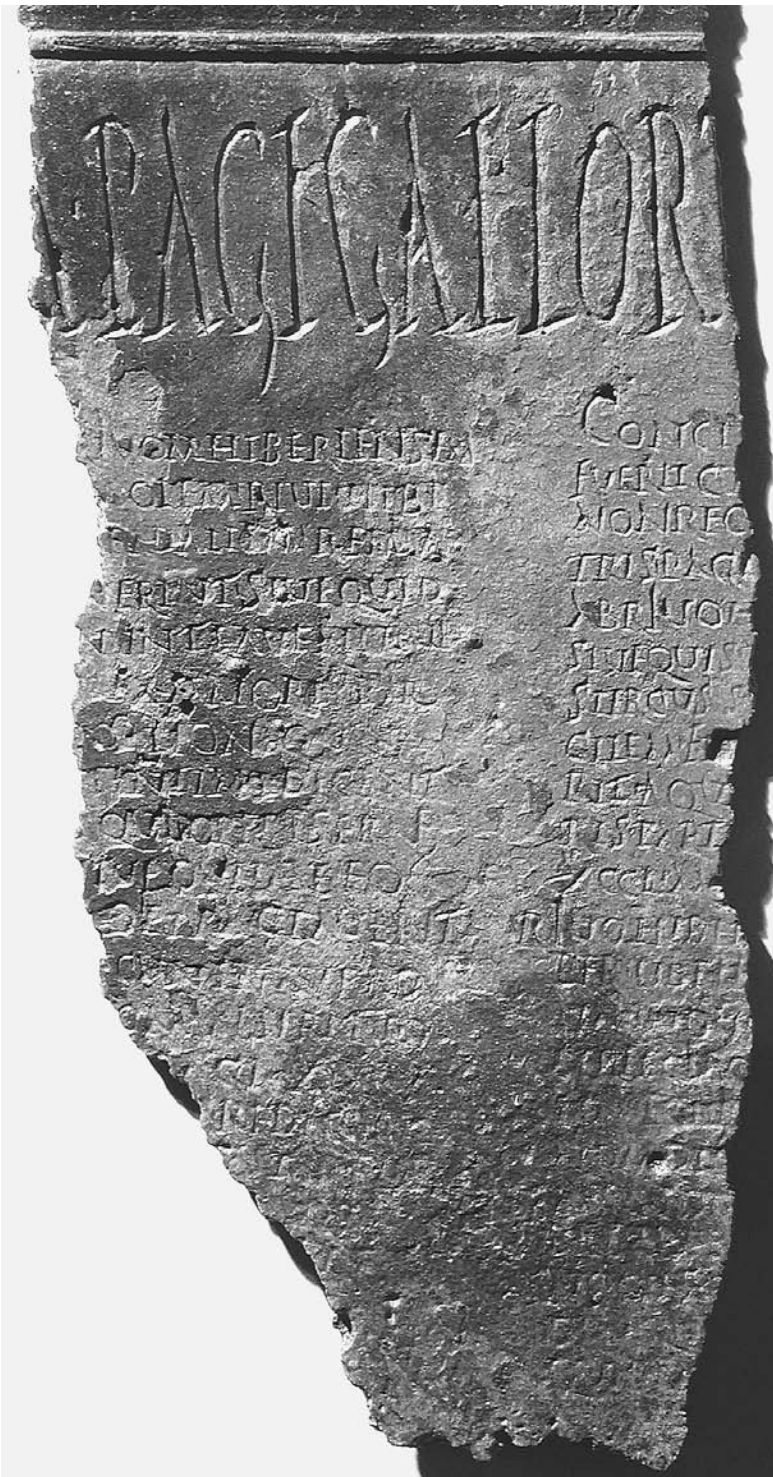
'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 2, lines I.26–38 (left side).



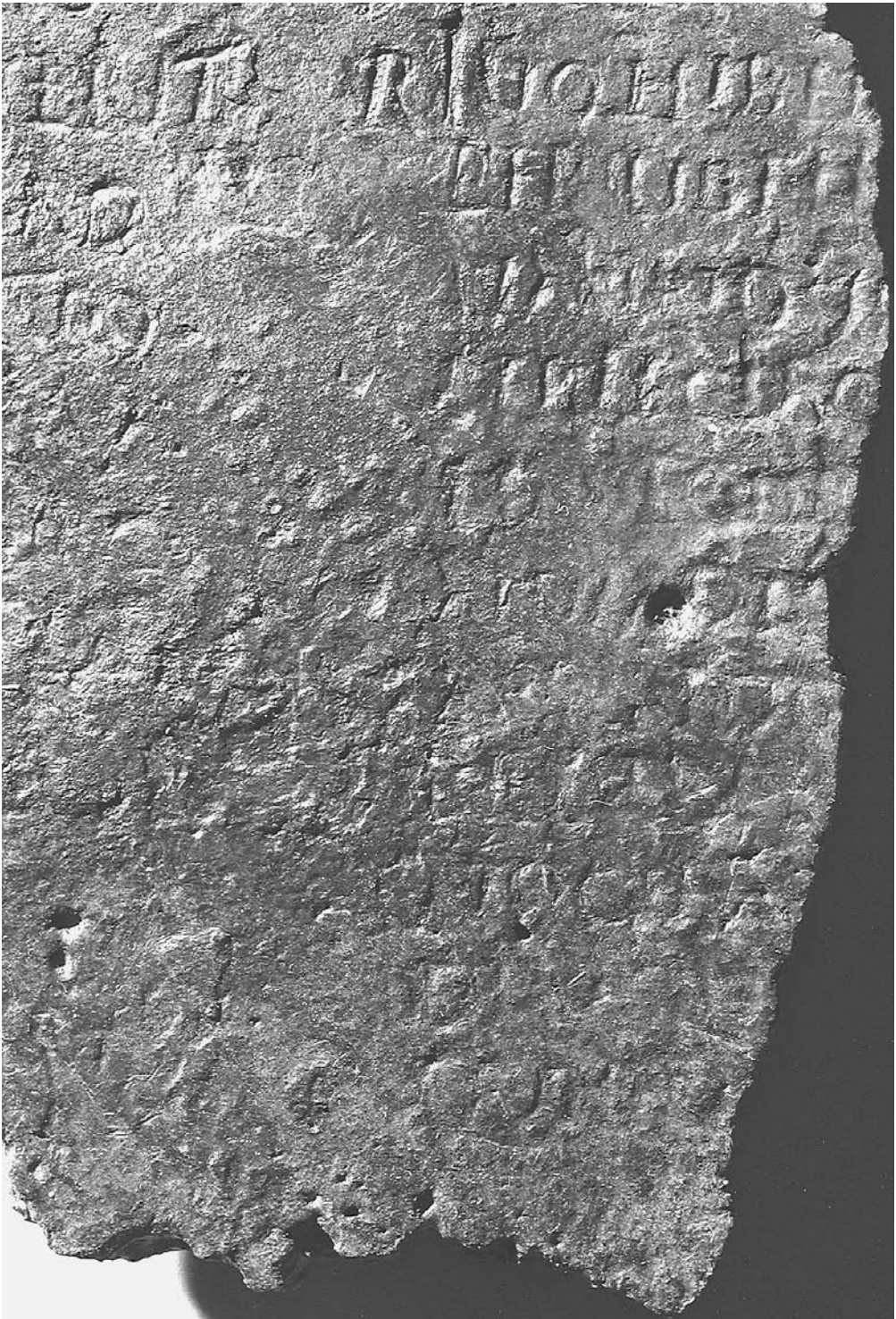
'Bronze of Agón': the *lex rivi Hibernensis*: Fragment 2, detail of lines I.27-32 (right side).



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 3 and left part of Fragment 7, lines I.38-51.



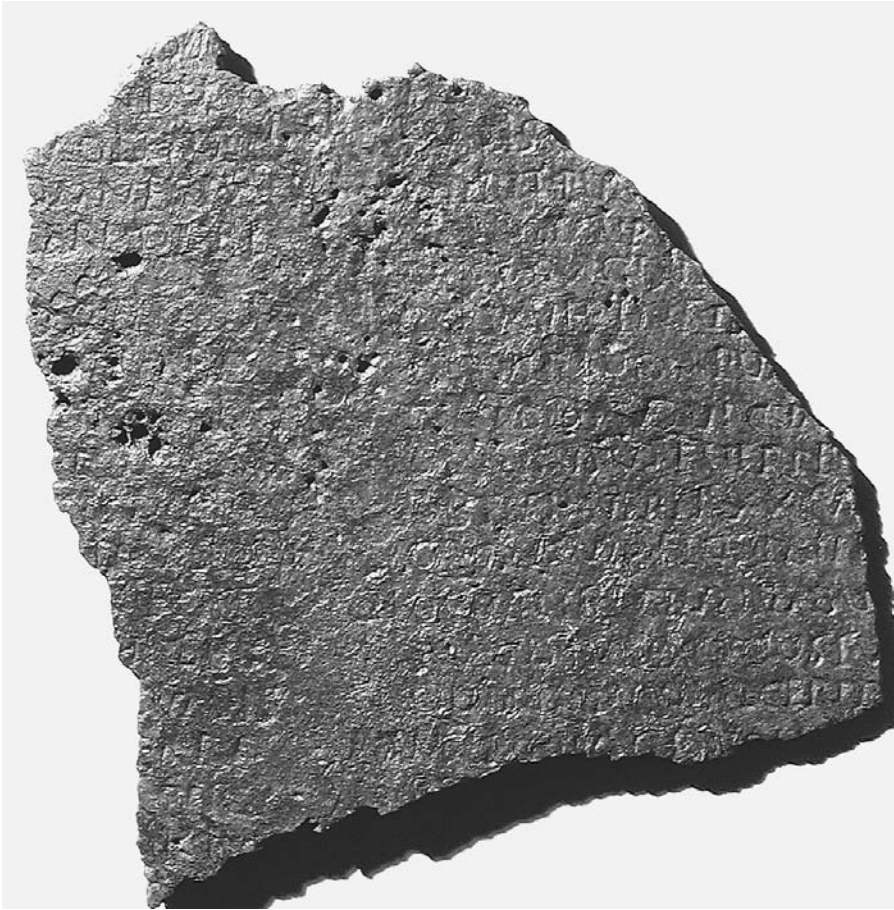
‘Bronze of Agón’: the *lex rivi Hiberiensis*: Fragment 4,
lines I.1–21 (right side) and II.1–24 (left side).



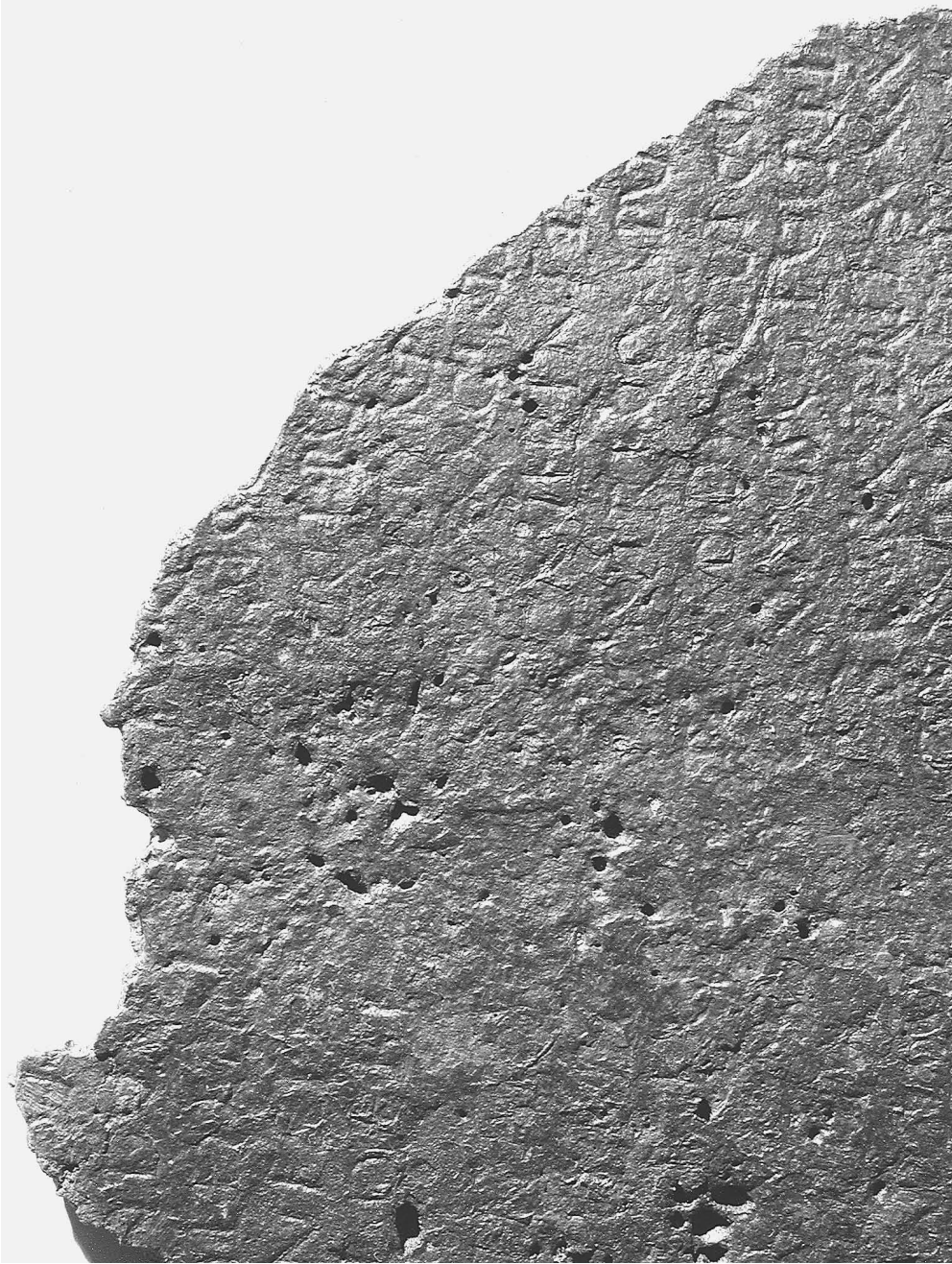
'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 4, detail of lines I.1-21 (right side) and II.12-23 (left side).



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 6, lines II.19–29 (right side).



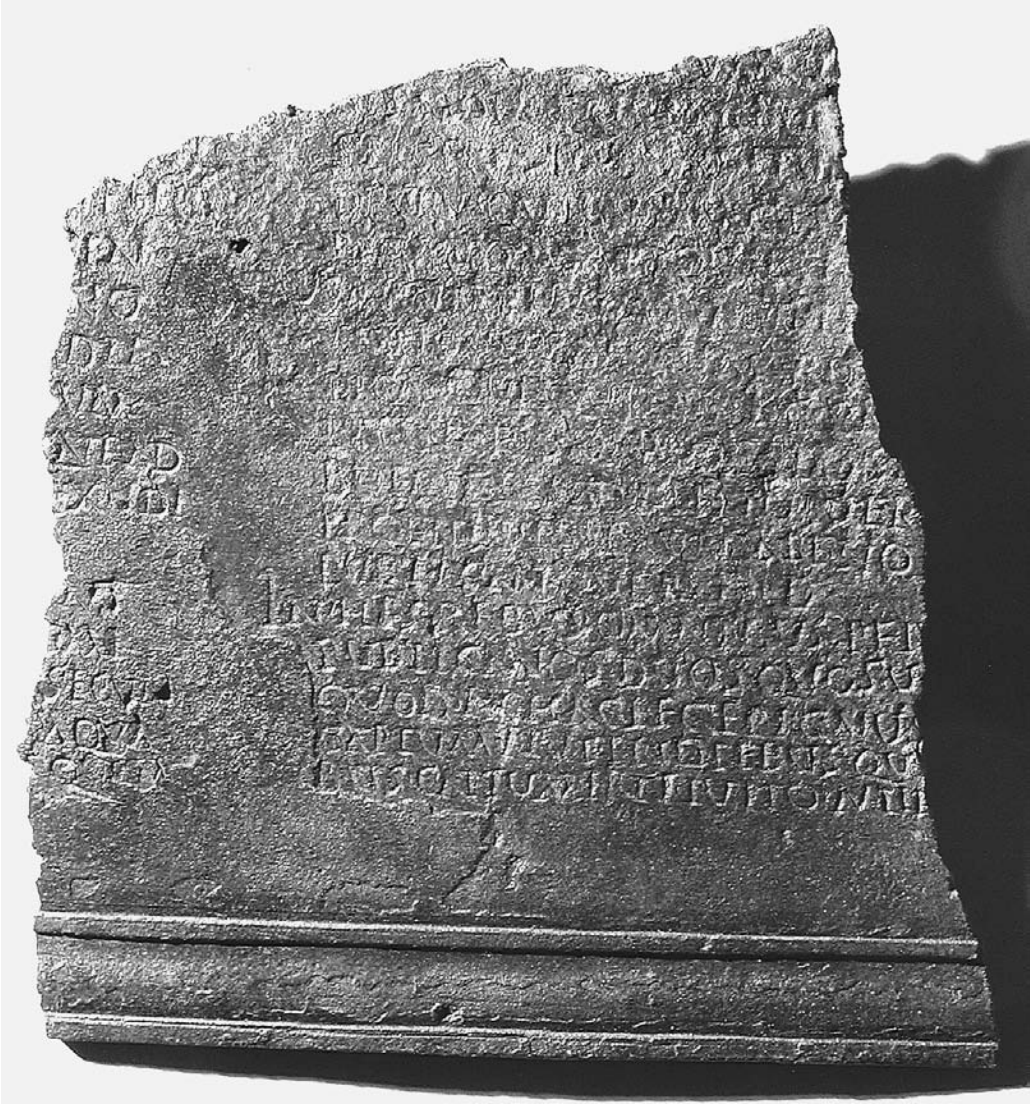
'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 5, lines I.22–39 (right side) and II.24–39 (left side).



'Bronze of Agón': the *lex rivi Hibernensis*: Fragment 5, detail of lines I.21-32 (right side) and II.24-33 (left side).



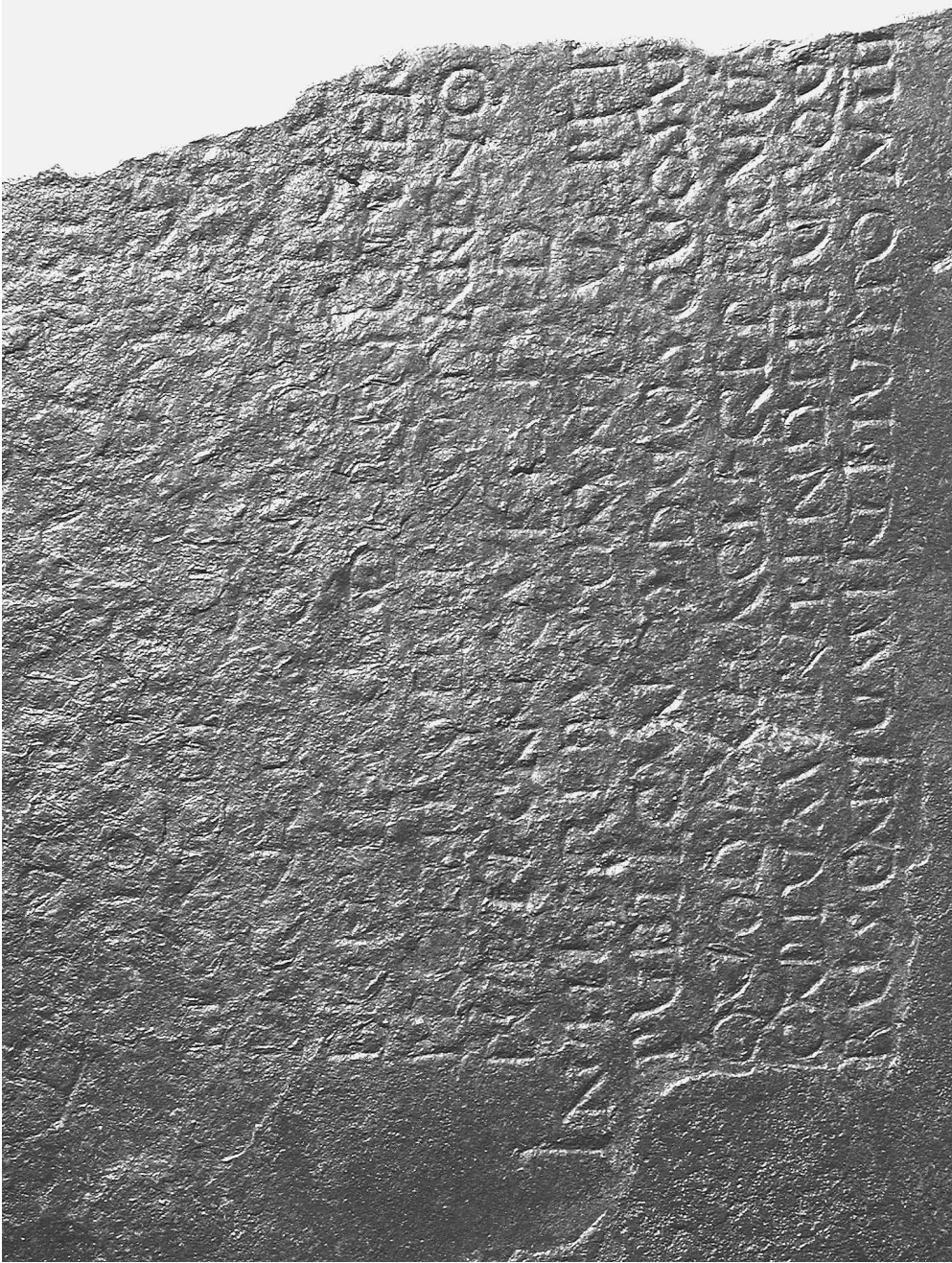
'Bronze of Agón': the *lex rivi Hibernensis*: Fragments 5 and 7, detail of lines I.32-41 (right side) and II.33-43.



'Bronze of Agón': the *lex rivi Hibernensis*: Fragment 7, lines I.39–51 (right side) and II.38–54 (left side).



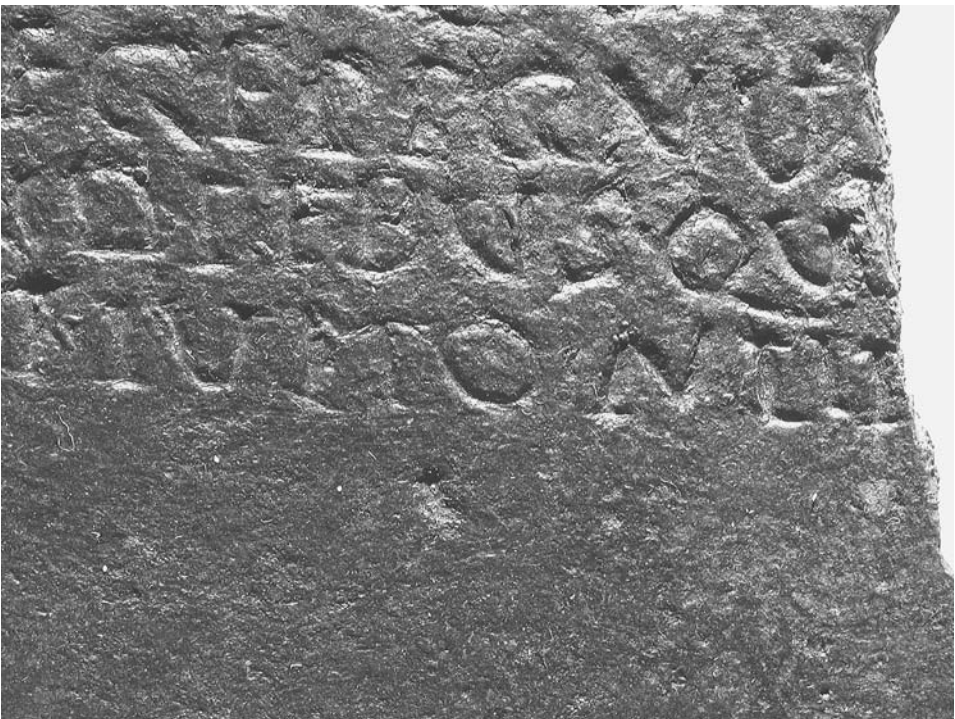
'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 7, detail of lines II.39-42.



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 7, detail of lines II.43-54.



1. 'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 7, detail of lines II.48–51 (left side).



2. 'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 7, detail of lines II.52–54 (right side).



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 8, lines II.1–11 (right side) and III.1–13 (left side).



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 9, lines III.1-13 (right side).



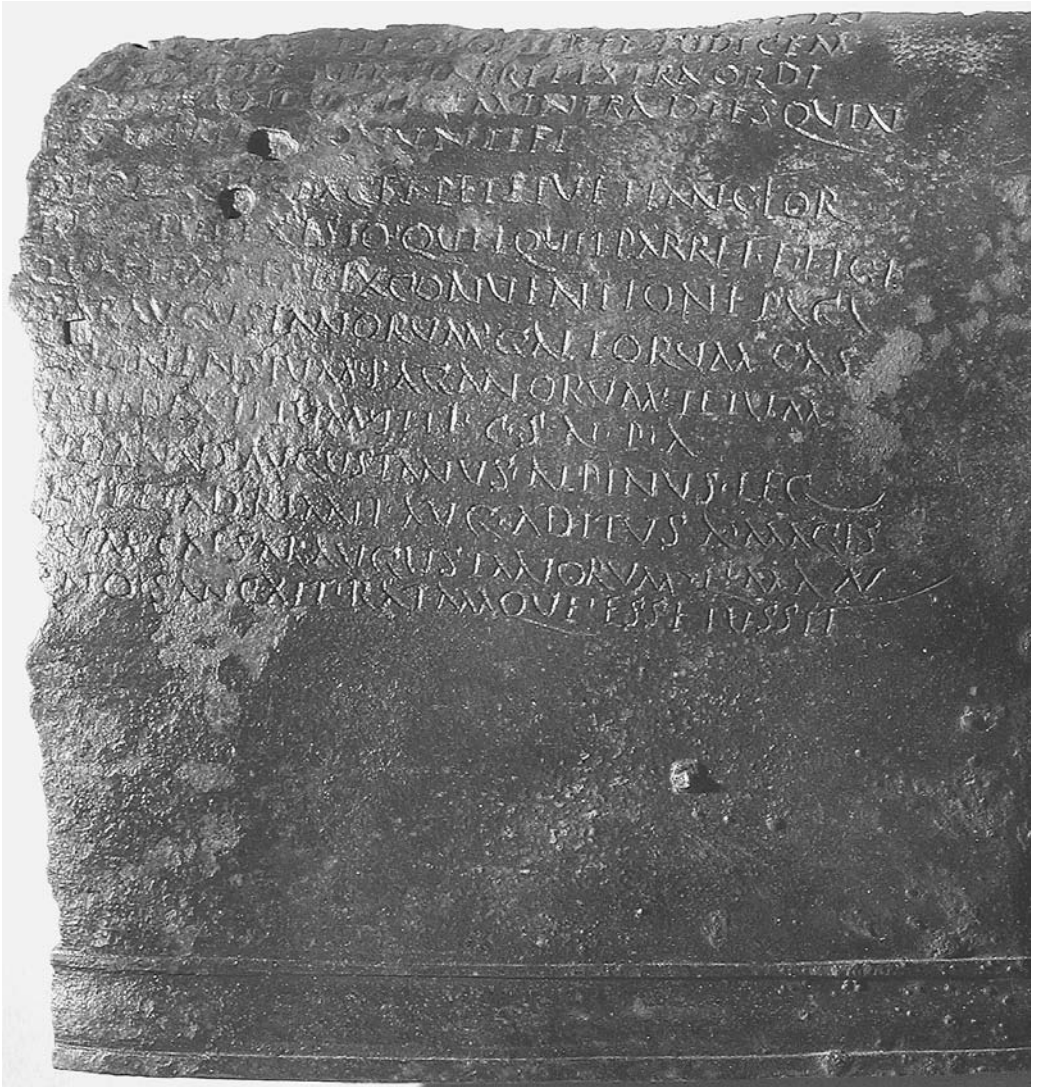
'Bronze of Agón': the *lex rivi Hibernensis*: Fragment 10, lines III.14-34.



'Bronze of Agón': the *lex rivi Hibernensis*: Fragments 10 and 11, lines III.26-47.



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragments 10 and 11, detail of lines III.31-37 (left side).



'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 11, lines III.33-47.



1. (top left) 'Bronze of Agón': the *lex rivi Hiberiensis*: Fragments 9 and 10, detail of lines III.8-13 (right side).

2. (above) 'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 10, detail of lines III.31-32 (left side).

3. (bottom left) 'Bronze of Agón': the *lex rivi Hiberiensis*: Fragment 11, detail of lines III.43 (left side).

