Land Surveying and Law in Ancient Rome

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Introduction

Land surveying was not a Roman invention. Romans themselves did not claim it either. Their land surveying specialist writers[1] traced back the origin of this art to that of Etruscan*haruspices.* Other ancient traditionsconsidered land surveying like several other sciences to have been invented by the Egyptians.[2] In the ancient Near East it was a well-established custom to survey the territory of lands and cities. We know about the application of measuring reed and measuring rope from the Old Testament,[3] which were tools widely used in land surveying. The Bible also mentions the surveying of some cities and holly districts and specifies that their length and width

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[1] Frontinus 8, 24–29C.Hyginus Gromaticus 134, 8C.
[2] Hérodotos 2.109.
[3] Ezekiel 42:16-19. Zakariás 2:1-2.

were equal i.e. their area was square in shape.[4] The squareshape could have sacral or symbolic meaning but practical reasons could also be in the background. Anyway, there is at least (and probably only) formal similarity between them and the Romans' favorite square units called *centuriatio*. The multiple prohibition referring to the displacement of boundary stones shows us that agricultural land had a crucial role in the life of the related community. Besides, it is also a reflection of the fact that proprietary rights were often challenged.[5] The question of land surveyors and land surveying tools as well as problems related to the surveying of lands and their ownership is a common topic throughout the ancient Mediterranean but as far as we know it was only the Romans that systemized their knowledge.[6] It was the Romans who had the opportunity to put their knowledge into practice on a vast area through a long period of time. The traces of their landscaping (that of *centuriae*) can be seen even today on the territory of e.g. today's

[4] Ezekiel 42: 16-19. Revelations 21:15-17.
[5] Deuteronomium 19: and 27:17. Proverbs 22:28.
[6] Campbell 2005, 308.

Northern Italy, the Roman province of Africa or Pannonia.[7] In addition, the preserved fragments of their specialist worksare available for readers in the collection entitled *Corpus Agrimensorum Romanorum*.

Whereas today's geodesic literature deals mainly with the mathematical aspects of land surveying, its techniques and related cartographic issues, Roman specialists were also involved in astronomy, etymology or history etc. They were especially interested in legal aspects including the legal classification of lands or the classification of legal disputes. For this reason they were required to possess a certain amount of legal knowledge since the majority of their tasks also had legal aspects.

Land surveying special literature writers devoted long pages to the proper implementation of *centuriatio*. C*enturiatio*was a system of land measurementwhich organized into a square grid the territory to be divided by means of axes perpendicular to each other. One of the authors calls the process of *centuriatio* to be *geographical*

[7] For the later cf. Bödőcs 2014.

violence,[8] which refers to the fact that this system built on perpendicular axes was naturally not always comfortable for the terrain. Nevertheless, the Romans persisted in its use. The implementation of the grid of centuriatio required the expertise of skilled land surveyors. Although the layout of *centuriatio* was fixed with registered boundaries, it was not unalterable. The boundaries could be rewritten by the land users or sometimes by a new *centuriatio* as well.[9] There could often occur a change in the legal entity using the land or the size of plots due to sale, change, inheritance or legal disputes.

Beside the above mentioned operations the state could also interfere with proprietary rights. The issue of land division was a frequently recurring one in Roman history. E.g. we know of six proposals for land law[10] in the thirty years that passed between the first registered land law in Roman history (Sp. Cassius – 486 BC) and the Law of the Twelve Tables. These may be of course

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[8] Cuomo 2000, 190. Cf. Spencer 2010, 36.

[9] Cf. e.g. the case of Minturnae. Hyginus Gromaticus 142, 8-11C.

[10] Vancura RE 12, 1154–1155 s.v. *leges agrariae*

easily assigned to the period of legendary history and what is more, the integrity and content of the *lex Licinia* dating from 367 BC is also questionable.[11] However, the foundation of colonies in the Plain of the Po starting from the 3rd century or the land laws of the Gracchi and the settling down of colonists left us traceable archaeological evidences. After a turbulent century full of civil wars that also subverted proprietary rights, Augustus tried to tackle the problem. He did not only regulate some particular technical issues (e.g. the width of axes (*limites*), the position of boundary stones and the possible inscriptions) but he also introduced the system of *honesta mission* to provide a long-term solution to the problem of settling down.[12] The legal sources suggest us that in the 4th century there was a revival in the settling down activity performed by the state.[13] This is both evidenced by

[11] Latest summary: Roselaar 2013, 95–112.
[12] Gvozdeva 1991. Campbell 1996. Also: Takács *The Social Status* 2013, 24 sqq. with further literature.
[13] Cf. e.g. CTh 5.11.7–12.

the great number of late antiquity land surveying writings and archaeological findings alike.[14]

Land surveyors had a very important role in insuring provision for agricultural land; therefore ancient sources could not avoid reflecting on their activity. In the following section we will make an attempt to present some aspects of the relationship between land surveying and law based on the results of previous research. The outline presentation of boundary disputes will reveal that the decisions made by land surveyors and their expert reports had a direct influence on the financial interests of the people involved. Naturally, they also had legal responsibility for their actions like all the actors of the legal operation. The importance the land surveyors had is clearly reflected by the fact that there was a separate action available for those seeking justice for the implementation of this responsibility, which is dealt with in a whole titulus in Digesta.

[14] Buck 1982, 247 and 255. For late antiquity land surveyors cf. Peyras (ed.) 2008.

Boundary demarcation and boundary disputes

The land surveyors (*mensores*) L. Opsius Herma and M. Nonius (whose *cognomen*is not clearly distinguishable on the inscription) acting as expert assistants of an arbiter in the compromissum used pegs for the demarcation and designation of the boundary line between two estates.[15] The owners of the two neighboring estates were L. Cominius Primus and L. Appuleius Proculus. When reaching his decision, the arbiter Ti. Crassius Firmus obviously relied on the land surveyors' expertise,which could also be essential given the fact the owners of the estates were not the first to use the land of the estates. This is backed by the difference between the names of the estates (*fundus Numidianus*and*fundus Stratanicianus*) and the names of the two parties of the

[15] TH 79. Crook 1967, 79. Wallace-Hadrill 1994, 179.

law suit. The name of the estate remains the same even if the legal situation changes thus preserving the name of the first or previous owner or proprietor. A similar case is that of Veleia and Volceii.[16] Cominius and Appuleius were probably not the original estate owners,therefore the exact demarcation of the boundary line running between the two estates may have required even more land surveying expertise. It was the land surveyors that were responsible for the exact demarcation of the boundary but the legally binding decision was the responsibility of the arbiter. Only the arbiter's decision was constitutive in effect, but his decision was based on the land surveyors' expertise.

The document is special from more aspects. On the one hand it specifies the names of the involved land surveyors, which does not always happen even if the text of the inscription makes it probable that a land surveyor was also invited to participate in the case. A typical example for that is the decision brought by M. and Q. Minucius (ILS 5946), which can be dated to the end of the 2nd century BC. The inscription com-

[16] Pachtere 1920. Champlin 1980.

memorates the land dispute between the people of Genua and Veiturii and describes in detail the boundary line between the two towns. Besides the use of twenty-three precisely defined boundary stones the usage of the expressions related to the boundary line is also remarkable. When describing the boundary line in detail, the person erecting the inscription uses expressions that are much similar to the ones used by land surveying writers.[17] At the beginning of his work, *De condicionibus agrorum,*Hyginus defines what formula can be used in a boundary dispute to describe a boundary line *in publicis instrumentis.* (78C) The fact that the expressions used are the same and the description is detailed and competent lets us assume that a person expert in land surveying was also involved. When analyzing the inscription, Crawford also draws the attention to the less detailed description of the a*ger privates*

[17] Crawford 2003, 207.Cf. also: Campbell 2005, 321. Campbell 2000, 470. Edmondson 1993, 173. Hinrichs 1974, 200.Cf. Gargola 1995, 37–38, who provides a historic background to the designation of the land for sale.

than that of the *ager publicus*, which he explains by listing geographical reasons.[18]

Besides terrain social factors are also to be taken into consideration. The boundary disputes between communities are much larger in number than the disputes arising between private parties. Naturally it was not only the towns that were interested either in legal or administrative sense in having the disputes commemorated in detail on inscriptions but for the officials of the communities it was also a great opportunity to show off.[19] The other special feature of the decision made by Ti. Crassius Firmus is exactly the fact that it gives an insight into a private law case, a category which was rarely recorded. The inscriptional stones marking the boundary lines between private estates also refer to the involvement of land surveyors. The abbreviation „*term priv*" or the inscription „*ad villam*" are excellent

[18] Crawford 2003, 208.

[19] According to Cuomo 2007, 114 it can be explained by the fact that the former city states that had lost their right to independent foreign policy and warfare tried to increase their territory by means of law suits. Cf. also Kaser 1971, 375.

proof for that.[20] The stones from Numidia with the inscription „*limes fundi Sallustiani*" also belong to the above mentioned category.[21] In order to define the precise place of the stones and establish the boundaries of the property it might have been necessary to hire a land surveyor.

In case of dispute between private parties the land was generally not as valuable as to have either the boundaries or the dispute commemorated in detail on expensive stone monuments. On the other hand, towns or other communities were eager to record every such procedureindependently of the size and value of the territory.[22] For example in Knossos the recovery of a territory as small as 5 *iugera* (1.25 ha) was followed by the erection of an inscription.[23] Some towns persisted with disputes even for centuries to get hold of a territory as we can see from the conflict between Sparta and Messene. Tacitus informs us (*Ann.* 4.43.) that the two towns sent a delegation in 25 to the Roman senate because of the

[20] CIL 5. 1050–1051.
[21] CIL 8. 7148.
[22] Campbell 2005, 309.
[23] CIL 3. 14377. Cf. Elliot 2004, 178.

disputed land called *ager Denthaliatis*, and the Artemis shrine erected in the territory. We do not have information related to the decision but we know that the delegation made use of arguments going back to the decision of the Macedonian king Philippos. The dispute for rights over the territory had been renewed several times and the two towns also defrayed the probably high costs that the journey of the delegation involved. We have no exact information on the size of the disputed territory but there is a boundary stone inscription remained from 78 (IG 5.1.1431), which was erected by T. Flavius Monomitos, Vespasian's freedman, who acting as land surveyor (*chórometrés*) fixed the boundary between the territories of the two towns.[24]

Such public law boundary disputes are naturally overrepresented in inscriptional sources. Besides these there could also be a combination of the two categories that is cases when a private person and a community were involved in the dispute. Ovinius Tertullus, the prefect of the

[24] Elliot 2004, 34, 54 and 74–79. Elliot makes a careful reference to the journey of the delegation of 25 and the boundary fixing of 78.

province of Moesia ordered that boundary stones be placed between the territory of Messia Pudentilla and that of the Vicani Buteridavenses.[25] Elliot considers the wording of the inscription (*ex decreto*) to refer to a boundary dispute.[26] Ovinius Tertullus' inscription is special in that the implementation was entrusted to the *praefectus classis*, a man called Vindius Verianus. Elliot regards this inscription to be the only one where a *praefectus classis* (a fleet commander) fulfills such a task.[27] Other military ranks are frequently recorded on inscriptions.

The general wording of inscriptions involving towns is changed a bit on the inscription found in Herculaneum which mentions the names of Opsius and Nonius. It denotes the involvement of land surveyors with the same words as the stone monuments erected by communities: *adhibito mensore*. The usage of the verb *adhibeo* must have been due to its use in legal or formal contexts. Ulpianus uses it twice in the titulus of the

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[25] CIL 3. 14447. Elliot 2004, 154–155. A similar situation in ILS 5982.Cf. Campbell 2005, 323.

[26] Elliot 2004, 154.

[27] Elliot 2004, 155, note 350.

Digest where he deals with the responsibility of the land surveyors. In 11.6.1.1.it is one of the parties while in 11.6.3.4.it is the judge that performs the action referred to by this verb.[28] The most frequently quoted use of the expression must be the inscription that the governor Q. Sentius Gellius Augurinus erected to commemorate settling of the boundary dispute between the settlements called Lamia and Hypata. Unfortunately we only have fragments from the inscription. The fragmentary second half of the inscription provides a detailed description of the boundary line between the settlements. The expert description that reminds us not only of the similar descriptions but also of the ones recorded by land surveying writers shows in itself that an expert was involved in the case. Besides using a general formula to show the involvement of a land surveyor, the erector of the inscription also mentions him by name: Iulius Victor, evocatus Augusti.[29]

Even if the Roman administration or experts were involved in decision making, the boundary

[28] Cf. 160, 32–34C.

[29] CIL 3.586, 3. 12306. ILS 5947a. Sherk 1974, 555. Elliot 2004, 121 sqq.

or territory disputes could take a very long time to settle, especially the ones that involves towns. It must have been quite a complex task to settle a boundary or territory dispute, which is well illustrated by a case in Sardinia that lets us have an insight into the time management, tools, etc. of such procedures.

Roman land surveyors depict the foundation of a *colonia* as a process consisting of several phases. One of the terminal phases was the making of the *forma*, the modern cadaster map, encapsulating both graphical and textual information. This map could be turned to in order to settle disputes that would arise. To secure the authenticity of said maps, two such documents were made while the cadastral survey was being carried out. One copy remained on site, while the other was taken to Rome for safeguard. Had anybody changed the boundary arbitrarily by moving the marker stone, the original state could be restored with the help of the *forma*. In such cases where its credibility was doubted (*si quis contra dicat*), a possibility existed – to turn to the imperial archive (*sanctuarium Caesaris*) holding all the cadastral's information on land distribution, at least according to Siculus Flaccus

(120, 27–32C). Such a case is documented on an inscription found near the Sardinian village of Esterzili, which deservedly aroused the attention of special literature.[30]

In AD 69 the proconsul Helvius Agrippa had to settle a boundary dispute between two small Sardinian communities by the name of Galillenses and Patulcenses.[31] The conflict was consequential to Galillenses' acquisition of territories by force, refusing to forego the region even after several warnings. At the suit of the Galillenses Caecilius Simplex, the predecessor of Helvius, commissioned the tablet pertaining to the matter be brought forth from the imperial archive (*tabulam ad eam rem pertinentem ex tabulario principis*), consequently granting them a three-month-postponement until the Kalends of December. The tablet also provides us with an insight into the time management of such disputes. The inscription was made on 18 March, AD 69 – re-

[30] ILS 5947 = CIL 10, 7852. For earlier literature cf. to The Roman Law Library (droitromain.upmf-grenoble.fr) and Meloni ANRW 1988, 469.

[31] The former can also be found on inscription CIL 10, 8061, which also displays the text *Larum Galillensium*. Cf. Meloni 1975, 340.

cording the decision Helvius Agrippa issued on 13th of March. This inscription also holds references to decisions made by two of his predecessors, first of which was M. Iuventius Rixa who was the last *procurator* of the island before Nero restored Sardinia to the senate in AD 67. Iuventius ordered the Galillenses to withdraw from the occupied lands by the Kalends of October allowing the other party to take hold of the premises. M. Iuventius Rixa was followed by the predecessor of Helvius, Cn. Caecilius Simplex, who was the senatorial governor of Sardinia in AD 67/68. His rank made it possible for him to grant postponement to the Galillenses to produce the tablet in question from the imperial archive. The deadline set for the map to be produced was extended by Helvius, granting the Galillenses a prolongation until the Kalends of February. This deadline was not met, and consequently, on 13th March Helvius decreed a withdrawal from the disputed lands by the Kalends of April.[32] It is not known whether Helvius' decree

[32] Posner 1972, 199–200. Moatti 1993, 54, 65, 88. Burton 2000, 200–201. Campbell 2005, 328–329. Also cf Kaser 1966, 366–367.

solved the dispute, but the inscription shows clearly that the governors' decisions were based on a bronze tablet available on location. The tablet recorded the boundary resolution performed by M. Metellus at the end of the second century BC (*fines … in tabula ahenea a M. Metello ordinati essent.*) Thus it may be concluded that the provincial or community archive stored a document, quite possibly as old as hundred years; the central archive serves to settle disputes that may arise due to doubts targeted at the authenticity of the map's content.

Needless to say, gaining access to the central archive was no simple task. The tablet from Sardinia bears testimony to the fact that it is not uncommon to wait as much as three to five months, even in such cases involving a province close to Rome. Turning to the archive must have been common in these types of procedures. It is evident that the governor accepts the request for delay without warning or comment, even though the Galillenses deliberately fail to obey the previous decrees.[33] Mysteriously enough, the inscription fails to acknowledge whether or not Galillenses

[33] Talbert 2005, 94–96. Campbell 2005, 332–333.

had done anything to obtain the document in question, nor does any special literature give any viable explanation for this absence. It is only Campbell who deals with it and calls it „a skillful delaying action".[34] Campbell also fails to provide a satisfactory explanation as to why the inscriptions remain silent about the documents. Why did the Galillenses ask for an extension if they did not take any action to get the *tabula* from Rome? The object of dispute is referred to with the words *fines* and *praedia* in the inscription, which directly implies lands were in question. A conclusion is thus drawn that the reason for the Galillenses attempt of delaying 'handing over' pertains to lands. The Galillenses were presumably trying to save the expectable yield of some kind of investment they had made.

Counting backwards three months starting from the deadline of 1 December, it is evident that the governor's decree granting postponement must have been issued at the beginning of October or September. That is the *terminus ante quem* the Galillenses must have submitted their request. The reason for requesting delay should

[34] Campbell 2005, 323.

be searched for in relation to the period amidst September and December.

Sardinia is mostly mentioned in association with the grain it had sent to the Roman army in the age of the Republic. Partially, the grain was the tax levied under the name of *decima*.[35] When presenting the events of the Carthaginian mercenary revolt in Sardinia, Polybius calls the crops of the island 'excellent'. Livy also repeatedly reports about the grain transported to the Roman army or the city of Rome itself and refers to the island of Sardinia as one of the most important sources.[36] At the same time, Varro and Cicero assign great importance to said grain from Sardinia in the greater scheme of Roman and Italian grain supply.[37]

Florus, the historian of the second century AD, calls Sicily and Sardinia 'the guarantee of grain supply' (*annonae pignora*) when he reports

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[35] Meloni 1975, 101–105. Rowland 1984, 285. Garnsey 1988, 245. Sirag 1992, 246–249.

[36] Liv. 29.36; 36.2; 37.50. Also see Val. Max. 7.6.1. Cf. Meloni ANRW 1988, 461 sqq. Garnsey 1988, 193–194. Sirag 1992, 246–247.

[37] Polyb. 1.79. Varro. *r.* 2. praef. 3. Cic. *imp. Pomp.* 34. Cic. *Att.* 9.9.2. Cf. Garnsey 1988, 202. Weeber 2000, 84.

on the measures that Caesar takes after conquering Italy, at the beginning of the civil war between himself and Pompey. The prominence of the role of grain from Sardinia is also mentioned by Horace the poet, closer in time to the inscription, when he speaks in one of his odes about 'the rich harvests of fertile Sardinia'.[38]

The significance of the province in the grain supply of Rome must have carried over to the age of the Empire as well. It can be encountered in the case of several governors whose positions prior to their Sardinian governorship were related to the transportation and division of grain. For example M. Cosconius Fronto served as *subpraefectus annonae urbis* before he was appointed governor of Sardinia in the second century.[39]

The importance of grain production is further attested by the large number of millstones found on the island. However, the region in question has only a few such stones although the presence of Romans in Esterzili is proven archaeologi-

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[38] Flor. 2.13.22. Hor. *carm.* 1.31.3–4. Also cf. App. *b.c.* 5.66–67.

[39] For further examples see Rowland 1984, 286. Also cf. Garnsey 1999, 31.

cally.[40] Nevertheless, the absence of millstones is a small problem compared to the fact that in the case of the majority of grains – autumn is not the time of the harvest but that of sowing. Palladius, an agrarian writer of late antiquity, who structured his work in a way that each book presents a different month,[41] recommends the period between September and November as sowing time for the majority of grains and leguminous plants, depending on land attributes.

The ideas of Palladius are confirmed by the Menologium Rusticum Colotianum,[42] which is an agricultural and religious calendar preserved in an inscription, and mentions the most important agricultural tasks laid out month by month. Although the inscription was found in Rome, the time of the agricultural activities mentioned within it begs of us to consider that it does not refer to the lands around Rome, but rather refers to territories north of Rome, presumably the Po

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[40] Cf. Rowland 1984, 293.Williams Thorpe – Thorpe 1989, 89–113.

[41] White 1970, 30.

[42] ILS 8745

valley.[43] It sets the sowing time of wheat and barley to November, and their harvest time to July or August, depending on crops.

This means that the time when the Galillenses applied for postponement does not correlate with the time of any important agricultural activity related to the most commonly grown grains. At the time of their application bread wheat had not been sown yet, which means their action must not have been driven by their intention of postponing the proceedings until they could harvest what they had sown.

There were, however, some plants whose harvesting was ongoing in the period in question. Palladius reports that millet (*milium, panicum*) was sown in March and harvested in September. Unfortunately his presentation is rather short. Millet matures quickly, has high yields but low needs in terms of soil, which was already known in antiquity.[44] Isidore explains the etymology of the word *milium* from the word *mille* by saying that the name comes from the multiplicity of the

[43] Cf. Broughton 1936, 353–356.
[44] Garnsey 1988, 55.Hoffmann 1998, 99.

crops (*a multitudine fructus*).[45] In Columella's view millet favors mild weather over dry soil, thus it is best to sow at the end of March. Columella does not think too much of millet but remarks that there are several regions (*multis regionibus*) where it is the primary sustenance of peasants. He adds that it is not too costly to grow since it requires a low amount of seed for sowing. When introducing Northern Italy, Strabo remarks that the millet produced in this region resists harsh weather, therefore suitable for preventing famine in the region. It is also known it was common for the farmers to grow the less demanding millet for their own consumption and produce wheat or other grains to meet the needs of the market.[46] Pliny the Elder also mentions Campania among the regions producing millet.[47] Pliny's inference is confirmed by archaeological findings. In the containers found at

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[45] Isid. *Etym*. 17.3.12.

[46] Garnsey 1988, 51.

[47] Colum. 2.9.17. Strab. 5.1.12. Plin. *n.h.* 18.10.24.100. We have information on growing millet in further Mediterranean regions as well e.g. in the Bible: Vulg. Ez. 4,9. Cf. White 1970, 67.Garnsey 1988, 52.

the villas at Boscoreale, north of Pompeii, archaeologist also found millet besides other grains.[48]

Other sources mention millet when describing barbarian or nomadic tribes.[49] The place where the inscription was found, the modern village of Esterzili, is situated in the middle of the island, roughly 60–70 km from the eastern coast. This coast of Sardinia is not ideally structured geographically and does not have a good natural harbor, diminishing its commercial values. Today it belongs to the administrative province of Cagliari, however, in antiquity it corresponds to the part of the island that Romans called Barbaria. While the coast was intensively Romanized, the inner part of the island was mostly inhabited by aboriginals, who must have supplied with staff the military unit whose name appears as *civitates Barbariae* on the inscription of their commander Sex. Iulius Rufus.[50] The lower extent of Romanization in this area was not the sole reason due to which Romans consider it

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[48] White 1970, 425.

[49] Herod. 4.17. Cass. Dio 49.36.4. Cf. Garnsey 1999, 66 and 71

[50] ILS 2684. Cf. Meloni ANRW 1988, 468–469.

barbarian. The local inhabitants were causing serious problems as far as two centuries past the occupation of the island. Tiberius expelled four thousand libertines of Egyptian or Jewish religion to Sardinia. Antique historians agree that the location was not chosen for their use solely because of its harsh weather conditions, as the Emperor wanted to use the ex-slaves for the suppression of the brigandage on the island (*coercendis illic latrociniis*).[51] The boundary dispute quoted in the inscription might have also been preceded or accompanied by aggressive actions, as the governor refers to the Galillenses as '*auctores seditionis*' and '*per vim occupaverant*'. Special literature deems them a local community, while the other party is reckoned to consist of inhabitants settled onto a *latifundium*.[52] The fact that the area was so remote with rather unfavorable economic environment makes the presence of millet in the local production a feasible idea. Furthermore, the territory had been at disputed for a long time, rendering the land dwellers

[51] Tac. *Ann.* 2.85.5. Suet.*Tib.* 36. Dio 57.18.5a. Cf. Meloni 1975, 147–150.

[52] Meloni 1975, 155 and 264. Meloni ANRW 1988, 470-1.

more careful as far as growing plants whose unabridged life cycle was long. Crops harvested in the period in question were not limited to millet.

Palladius makes note of two undertakings to be done in the month of November, which do not seem to be of great importance at a first glance, namely the collection of acorn and wood cutting. Elaborating on the former task, he only mentions its time additionally to the fact that it is a task reserved for women and children (*femineis et puerilibus operis*).[53] Specialist writers regarded acorn as valuable due to its ability to provide fodder for animals. Information has been ascertained as for its use for pigs and cattle.[54] Moreover, acorn could be used simultaneously to feed both animals and human populations alike.

Ovid's account of the golden age contains references to the notion that people living in times void of agriculture used acorn as aliment. No doubt it is a repetitive motif with several authors.[55] Likewise, people could turn to such nourishment in times of need. Following their

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[53] Pallad. 12.14.

[54] Varro *r.* 2.4.6. Plaut. *truc.* 646. Cf. White 1970, 318.

[55] Ov. *Met.* 1.106. Iuv. 6.10. Tib. 2.3.69. Cic. *orat.* 31.

defeat by Pompey, parts of Spartacus' army tried escaping via forested routes and were subsisting on acorn.[56] Mediterranean agriculture struggled to attend the demand in an environment overburdened by multitudes of adversities, derivatives of climate and weather shifts. The risk of crop failure due to drought was elemental to these hardships that resulted in problems.[57] In the struggle to prevent famine, certain plants became indispensable from several aspects. For example, by using acorn, people could barter some plant goods for human consumption (formerly used for fodder as well). Stated in the above source (*r.* 2.4.6.), Varro also enumerates bean, barley and further grains (*deinde faba et hordeo et cetero frumento*) alongside acorn as being suitable for feeding pigs. By substituting these plants for acorn, the amount of food available for people expanded. Acorn, however, was suitable and directly used for human consumption as well. It could be roasted, smashed or ground to use as

[56] App. *b.c.* 1.50.216. Galenos 6.620. Also cf. RE V 2068 (s.v. Eiche). White 1970, 137.

[57] Cf. Horden – Purcell 2000, 272 sqq.

ingredient for pies or porridge.[58] Its importance is further substantiated by two independent types of sources.

One of the fragments by Ulpianus which ultimately goes back to the 'Laws of the Twelve Tables' states that it is lawful for a man to gather his acorns that has fallen upon the land of another within three days, additionally forbidding this action to be denied by force. Ulpianus conjointly adds that the idea of acorn applies to all kinds of fruits.[59] Although little information is obtainable on the inception of this law verbatim, going back to the archaic age of Rome, it may be speculated that legislators would not have elected acorn be stipulated in the text had it not been important in commonplace agricultural practice.

Cato structures nine categories while grouping estates. His outlook among the estates of 100 *iugera* features the vineyard as most lucrative, second to irrigated kitchen garden and *et cetera*.

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[58] Garnsey 1999, 40–41. Cf. Hoffmann 1998, 65, who mentions Sardinia, but unfortunately without specifying the sources.

[59] Dig. 43.28. Dig. 50.16.236. Plin. *n.h.* 16.5. (leg. XII tab. 7.10.)

The ninth on the list is acorn wood, *glandaria silva*. Cato's enumeration is taken over as quotation by Varro approximately a hundred years later.[60] Apart from being a source for fodder, woods could be used in any number of ways.

It suffices to contemplate the general marketing of wood as principal material for tools or construction at any time. Pliny the Elder mentions shingles, for example, elucidating that high quality shingles can be made of oak while the wood of resinous trees is of lesser longevity for this purpose.[61] Nearly one fifth of the territory of Sardinia is dominated by woods, a percentage that may have been much greater in ancient times.[62] According to Palladius, November is the best month for cutting down trees, albeit the optimal time may have varied from region to region, it is still worth noting the fact that the agrarian

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[60] Cato 1.7. Varro *r.* 1.7.9. The foreword written to the Hungarian translation only highlights its prominent role in animal fodder. (M. Porcius Cato: A földművelésről. Budapest, Akadémiai 1966, 59.)

[61] Plin. *n.h.* 16.10.15.36.

[62] Sirag 1992, 241. The Sardinian honey referred to by Horace (*ars poetica* 374-6) may also be related to the utilization of woods.

writer mentions Sardinia when portraying this activity. As an exposition he elaborates as to how the humidity of wood can be decreased to the minimum prior to cutting down the tree. After which he details the different types of wood alongside their characteristic features. When presenting the pine (*pinus*) he describes a unique way of drying that was used in Sardinia, in which the beams of pinewood were submerged in water for a spell then buried by the seashore under a pile of sand, thus rendered suitable for use with the help of the ebb and flow of the tide carrying salty water. Highlighting Sardinia may be due to the particular feature of the method, or perhaps a relationship between the writer and the island – as the writer himself admits to have had an estate on the island (4.10.16.). At any rate, the formidable importance of wood processing on the island is most definitely an insight to be reckoned with.

At the time of postponement the most pivotal harvesting activities were the ones relating to olive trees and fruit, as well as grapes. Obviously it is needless to state the importance of these two crops in Mediterranean polyculture. Additionally, it is fairly established that harvest took

place in autumn.[63] In regions of mild climate or on the coast, Palladius advocated the harvest be started in the month of September, adversely to colder regions in which it is merely time for preparations (10.11.1). In October, olive is harvested and processed, an activity that carries over to the month of November (11.10 and 11.17–22). The Menologium Rusticum appoints the month of October for grape harvest to, and that of oil to December. The two crops were among the most easily marketable ones, thus it is not by chance that there is archaeological evidence for their production in certain parts of Sardinia.[64]

As the inscription fails to yield information, we can only assume that the Galillenses attempted postponing the deadline in pursuance of saving crops waiting for harvest. This may very well be a primary issue regarding a community living on agriculture. Unfortunately, no such textual or otherwise material evidence exists that would potentially educate us as for which parcel of land was disputed by the two villages, as well as the variety of crops grown on their territory. How-

[63] Garnsey 1999, 13–15. Hoffmann 1998, 100.
[64] Rowland 1984, 289–290.

ever, it is evident that there were several plants awaiting harvest in the months in question, playing an important role in Mediterranean agriculture and economy. Grapes, olive, acorn and millet were widespread and important crops in this economy; be it either as a result of their marketability, role in human catering or animal feeding, the risky climate or the prevention of famine. Their harvesting, processing and transportation were time consuming excursions. These factors mentioned may be elemental to our understanding of the request brought to the governor for postponement, all the while maintaining a shroud of silence regarding the documents and resolution.

The Sardinian bronze tabletfails to mention whether or not a land surveyor was involved. This might be due to the fact that it was not the place of the boundary line that was in question but the right over the territory. The governor basically had to solve a legal question. However, the cases when the legal procedure was aimed at determining and fixing boundary lines were a question of fact therefore they were more likely to mention the presence of land surveyors. Such a case is known from the the island of Corsica in time of Vespasian. A community (*Vanacini*) pur-

chased a territory from the emperor. The neighboring colony (Mariana) did not question the legal basis for the purchase but the extent of the area. The emperor sent a *mensor* to the site to handle the problem.[65]

No matter whether it was private parties or communities that disputed the rights over a territory, the result of the dispute had a definite influence on important aspects of life. These included aspects like direct financial growth or damage, taxation or jurisdiction. Land surveyors must have been frequently involved and had an important role in the social interactions related to agricultural land. Consequently, it is natural that their job is frequently mentined by several Roman authors.

[65] CIL 10. 8038. Elliot 2004, 23.

The presentation of land surveyors

The poets of the Golden Age of Latin literature present the division of agricultural lands and the activity of land surveyors to be among the motifs pertaining to decline and a worsening era of mankind. Tibullus, Horatius and Vergilius only mention measured plots and boundary stones; whereas Ovidius with a slight exaggeration blames the activity of *mensores* to be responsible for the termination of golden age conditions. This unfavorable opinion on land surveying was obviously due to the happenings of the age, of the Roman civil wars.[66] The views of other writers on land surveyors or land surveying however, are not that negative.

A classical source for the classification and evaluation of livelihoods can be found in Cicero's *De officiis*. This work was written by Cicero in 44 BC, in the form of a letter to his son with the

[66] Cf. Takács *A római földmérés* 2014, 11–20.

aim to educate and warn. Cicero lists the trades according to whether they are worthy of a free man (*liberales*) or not (*sordidi*). The latter category comprises the trade of usurers, tax-gatherers, hired workmen, mechanics and all trades catering for sensual pleasure. Of such trades are for example cooks, fishmongers, butchers, etc. An especially important element is what Cicero misses in the case of the trades he considers vulgar. The work done by hired workmen and mechanics (*mercennarius, opifex*) lacks creative workand artistic skill (*artes, ingenuum*). It is exactly these aspects that make the profession of architect, doctor or teacher for example a respected one as their profession is *ars* and when practising it these people use their mind (*prudentia*). Cicero however, considers the occupation of farmers engaged in agriculture (*agri cultura*) to be the most respectful. It is only wholesale (*mercatura … magna et copiosa*) that can be additionally put on this list. Nevertheless, this occupation can be taken as respectful only if the wholesaler retreats onto his lands with his fortune. The income of the senatorial aristocracy that Cicero himself belonged to was originating from several sources. The aristocracy was involved in trade and financial market transactions as well

but his wealth was mainly due to the owned estates. The first and most robust definition of the interconnectedness between agriculture and social esteem comes from Cato the Elder.

Whilst Cicero does not mention the occupation of land surveyors by name, his classification still contains some elements that occur later in connection with land surveyors as well. In addition, the architects and doctors he refers to are mentioned at the same time with land surveyors or the teachers of geometry several times. Columella (Col. 5.1.3.) draws parallelism between the tasks of land surveyors and architects arguing that a land surveyor must be able to measure the size of a land whereas an architect is responsible for the measurement of building sizes.An imperial decree from the 4th century puts the architects and land surveyors in the same category on the basis of education and related benefits. (CTh 13.4.3. CJ 10.66.2.) For the latter ones the name *geometra* is applied.[67]

[67] Thedesignation of geometra refers to a teacher or theoretical specialist in several cases. There is no possibility to elaborate on the use of the word *geometra* here. For this cf. Takács *A római földmérők elnevezése* 2013. Bödőcs 2008.

The same word is used by Seneca for land surveyors.[68] Like Cicero, he does not think much of painters, cooks, wrestlers, etc. and does not count them among the practitioners of liberal arts-on the grounds that they only serve luxury and pleasure. (Sen. *ep.* 88.18.) Seneca however looks at liberal arts from the aspect of philosophy too. He contemplates how and with the help of what knowledge is it possible to reach virtue. He only considers philosophy to be able to lead to virtue, therefore liberal arts (*liberalia studia*) only form a basic knowledge but cannot make a man better. He agrees that they are useful to a certain extent and considers them worthy to a free man (*ep.* 88.1 and 88.20.) In his view liberal arts include grammar, music and astronomy, along with the knowledge gained by engineers (*ep.* 88.10). An engineer will know how to measure an estate. His knowledge could be exploited to reveal if some mistake had been made during the divi-

[68] For a summary on Cicero and Seneca's views: Visky 1977, 10–11. Also cf. Molnár 2013, 25.

sion or measurement of the land or in cases when the neighbor took over some part of the parcel.[69]

Seneca's letter reveals that land surveyors were turned to quite grequently in the middle of the 1st century AD and as a result their occupation must have been a well-paid one.[70] Seneca calls it an occupation that leads to making a living (*quod ad aes exit*, ep. 88.1) but includes it among the liberal arts, which is further supported by other sources.

Sometimes land surveying writers also call their art or profession *ars*. Karl Thulin, the publisher of the texts preserved under the name of Frontinus gave the title *De arte mensoria* to one of the texts. The expression *ars mensoria* itself appears

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[69] Sen. ep. 88.11: *Quid mihi prodest scire agellum in partes dividere, si nescio cum fratre dividere? Quid prodest colligere subtiliter pedes iugeri et conprendere etiam si quid decempedam effugit, si tristem me facit vicinus inpotens et aliquid ex meo abradens?*

[70] Cf. Iuv.Sat. 3. 76–78. These lines by Iuvenalis are not at all flattering for the proffesionals working in the above mentioned fields. Here the poet caricatures the Greek and eastern immigrants flooding Rome, who would undertake any occupation to get some money. The author uses the denomination geometres, similarly to Seneca a bit earlier. Cf. Forbes 1955, 326.

in the text, but on another occasion Frontinus also calls the art of land surveying as *ars* (Frontinus 12,3C and 12,19C). Balbus, Emperor Trajan's military engineer also refers to his occupation with the same word; furthermore, he also classifies it among the *studia liberalia* (Balbus 204, 15 and 31C). In his treatise, Balbus uses one more expression to denote his occupation, and that is *professio*.[71]

Land surveyors tend to refer to their profession with the expression *professio*, which they also attribute a further meaning to. Sometimes it has the meaning 'declaration', when it refers to the action of a land owner declaring where the boundary line is.[72] In a place by Hyginus Gromaticus (160, 34C) it also has the meaning of declaration, but their it refers to the quality of land and the yield that forms the base for tax. A couple of lines earlier the same specialist writer uses the word*professio*with a completely different meaning. The use and legal status of lands varies significantly from province to province, as he says.

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[71] Balbus 204, 33C. For further uses of the word *professio* that are not elaborated on here: Siculus Flaccus 102, 4.

[72] Siculus Flaccus 122, 30C. Hyg.Grom.142, 9C. Dubitable meaning Lib. Col. 174,5C.

This should be reflected in the way boundary lines are determined, that is different boundary establishing methods ought to be used on different lands.There are some who do not wish to comply to with this expectation but according to Hyginus Gromaticus the art of land surveying (*professio nostra*) is able to handle the different local varieties (Hyg. Grom.160, 22–28C). Hyginus' text does not compare the profession of land surveyors to other professions but reckons the elaborated rules of land surveying a set worth observing.

A similar view can be detected at another specialist writer also called Hyginus, who praises a case of land management in the province of Pannonia. In this case the land surveyor was such an expert in his profession (*professionis quoque nostrae capacissimus*) that no dispute or contest (*lites contentionesque*) arose after his dividing the land (88, 10–16C). This view complies very well with the opinion of other land surveying writers. According to them, any deviation from the well-established rules of land surveying e.g. the proper implementation of centuriatio would always result in conflicts, turmoil and errors.[73]

[73] For examples cf. Takács *A római földmérés* 2014, 19–20. and Takács *Földadásvétel* 2013, 34–35.

In these places the word *profession* refers to the profession of land surveyors, but the writers do not compare it to other professions. As a result, land surveying was not included in any kind of ranking or classification like for example by Seneca. However, in the quoted examples land surveying has an inherent system of rules which can be used as a point of reference to judge the value of some activities and procedures. In other words specialist writers consider the good practices of their profession to be a set of standards that they also compare to other norms. Two such examples can be in the corpus.

When presenting legal controversies (*controversiae*), Hyginus lists the possible features (e.g. ditch, brook, hedge) may form plot boundaries. Furthermore, he also presents in short what the land surveyor has to consider in such cases. Finally, he concludes by stating that it is the customs of that particular area (*consuetudines*) that must be taken into consideration and the land surveyor has to avoid creating something new or unusual. The reason behind is that the credibility of the profession (*fides professionis*) can only be preserved in the procedure if the customs of that particular area are observed. (Hyg. 94, 25–27C)

Besides the case of land surveyors, the idea of*fides*and *consuetudo* are also interconnected in an imperial decree dating from 293 AD.[74] Land surveyors must obey the customs of the area even if it means neglecting the rules of the profession. The imperial decree orders that contract loyalty (*fides contractus*) must be observed unless there is some term or condition in the contract that contradicts the customs of the area (*contra consuetudinem regionis*). The rental fee could only be decreased in harmony with the local customs. Should it happen in any other way, it cannot serve as *praeiudicium*for third parties. Contract loyalty and local customs strengthen each other in the imperial decree as well; otherwise legal and professional problems may arise. When dealing with *de loco* disputes a couple of lines later, the same writer clearly distinguishes the scope of of land surveying and law. (*rem magis esse iuris quam nostri operis*). He considers the clarification of ownership to be the task of lawyers rather than land surveyors. (Hyg. 96, 4–10C)

The two examples presented by Hyginus tell us that land surveying may have been important

[74] CJ 4.65.19. Cf. Molnár 2013, 38.

in settling legal disputes, yet it must have had a subordinated role compared to legal sets of standards. In other words it must have had some auxiliary role. Land surveying writers inform us about several cases, when law was a necessary element in the decision.

No foreword or *praefatio* precedes the writings preserved in the collection written by land surveying specialists. Unfortunately it would be difficult to find out whether they did not exist at all or they got lost at the time when the *CAR* was compiled. Due to the lack of such preface we can only rely on these scattered fragments when we want to reveal how land surveyors viewed their profession.These fragments tell us, among others, that land surveying was closely connected to issues dealt with by law and legal procedures.

It is not mere chance that land surveyors also appear in legal sources. Ulpianus writes that the governor of a province may settle disputes connected to the remuneration (*de mercedibus*) of teachers of the liberal arts.[75] This category obviously comprises those teaching rhetoric, gram-

[75] Dig. 50. 13.1. Cf. Klami 1989, 581. Hamza 2011, 35.

mar and geometry as well as doctors, but excludes exorcists and charlatans etc., even if they also promise to relieve problems and pain.

These texts present the *geometra* as a kind of teacher,[76] and we must not draw a sharp dividing line between the theoretical and practical sides of this profession. Frontinus, Hyginus and Balbus both had practical experience and wrote didactic works. Seneca's above mentioned letter also infers that the *geometra* had both theoretical knowledge and practical skills. In his book devoted to how Roman law viewed intellectual work, Visky Károly dedicates a whole chapter to land surveying. In this chapter he does not make a difference either between the theoreticians and practitioners of land surveying. He interpretes boththe words *geometra* and*mensor* to refer to land surveyors in the sources he studies. Visky builds his interpretation on the fact that in one of the tituli of the Digest Ulpian states that in the past (*apud veteres*) land surveyors did not work in the framework of *locatio – conductio* (lease) type of contracts. His activity was rather considered a *beneficium* that is a kind of favour. However contracts

[76] Cf. Visky 1977, 43

could also be concluded in the form of *locatio – conductio*. Later both Ulpianus and Paulus use the verb *mandare*to refer to the mandate given to a land surveyor. A land surveyor could perform his activity either in the framework of a mandate or a lease type of contract.

On the basis of all the above Visky draws a kind of developmental arch. In his interpretation land surveying was a highly respected profession in the age of the Republic which was determined by personal relationships and favor, thus it could also be sometimes a free service. In this age geometry and land surveying go hand in hand. However, in the age of the empire land surveying came to be a lease type of contract and viewed as manual work. Ulpianus and Paulus attempted to restore the former status and tried to treat the contracts involving land surveyors as mandates.[77]

When signing a contract of mandate the mandatary assumes the obligation to perform an action for the mandatory without reward. Nevertheless, the fact that the activity was performed for free did not mean that he mandatary could

[77] Visky 1977, 40–44. Cf. Klami 1989, 579–580.

not receive any compensation for his work.[78] It must have been a free action due to the fact that such contracts were originally made between persons that had had some kind of personal relationship prior to the legal affair or interdependence existed between them.[79] On the other hand, lease type of contracts involved pecuniary interest; in other words one of the contracting parties assumes the obligation to provide money.[80] Special literature also considers thi aspect to distinguish between the two types of contracts. Molnár Imre quotes two places by Gaius (Dig. 19.5.22, besides Gaius *Inst.* 3.162) using them as an example, which mention the *politor*, the *sarcinator* and the *fullo*. If any remuneration (*merces*) is mentioned in the contract, all the sources (Dig. 17.1.1.4 and Dig. 19.5.19.1) unanimously talk about a lease type of contract.[81]

This dogmatic and strict distinction was of course not realistic in Rome either. This is high-

[78] Földi – Hamza 2006, 531 (1708 §). Watson 1995, 135. Klami 1989, 577.
[79] Földi – Hamza 2006, 530 (1706 §). Watson 1995, 136.
[80] Földi – Hamza 2006, 521 (1674 §). Molnár 2013, 31.
[81] Molnár 2013, 54–55.

lighted by legal experts as well when they reveal that the mandatary could get some remuneration called *honorarium*.[82] As Ulpianus informs us land surveyors also used to receive such a remuneration, which can easily be explained by the fact that land surveying was classified among *artes liberales*. Nevertheless, some other data let us assume that land surveyors received wages for their work. Ulpianus (Dig. 11.6.1.1) and Paulus (Dig. 10.1.4.1) use the word *merces* for the payment of land surveyors; in addition the latter uses it together with the verb form *conductus*. When writing about the professions considered *artes liberals* and the fact that the remuneration received by these professionals was legally enforceable, Ulpianus makes again use of the word *merces* in the place quoted above (Dig. 50.13.1). Hyginus (96, 4–10C) once refers to the activity of land surveyors as *opus* (*rem magis esse iuris quam nostri operis*). We do not necesseraily have to assign much importance to this usage, but anyway, it would perfectly fit one type of *locatio – conductio* transaction, that is today's contracts for professional services, the *locatio – conductio*

[82] Földi – Hamza 2006, 531, (1709 §).

operis. In contracts for professional services the objective of the contract is to produce a particular piece of work or a task to be fulfilled with a particular result.[83] The latter part of the definition can be applied in the case of land surveying as well. Besides the above quoted sources Seneca's letter also lists this profession among the ones yielding wages.

However, there is one more aspect we have to consider. No matter if the land surveyor had to measure and divide land or establish the boundaries of a plot, a land surveyor had immense costs. He had to travel to remote places and spend time there. Their work required the use of special essential tools and devices that had to be acquired, mended sometimes and transported, which also involved high costs.[84] The determination and fixation of boundary lines required the use of *groma*, a measuring rope or chain and measuring rods. Moreover, their application also needed human workforce that is assistants. The time and money the land surveyor invested had to be recovered. It cannot have

[83] Molnár 2013, 70.
[84] Takács *A római földmérés* 2014, 127–133.

been enough warranty for the land surveyor to receive some *honorarium* depending on the personal initative of the mandatory after the termination of the task. Besides realistic aspects, a source from the age of the Republic, the text of the *lex agraria* dating from 111 BC also certifies that land surveying had already been carried out in the framework of lease-hire contracts in old times. The related lines of the fragmentary text are as follows: *agrum locum … omnem metiundum terminosque statui curato … opusque locato eique operei diem deicito, ubi perfectum siet.* [85]

Even if a *mandatum* was a contract free of charge in dogmatic sense, land surveying as an *ars liberalis*[86] could be performed in the frame-

[85] Riccobono (ed.) 1968, FIRA I. n. 8. (p. 102–121).

[86] I would like to mention as a side note the fact that in inscriptional sources the land surveyors are either slaves or freedmen, which seems to be in contradiction with the high society prestige of the *artes liberales*. (Cf. Takács *The Social Status* 2013, 41–75.) This seeming contradiction, though it should be studied more thoroughly, can be partially explained by the characteristics of epigraphic sources, that is the ex-slave erectors of inscriptions are overrepresented in epigraphic evidence. By analyzing social aspects, Klami 1989, 578 also draws the conclusion that the contract of mandate was not used in the case of

work of such contracts. It is not unlikely that land surveying tasks would have been carried out in the framework of a *mandatum* complemented by e.g. a *stipulatio*, but our assumption is that the application of l*ocatio – conduction* must have been much more common. No data infer that land surveying tasks would have ever been performed free of charge, only for favor. Consequently, no matter how attractive Visky Károly's idea[87] of land surveying having been free of charge in a specific age might sound, it is still not convincing.

The renown Hungarian legal historian must have been inspired by the aspects of another profession when he was elaborating on his views on land surveing. Ulpianus excluded legal experts from the category of professionals whose remuneration was legally enforceable. His reason behind was that, at least according to Ulpianus, who himself was a legal expert, the value of this sacred profession could not be determined in

activities pertaining to the artes liberales, therefore land surveying could not be carried out within the framework of this type of contract either.

[87] Visky 1977, 41.

money. (Dig. 50.13.1.4.) However, if they asked for salary to be paid to them (*salaria petebant*), claims could be brought against them as Paulus (Dig. 50.13.4) states. Ulpianus distinguishes legal experts from lawyers against whom (*adversus advocatos*) claims could be brought any time.[88]

The question of the remuneration of lawyers' activity already had a long history in Ulpian's time. This legal expert gives a clear account of the possible conditions of suing. For example claims could be brought if the remuneration exceeded the permissible amount. (Ulp. Dig. 50.13.1.10) Should any dispute arise, the exact determination of the permissible amount is up to the judge. His decision depended on factors such as the type of the lawsuit, the talentedness and skillfulness of the lawyer and on customs. All this was based on a *rescriptum* issued by Caracalla and Septimius Severus. The fact that lawyers were remunerated as well as the extent of their remuneration had been long regulated. The story of the procedure of regulation was clearly depicted in Pliny the Younger's letters.

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[88] Cf. Molnár 2013, 74–75. Visky 1977, 39. Klami 1989, 584–585.

Pliny was a famous lawyer in his age, who learned the art of rhetoric from Quintilianus. In the Senate he would give eloquent speeches in political issues, and would act as an advocate in inheritance and property cases. In addition, as it turns out from many of his letters, he either prosecuted or defended provincial governors accused of abuse of power. In the case of Marius Priscus, who was sued by the inhabitants of Africa province, Pliny represented the interests of the provincials together with Tacitus (*ep.* 2.11–12.) Nevertheless, in the case of Iulius Bassus, ex-governor of Bithynia he played the role of defender.[89] Pliny would often provide legal representation; however, he would not allude to earning a significant income from this activity. On the contrary, his letters seem to show the opposite. One of his letters reads as follows:

'Avidius Quietus, whose good opinion of me I valued as much as his warm affection, had been a friend of Thrasea's and used to tell me many of his sayings. A common one he often quoted was that there were three kinds of case which we

[89] Plin.*ep.* 4.9. Cf. 6.29. On the trials cf. Sherwin-White 1966, 56–62.

should undertake: our friends', those which no one else would take on, and those which establish a precedent. … To these I will add a fourth type of case, though it may seem presumption on my part: cases which bring fame and recognition, for there is no reason why a speaker should not sometimes act for his honour and reputation's sake, and so plead his own case.'[90]

When giving reasons why one must undertake such cases, Pliny does not make any reference to lawyer's fees. Instead, he reasons using key notions like perseverance, human feelings, friendship, glory and fame. Naturally, he must have resorted to this approach in order to emerge in as favorable light as possible in the eyes of contemporary and future readership. It may be the result of a later redaction of the letters, or the consequence of the fact that the Romans undertaking a social or political role wished to view and also make their oratorical or political character viewed in the light of ethical norms. Assessing public figures on the basis of moral concepts was rooted deeply in Roman tradition especially when it came to the aristocracy. For the community, this

[90] Plin *ep.* 6.29.1–3. Transl. by Radice.

was the basis of assessment of one' personality, and one could only be successful or recognized if they were able to meet these requirements.[91]

Traditionally, and in principle, representing someone in a trial was a free service[92] but in practice the case was completely different, and this was true for the age of Pliny as well. The question of lawyers' fees used to be a major public concern, and Pliny devotes some lines to the question himself. The lines are connected to the activity of M. Licinius Nepos as praetor of 105, who in this position performed the role of chairman of *quaestio publica*. Nepos, who was famous for his rigor (*ep.* 4.29.), was questioning the fees of the legal services of one of the parties in a case related to fairs. The problem was that in one instance the lawyer failed to appear in court although as it was revealed he received a significant sum of money for representation. (*ep.* 5.4 and 5.13.) During the trial Nigrinus, one of the tribunes, inveighed against current practice, attacking the fact that legal activity had become, as a matter of fact, a sale.

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[91] In the case of Pliny cf. A.M. Riggsby 1998, 77–79.
[92] Visky 1977, 58.

In Roman legal literature the free nature of legal representation is originated from a law proposed by M. Cincius[93] in the 3rd century BC (*lex Cincia*), which regulated donations.[94] Fragments and references to this law can be read in several authors from Cicero through Livius to Cassius Dio.[95] In the first century of the Empire the question of it being free of charge was heavily debated due to a scandalous affair. A Roman equestrian named Samius committed suicide as he had presented Suilius with a significant sum of money for him to give indictment speeches.[96] The affair was also investigated by the Senate and consequently Emperor Claudius decided that the acceptable *honorarium* would be 10.000 sestertius at most.[97] A couple of years later em-

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[93] Liv. 29.20.11 and 34.56.1.

[94] Kaser 1996, 219. Visky 1977, 60. Zimmermann 1996, 482–484.

[95] Cic. *de orat.*2.71; *ad Att.* 1.20; *Cato maior* 10. Liv. 34.4. Tac.*Ann.* 15.20. Cass. Dio 54.18.The legal fragments of the law *frg. Vat.* 260–316. (Mommsen): http://droitromain.upmf-grenoble.fr/

[96] Tac. *Ann.* 11.5–7.

[97] Nero was again forced to set lawyers' honorarium: Suet. *Nero* 17.

peror Nero was compelled to take some measures so that the litigants would not have to pay a higher sum to the lawyers than the set and fair sum of remuneration (*certam iustamque mercedem*).[98] Roman law making was dealing with the question of how much remuneration should be given to lawyers starting from emperor Claudius to Ulpianus. In the age of the Empite the lawyers were entitled to a certain amount of remuneration for their work. Therefore Pliny could have, at least to a limited extent, accepted an honorarium for his legal representation. Still, at the end of one of his letters (ep. 5.13) he is proud to be able to state the following: 'How glad I am that I have always kept clear of any contracts, presents, remunerations, or even small gifts for my conduct of cases.'[99] Persons of a social status similar to that of Pliny undertook the cases (or part of them) free of charge to help maintain their social network and fame. In the case of most disputes, however, lawyers did not hesitate to accept money for their work.

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[98] Suet. Nero 17.

[99] Transl. by Radice.

Presumably it was the similarity between land surveying and lawyers' work that made some assume that land surveyors also provided their services for free.[100] Naturally there was a considerable difference between the two. On the one hand, compiling and presenting a speech in a trial meant an intellectual challenge, which was highly preferred by the Roman elite, as Pliny informs us and in addition it did not involve any financial investment. On the other hand, land surveying definitely required investment costs, which means only a little percentage of land surveying activities may have been performed for free.

In conclusion we can state that starting from the age of the Empire land surveyors performed their activities as entrepreneurs in the framework of *locatio – conduction* type of contracts and only rarely did they work as mandataries in the

[100] Sometimes geometra and legal expert falls under the same consideration. According to the collection found at the beginning of the 19th century in a palimpsest codex, in other words the *fragmenta Vaticana* compiled in the post-classical age: *Neque geometrae neque hi qui ius civile docent a tutelis excusantur*. frg. Vat. 150. Also cf. Scaevola Dig. 27.1.22.1, where only the geometra is mentioned. Hinrichs 1974, 165.

framework of a *mandatum*. As the sources reveal, they were paid wages for their work. As regards previous ages, we can only make assumptions. However, it can be stated that free service could not have been a widespread phenomenon in any age. Land surveying, or at least its theoretical aspect, geometry in its strict sense was a highly appreciated art, and thus classified among the *artes liberales*. The difference between the types of contract became relevant in the degree of responsibility the land surveyor had.

Legal liability of land surveyors

As land surveyors performed tasks of high responsibility, it is not surprising that Roman legal experts were quite interested in the activity of *mensores* and the legal implications of their work. The liability of land surveyors was regulated in the titulus entitled *si mensor falsum modum dixerit* of the Digest.[101] The praetor had a separate action for the cases when the land surveyor made a false report on dimensions that is if the *renuntiatio modi* did not correspond to reality. Ulpianus failed to mention the time when the action had been established. However, its reason is specified. The praetor proposed its use in cases when land surveying was not performed in the context of *locatio – conductio*.

[101] Dig. 11.6. Cf. Kaser 1971, 569.

Ulpianus fails to tell us what type of contract the *mensor*'s activity is based on. This title of the Digest uses the verb forms *mandaverim*, *mandavero* etc. several times, which infers the use of a contract of mandate. This idea is also backed by the fact that Ulpianus interpretes the legal relationship between the parties as *beneficium*, which provides the relationship with a kind of personal aspect, as when doing a favor. Although Hannu Tapani Klami doubts that the activities considered to belong to *artes liberals* could be performed in the framework of contracts of mandate,[102] we cannot reject the idea of land surveying tasks having been carried out in the form of *mandatum*.

Klami draws the attention to the fact that in actions of mandate (*actio mandati*) condemnation carried infamy. Besides possible financial loss the unsuccessful party was risking all his political rights, his power of representation in legal proceedings and his marital perspectives.[103] Therefore presumably the parties were reluctant to con-

[102] Klami 1989, 578 Cf. Földi 2004, 300 sqq.

[103] Klami 1989, 579. Also cf. Földi – Hamza 2006, 223 (749–750 §§), as well as 533 (1713 §) in the same place.

clude contracts that in case in disputes could not only cause the unsuccessful party financial damage but infamy as well. It must have been even more important after the end of the 3rd century BC when according to sources land surveying became rather widespread. Consequently its personal and confidential aspect became neglected. Still, it took the Romans a long time to start applying the lease-hire type of contracts for this activity as lease-hire was quite conservative. Nevertheless, the growing number of tasks made it inevitable to regulate the liability of land surveyors.

In Ulpianus' view the liability of the land surveyor can only be determined in case of *dolus malus* if he gives a false report as to the dimensions of a property in a trial or a sale. The employer would be liable if he was not careful enough when picking the *mensor*and elected someone that is not skillful enough (*imperite versatus est*). The negligence of the land surveyor (*neglegenter*) he is also exempt from liability. This way Ulpianus exempts the land surveyor from liability based on culpa and limits it to*dolus*only.[104] In terms of le-

[104] Presumably the culpa lata and dolus (D. 11.6.1.1.) fall under the same consideration here. Földi – Hamza 2006, 427. (1368 §). Cf. Vinci 2009, 266.

gal liability the land surveyor got into a priviledged position if he did not conclude a *locatio conductio* type of contract. No action could be started if the land surveyor was negligent or lacked expertise; it was only *dolus*that inferred action.

Action could only be started by those whose interests were violated by the misstated measurement, which commonly involved either the vendor or the purchaser.[105] However, if the land surveyor acted in a way that resulted in *dolus*, he was only the second person in line against whom an action could only be brought, says Pomponius. [106] For example if the purchaser gives the vendor too much as a consequence of the false report, the purchaser can use *condictio* against the vendor. In this case *condictio* basically referred to the resolution of unjust enrichment as the purchaser pays extra money to the vendor without owing him. It was only if the vendor was insolvent that the land surveyor could be sued. If the vendor delivers a larger extent of land than he had in-

[105] Dig. 11.6.3.1.

[106] Pompon. Dig. 11.6.3.2–3. Sextus Pomponius was a legal expert in the 2nd century, but e.g. Liebs 2010 does not even mention him.

tended to due to the deceitful measurement of the land surveyor (*fraudatus a mensore*), it is again the purchaser he should sue first *ex vendito* and not the *mensor*. Here Pomponius (or Ulpianus) must have had the *actio venditi* in mind, which the vendor could use to assert his rights resulting from sale.[107] The land surveyor could be sued in cases when the original status cannot be fully restored through *condictio* or *actio venditi* (*de toto modo qui deerat*). In such cases the land surveyor could be sued for the residue (*de residuo*).[108]

Land surveyors were liable in one single case. When a land surveyor acted as an expert in a legal dispute and he reported deceitfully, the affected party could bring an action directly against the land surveyor. Pomponius says this possibility was also open when the land surveyor was employed by the judge (*a iudice adhibitus*).[109] It is natural that legal experts agree that in such cases the party to whose disadvantage the malicious

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[107] Földi – Hamza 2006, 515 (1652 §).
[108] Ulpianus Dig. 11.6.5.1 (when presenting Pomponius' view).
[109] Dig. 11.6.3.4.

report had been made could sue the land surveyor directly. In these cases the deceitful activity of the land surveyor was undermining the judicial procedure and therefore meant a direct threat for interests of the state. On the other hand, the aggrieved party could not bring an action against anyone else to have his damage repaid.

In order that the *mensor* could be made liable, besides the objective fact of *falsa renuntiatio* the presence of a subjective element had to be proved as well, and that was the mensor's fraudulent activity.[110] If we interprete their contract as a personal *beneficium,* the necessity of this element becomes obvious.

However, if the land surveyor ceased to be a *mandatarius* and received financial remuneration for his activity (*mercedem accepit*) then he became liable in all cases of *culpa* (*omnem culpam eum praestare*).[111] If the land surveyor worked for remuneration and was either negligent or lacked expertise, he could be sued directly. The legitimate question that Susan D. Martin also examines is how one could decide whether the

[110] Vinci 2009, 265.
[111] Dig. 11.6.1.1. Cf. Vinci 2009, 267.

skillfulness or lack of expertise could be determined. The problem could arise as early as the conclusion of the contract as in the Roman society there was no formal qualification that could have been obtained therefore it could not be certified either.[112] In addition Martin states that in big cities like Rome there were no personal ties that could have informed the recipient about the professional knowledge and expertise of the service provider,[113] even if it must have been important as early as the contract of service was made to know the person that was to provide the service. Ulpianus' frequently quoted sentence is quite revealing in this sense: *Inter artifices longa differentia est et ingenii et naturae et doctrinae et institutionis.*[114] Even though Martin does not examine the case of land surveyors, his findings can be extended for their profession as well. They were carrying out tasks throughout the whole Empire and undertook ventures in quite remote parts.

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[112] Martin 2001, 124.
[113] Martin 2001, 108.
[114] Dig. 46.3.31. Also cf. Dig. 12.6.26.12.

It was definitely difficult to demonstrate the presence of *neglegentia* or *imperitia* in case of wrong measurements as both of them carry some kind of subjective aspects. In the case of *locatio conductio operis* Celsus considers *imperitia* to be the source of contractual responsibility that is a type of *culpa*.[115] However, it was not easy for non-professionals to demonstrate the *imperitia* of the surveyor as non-professionals were unlikely to possess the necessary professional and legal knowledge.[116] According to Martin, legal experts attempted to make *imperitia* easier to determine in objective terms.[117] In the case of land surveying it was relatively easier than with entrepreneurs working with moveable objects. The mere fact that an imprecise measurement had been performed could form the basis for imperitia and the liability of the land surveyor.[118]

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[115] D. 19.2.9.5. Cf. Martin 2001, 114.

[116] Martin 2001, 126.

[117] Martin 2001, 123.

[118] In our opinion Vinci 2009, 271 unreasonably relies on subjective elements based on Agennius Urbicus' text when determining the liability of the mensor; let alone the fact that the quoted fragment by Urbicus refers more to the role land surveyors played in trials.

If the land surveyor performed the task himself, his contractual responsibility was determined as described above. However, the *mensor* could hire an assistant as well, which is not only implied by the rules of Digestspecifically elaborated for such cases but also historical data known from the practice of Roman land surveying. Although highly developed tools were available for Roman land surveyors thanks to the results achieved by Greek science and technology (e.g. dioptra, hodometer), Roman texts fail to mention the use of these tools. The obvious reason was that dividing the land into parcels and determining boundary lines did not require any complicated or expensive technical tool. The perpendicular and parallel lines could be drawn with rather simple tools (measuring stick, measuring rope, groma), but their use required assistants.[119] Epigraphic evidence shows clearly what

[119] We possess data from the technically quite similarly developed Hungary of the 18th century which show that simple tools were absolutely suitable to survey whole counties. The cadaster measurements ordered by King Joseph II were executed by county committees, which comprised three members with one member being an engineer. The committee was also joined by

labour force was available for land surveyors. Oswald Dilke identified 14 civilian land surveyors on inscriptions dating from the 1st century A.D. with eight of them being freedmen, three imperial freedmen, one slave and the status of two could not be determined on the basis of the inscription. Brian Campbell registered 41 inscriptions from the age of the Empire where non-military land surveyors were recorded. Of them eleven were freedmen and nine were slaves.[120] In conclusion we can see that inscriptional evidence implicates there were a number of land surveyors[121] who were slaves or had been originally slaves.

The inscriptions erected by mensors who were slaves come from different parts of the Empire and show quite a significant difference in the status

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seven workmen, out of whom one was a penman, two were busy with the management of poles, two with measuring chains and two with nails. Fehrentheil – Gruppenberg 1937, 230. Szántay 2008, 407–409. The use of technical tools was impeded by several other obstacles as well, for which cf. Grüll 2007, 206–210.

[120] Dilke 1971, 39 (referring to RE s.v. Gromatici, col. 1891). Campbell 2000, l., 150–151. jz. Also cf. Hinrichs 1974, 158–162.

[121] Here also, the reason for disproportion can be searched for in epigraphic evidence.

of the erectors as well. L. Aebutius Faustus, who erected an ornate tomb stone for his wife and himself in Northern Italy, was a freed slave. On the inscription his profession is specified as *mensor* and below the textual part of the inscription he also had his work tools (e.g. a groma) engraved in the stone.[122] Only a few inscriptions refer to land surveyors who were independent of the state. What is more, most of them were of quite low social rank. The names of Messius Stichus or Aristo are telling by themselves.[123] Others would also refer to their status of freedman[124] or slave. For example, there was a mensor from the city of Rome whose name was preserved only fragmentarily, but he let us know he was the slave of a man called Volusius.[125]

A special group of inscriptions is that of freedmen and slaves linked to the imperial family or the imperial administration. The tomb stone that T. Flavius Dapnus' wife erected in the memory

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[122] CIL 5. 6786. Cf. Dilke 1971: 39, 50

[123] CIL 1.1573.CIL 6. 9619, 9620.

[124] AE 1939, 0147. As this inscription was found in Ostia, it is quite doubtful if the word mensorrefers to a land surveyor.

[125] CIL 6. 9620. Also cf. AE 1934, 0250.

of her husband informs us that Dapnus was an *agrimensor* and freedman of the emperor, and lived up to the age of 90.[126] We have several similar inscriptions from the territory of Africa: Felix, Victor, Didymus and Romanus were all imperial slaves and all of them were *mensor agrarius*.[127] Knowing how widespread the African centuriatio was, it is surprising that we know about such a high number of land surveyors from this area.[128] Besides imperial administration, we can find *mensores* among city slaves as well. The inscription of Augurinus erected by his father, Liberalis, was found in Sipontum, Apulia. Augurinus was also referred to as a mensor and *servus rei publicae*, while his father was a *servus arkarius* of the city, who had administered the alimentation earlier. Surveys and registration of the lands and financial issues of a city especially those of alimentation were interrelated, which can easily explain the profession of Augurinus.[129]

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[126] CIL 8. 12639. For age data cf. MacMullen 1982, 238.

[127] CIL 8. 12637; 8. 12639; 8. 12912–12913; 6. 8912; 3. 2128. Cf. Hinrichs 1974, 160–161.

[128] Also cf. AE 1983, 0944. CIL 8. 25988 2b.

[129] CIL 9. 699 and 821. Cf. Weiss 2004: 40. Hinrichs 1974, 162.

This hardly complete list clearly reveals us that slaves or freedmen could commonly perform land surveying tasks. On inscriptions a high ratio of slaves is linked to the state or city communities, which can easily be explained by epigraphic habit. However, as some inscriptions tell us, we have to consider a number of slaves owned by private individuals who undertook land surveying works. Besides these assistants of slave status we have to mention the freedmen and, in modern terminology, the subcontractors as well.

The Digest gives a short account of the types of responsibility that occur when a substitute carrier is involved. If the substitute carrier to whom the matter had been handed over acted in bad faith (*dolo malo*), it was the land surveyor who was liable because he had not taken enough precaution when electing the substitute.[130] Földi András has an in-depth analysis of the liability of the substitute carrier used in *mandatum* type of contracts, with particular reference to the related fragment in Paulus. In his opinion, in this case the *mensor* is liable due to *dolus in eligendo*, which means he is responsible for having chosen

[130] Paul. D. 11.6.2.1.

an unreliable assistant. The *dolus* of the assistant is the basis for the liability of the land surveyor.[131]

Legal experts are uncertain in cases involving a slave, which must have been quite common. The fragment in question does not refer *expressis verbis* to what role the slaves could have, but it is most likely that it was the slaves that carried out the work for the land surveyor.[132] Pomponius chooses the right of action called noxal rather than *de peculio*, to which Ulpianus adds with doubt: *quamvis civilis actio de peculio competat.*

The detailed legislation dealing with the liability of land surveyors provides us with a comprehensive picture of the role land surveyors had in social and economic life. Under the contracts other than contracts of service their liability was limited to *dolus.* They could not always be directly sued even if they measured wrong. Besides limited liability and their favorable situation in trials, the importance of their profession is also suggested by the fact that the Digest extends this type of liability to all the professions involving measurement.

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[131] Földi 2004, 302–303; 311.
[132] Dig. 11.6.3.6.

Land surveyors and legal problems. The case of the Lex Mamilia

Roman land surveyors were frequently involved in judicial procedures and legal actions. Both the actions and the liability of land surveyors were regulated by legislation. The tasks carried out by land surveyors were linked to law in several aspects, and this close link can be noticed in their specialist writings as well. If we simplify a bit, on the basis of the legal questions dealt with in Roman land surveying works, the writings can be grouped in two large categories. The first group comprises the categorization of the divided lands and territories from the point of view of the state and common law. Here the following categories were set up and analyzed: *ager divisus et adsignatus*, *ager arcifinius*, *ager quaestorius* etc. The different categories were different in terms of ownership and taxation.[133] The sec-

[133] Dilke 1971, 63–65. Roselaar 2013.

ond group consists of works that present the arising conflicts and the ways to solve them. Therefore it seems reasonable that in the surviving collection of their works entitled *Corpus Agrimensorum Romanorum* there are as many as three works dealing with the conflicts arising from disputed boundaries.

The works that could be summarized as *de controversiis* were written by Frontinus, Hyginus and the late antiquity writer Agennius Urbicus.[134] They all were followers of Roman casuistic law and thus treated land tenure disputes in groups of cases. Frontinus set up two major groups. One of them was related to the problem of *finis*, while the other was connected to *locus* (*materiae controversiarum sunt duae, finis et locus*). However, he treated altogether 15 types of cases without defining the relationship between

[134] The title of Frontinus, the three times consul's (73, 98, 100 AD), work is *de controversiis* (4C). Chronologically the next in line is Hyginus, whose work is entitled *de generibus controversiarum* (90C). At the beginning of the presumably late antiquity writer Agennius Urbicus' work we can find the title *de controversiis agrorum* (16C). On authors: Campbell 2000, xxvii–xxxvii and Castillo Pascual 1998.

the two major groups and the 15 cases treated (Frontinus 4C).[135] Hyginus, on the other hand, defines only six groups: *de alluvione*, *de fine*, *de loco*, *de modo*, *de iure subsicivorum*, *de iure territorii* (Hyginus 90C). At the end of his work he also considers some further possible categories which he does not elaborate on but treats as pertaining to the field of law.

Urbicus begins to describe his own grouping system by presenting abstract categories, but after a theoretical and philosophical introduction he also deals with land disputes in terms of categories that are similar to the ones used by his predecessors mentioned above.[136]

Urbicus starts presenting his own categorization by stating that all disputes begin with a *proposition* which will lead to a trial (*ad litem*) through a

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[135] The lack of explanation is mainly due to the uncertainty connected to Frontinus' works. Altogether 4 shorter works of his have been preserved, namely *de agrorum qualitate*, *de controversiis*, *de limitibus*, *de arte mensoria*. These works are no longer than 7 pages (2–15C) in Campbell's edition. We cannot decide whether they are four fragments of a larger piece of work or extracts from four different works. Cf. Dilke 1971, 105–108.

[136] Campbell 2000, 337.

status generalis. The *proposition* is correct only if the subject of the case can be categorized under the *status generalis*. The process itself is called *transcendentia*. There are two basic cases of *transcendentia*. Urbicus defines the first as follows: „*Ex non stante propositione in [te]stante<m> transcedunt controversiae*", which means it comprises the cases when there is no strong body of evidence related to the land in question e.g. the applicant claims that the boundary sign has been damaged (*aboliti finis querella exponitur*). The opposite direction type of *transcendentia* (*ex re stant<e> i<n> non stante<m>*) happens when e.g. one of the neighbors (*ab ambitio<sis> possesoribus*) questions an already existing boundary sign and starts an action to expand the territory he owns.

Besides grouping land disputes based on the relationship of the starting statement to reality, Urbicus also categorizes them on the basis of their *effectus*. The procedure called *coniunctivus* is preferred by parties that can agree upon a solution and want to avoid the involvement of a judge. This group comprises procedures in which the territory of both parties stays intact: *inlaeso utriusque agri[s] solo*. The *disiunctivus* type consists of procedures during which a section of one's

territory is annexed to the other's. The contested territory is usually of different quality than the one it is annexed to at the end of the procedure. In the *spectivus* type of cases the parties possess evidence about most of the contested boundary line and even the doubted portion of the boundary line is detectable (*aspectum praebeat finitionis*). *Expositivus est effectus controversiae quotiens finitimorum argumentorum caret demonstration*, says Urbicus about the fourth category, where arguments are needed from both parties as to where the boundary lines are missing and where the boundary signs should be restored. *Subiectivus* is the category where the procedure starts from a *status generalis* but later gets into another *status.* It is quite surprising that this category is not mentioned in the starting list (24C), yet its description can be read at the detailed presentation part (26C). In our view it is either the result of inconsistency in drafting or copying mistake. The last category is that of *effectus reciperativus*, when a straight line runs from one point of the boundary line to the next boundary sign and thus *per incessum definitionis* one of the lands gains some territory. A subtype of it is *quasi re-*

ciperativus, when both lands gain some territory from the area cut down by the boundary line.

However, when elaborating on the individual cases Urbicus also follows the grouping made by Frontinus and Hyginus. There is one more grouping before the presentation which he definitely uses, though. The categorization based on *status* relies on the basic nature of the dispute.[137] For example the group of *assumptivus generalis* involves *de positione terminorum*, where external arguments and evidences must be considered. The category of *status initialis* comprises the cases where the conflict is caused by *rigor*, which is the boundary line without any extent. The cases grouped under *de fine* are cases of *status materialis. Status effectivus* involves the cases when some factual or legal complementation of the territory takes place (alluvial activity, ownership etc.). In the cases called *status iniectivus* the dispute is based and governed by some kind of claim.

The categories that Urbicus sets up are difficult to understand and interpret, which is due to the fragmentary nature of his work and the fact that we cannot find parallel presentation in the

[137] Cf. Campbell 2000, 336 sqq.

other land surveyors' writings. Sometimes it happens that he contradicts himself.[138] After the theoretical introduction and the presentation of his categories he follows his predecessors and deals with land disputes using the same categories as his predecessors had.

The first group of cases was presumably the *de positione terminorum*. Frontinus mentions this first of all. Hyginus does not deal with this category, but Urbicus also regards it as the most important one. Urbicus' text is fragmentary at this particular point but on the basis of the surviving parts we can assume that he also started to present disputes with *de positione terminorum* (Frontinus 4C; Urbicus 26–28C).[139] Both Frontinus' and Urbicus' descriptions show that the *de positione terminorum* was in the first place a preliminary procedure which decided factual questions. The starting point of the procedure was the discrepancy between the location of boundary signs and the latest property description (*secundum proximi temporis possessionem non conveniunt*). The *agrimensores* had to define the correctinitial loca-

[138] Campbell 2000, 337.
[139] Cf. Campbell 2000, 338.

tion of these boundary signs and also to suggest how the signs could be repositioned in the right place. Consequently the procedure only made a statement of fact and it was a further procedure that clarified the legal situation. It is not by chance that Urbicus calls it *anticipalis* in nature. In terms of procedural law this could be a *praeiudicium*, the results of which will be taken into account in the next trial. Naturally, the *agrimensores* give us an account of how the case went on, but before that we should have a look at legal sources.

In Book 47 of the Digest we can read about the *actio de termino moto*, the name of which seems to be closely related to the following words by Urbicus: *haec controversia moti termini*. However parallel the two texts might seem, it is only the basic facts that are the same. In both cases regulation is based on the fact that the location of boundary signs can be changed as a result of human activity, which affects land and tenure rights. While land surveyors' writings mainly refer to private lawsuits, the Digest tends to feature criminal law regulations.

Callistratus refers to two pieces of *lex agraria* (C. Caesar, Nerva), and Hadrian's *rescriptum*

when presenting the rules. Hadrian ordered that if people from the higher ranks of society (*splendidiores personae*) committed such an act in order to occupy others' land, they were to be sent in exile for a period that was inversely proportional to their age. Those who moved boundary signs while performing some (other) task had to do hard labour for two years. Presumably this was the category which land surveyors also fell into. Those who committed such an act only by chance, or out of ignorance, were simply whipped.

The name Caius Caesar may refer either to Julius Caesar or Caligula. No matter whom the name referred to, the law containing his name is at least hundred years older than Hadrian's *rescriptum*. It stipulates that people who, *dolo malo,* change the location of boundary signs will have to pay fifty aurei per boundary sign. The procedure could be started by anyone, thus it was an *actio popularis*. Nerva's law added that slaves committing this act should be sentenced to death.

The development of sanctions is important from a sociological perspective as well. The offence was already punishable by a significant fine, although it seems to have been more of a

compilation.[140] Exile and hard labour, however, were much more serious threats for offenders. It must have been the growing number of land occupations (as a result of boundary mark movement) that prompted emperors to introduce more severe sanctions.[141] This assumption is backed by the fact that Hadrian treats offenders coming from the higher ranks of society differently, and threatens to punish them more severely. The reason behind this is that it was precisely these social groups that enlarged their lands using such methods, without fear of punishment. It was the result of social processes that Modestinus (despite earlier laws) does not allow financial penalties, and provides for sanctions in concordance with Hadrian's provision.

After finishing the procedure of *de positione terminorum* the land owners concerned faced a further procedure. As Frontinus (4, 14–15C) puts it: *ab integro alius forte de loco alius de fine litigat*. Thus the real lawsuit following the settlement of the *de positione terminorum* problem

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[140] Crawford 1989, 185.

[141] Urbicus 26, 33C also thinks that boundary marks are moved *usurpandi finis causa*.

had to decide on either *de loco* or *de fine*. Urbicus treats *locus* and *modus* as the subject of the next dispute, but after *de positione terminorum* he also writes about *finis,* treating it as a separate type of case. *De fine*, *de loco* and *de modo* also appear in Hyginus' work.

In *de fine* procedures agrimensores are concerned with what forms the boundary between two plots. They mention boundary stones such as marks, marked trees and alleys, ditches, streams, hilltops etc. They describe in details what circumstances and conditions land surveyors had to consider. For example on the basis of the marks on trees they had to decide whether the boundary marking tree was common or belonged to one of the owners only. Similarly, ditches also had to be examined carefully to decide who they belonged to and whether they were situated on the border line or not. A solution to the latter question is sought by Urbicus, who in fact does not deal with the question of ditches separating plots because that part of his work must have been lost. However, when analysing *termini sacrificales,* he tells us that boundary signs were not necessarily placed at the physical boundary of plots, but their placement could sometimes be

influenced by *opportunitas* and *commoditas*. Both these words can be interpreted as religious and practical terms at the same time. The above mentioned aspects could also have been taken into consideration when designating the place for other boundary sign as well. When digging ditches, it was the soil parameters and facilitation of drainage that played the most important role.

Besides practical pieces of advice land surveyors also make some references to the legal nature of such boundary disputes. Frontinus specifies that the procedure is subject to *lex Mamilia* providing that the boundary dispute originates from *de rigore*. Their legal status is the same as that of conflicts arising from *de fine* causes. The only difference is that while *rigor* refers to a boundary line without any extent, *finis* is a border having some extent. According to land surveyor specialists both types of boundaries shall be analyzed as subject to *lex Mamilia*. That may be the reason why, following the description of *de positione terminorum*, it is the case of *finis* rather than that of *rigor* that is paid great attention to besides *locus*, because borders with some extent were significant for practical reasons as well. The difference between disputes connected to *locus* and

procedures *de fine* was that in the case of *de loco* procedures debate was about a territory or strip of land which was broader than the extent specified by law. It could also be relevant from the point of view of farming, in contrast to the strip of land determined by *lex Mamilia*, which was important mainly for transport. According to Hyginus (92, 11–12 C), who fails to mention the text of the law, the five or six feet wide strip of land was used by land owners to get to their plots (*iter culturas accedentium*), or it served as a place to turn the plough round (*circumactus aratri*).

Land surveying specialists refer to this Mamilian law on several occasions. Frontinus states that it is the procedure connected to disputed plots or boundary lines not wider that five feet that are subject to the law mentioned above. Urbicus considers it important to mention in connection with this law that even legal scholars have doubts about how to interpret the measures specified by the law because its text is archaic (*antiqui sermonis*). The other uncertainty related to the law was the width of 5 or 6 feet (appr. 1.6 – 2 m) specified in the *lex*. What is most important from the legal point of view is the fact that in order to preserve this strip of 5 or

6 foot wide land for common use there was no possibility for its *usucapio*.[142]

Among the texts of *Corpus Agrimensorum Romanorum* we can find three short fragments from a law which bears the name of *lex Mamilia Roscia Peducaea Alliena Fabia* in the collection.[143] The obvious question that arises is what the relationship between the two laws was.

The first fragment of *lex Mamilia Roscia Peducaea Alliena Fabia* states that it is the obligation of the plot owner/user (*cuius is ager erit*) to make up for the missing boundary lines (*terminum restituendum curato*). Meanwhile, their control falls within the scope of local *magistratus*. The second fragment sets out payment of a sanction for those who change the located boundary lines in any way, e.g. by ploughing them away or filling up the ditches. The third fragment also refers to the consequences of moving boundary lines by describing the procedure to be followed. The

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[142] Frontinus 4C; Urbicus 22–24C and 30C; Commentum 60C; Siculus Flaccus 110C; Hyginus Gromaticus 136C. On the basis of the definition the above mentioned Hyginus 92C can also be referred to here.

[143] 216–219C. The text is quoted by Hardy 1925, 185 and also Crawford 1989, 180–181.

duty of the magistrates of coloniae was to appoint a judge to clarify and decide on the disputed case. The only means of proving one's right (in the fragment) is taking evidence, and also threatening to make the guilty party pay a fine. The fact that the authenticity of boundary lines was of community interest is shown by the following: the fine was collected with immediate execution (*primo quoque die exigito*), and half of the amount was given to the person who initiated the case (*partem dimidiam ei cuius unius opera maxime is condemnatus erit*), who was probably one of the adjoining owners.

In relation to the latter mentioned law research has mainly been preoccupied with dating. The first fragment can be found word for word in the text of *lex Coloniae Genetivae*, while a part of the third in that of the Digest (47.21.3). The latter fragment – as we have already mentioned – is referred to as the law of a C. Caesar in connection with *de termino moto*. On the basis of the limited data available research has made several attempts to date the law.[144] If we do not take into consideration the – as yet unreflected – view

[144] For a short insight on possibilities cf. Kroll, RE 12, 2397.

which dated the issue of *lex Mamilia Roscia Peducaea Alliena Fabia* back to the age of the early Empire after identifying the C. Caesar mentioned in the Digest with Caligula, we can say there are basically two different views on its dating. The first view considers this law to be part of the numerous judicial acts that started after 111 BC as a counter reaction to Gracchus' measures, and thus could be dated back to 109 BC. In this case the law can be linked to C. Mamilius Limetanus, who was also known for his actions against the abuse associated with Jugurtha (Sall., *Iug.* 40. Cic., *Brut.* 127).[145]

The other view considers that *lex Mamilia Roscia Peducaea Alliena Fabia* was introduced at the time of Caesar's agrarian laws or colony founding program. Furthermore, there is disagreement concerning the exact year, even among those who date the law back to Caesar's age. Among the possible years 59, 55 and 49 have all

[145] Cf. Hardy 1925, 186 sqq.Heurgon 1960, 221 sqq. Crawford 1989, 187. Heurgon also dates back another extremely disputed piece of *CAR*, the so-called Vegoia prophecy to the beginning of the civil wars. Cf. Heurgon 1959.

been mentioned, together with the period between 47 and 44. [146]

So far, research has hardly dealt with clarifying the connection between the two laws mentioned by land surveyors. Kroll – though in an unspoken fashion – identifies the two laws as one when he uses Agennius Urbicus' (24C) statement on the archaisms found in *lex Mamilia* to date the other law.[147] Crawford, however, establishes two groups: the fragments of *lex Mamilia Roscia Peducaea Alliena Fabia* on the one hand,

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[146] Cf. Kroll, RE 12, 2397. Cary 1929, 115, argues for year 55, which he explains on the basis of the growing number of soldiers needed as a result of Caesar's conquest of Gaul. Crawford 1989, 184 and 187 sqq.connects the law to Caesar's legislation of 59, while Hardy 1925 sees a connection between the law in question and the period between 47–44. The substantial difference between the positions of the two authors is that Crawford identifies the known fragments with a single *lex Iulia agraria*, and dates lex Mamilia, Roscia, Peducaea, Alliena, and Fabia with unknown content to year 109, while Hardy proves that the law bearing this name had the content we know today.

[147] We must not forget that Urbicus wrote in late antiquity. Therefore his comment on the law having ancient wording should be taken into chronological consideration accordingly.

and the references of land surveyors to *lex Mamilia* on the other.[148] The basis of his argument is that the latter (i.e. the comments of land surveyors) mainly refer to problems governed by private law, while the former (law fragments) are part of public law.

It is Cicero that gives us clues for dating *lex Mamilia*. In his dialogue entitled *de legibus*, which was presumably written around 53–51 BC, he traces back the prohibition of the *usucapio* of the five-foot wide boundary strip to the Twelve Table Laws. He also adds that upon the principles of ancient laws three judges (*arbitri*) were required in the case of *de finibus* disputes, while Mamilius' law only prescribed one judge (Cic., *leg.* 1.55).[149] Mamilius' law, to which land surveyors refer, presumably dates back to the period before the second half of the 50's, and its source was the text of the Twelve Table Laws, which he changed at least with respect to the number of judges involved.[150]

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[148] Crawford 1989, 183. He is followed by Campbell 2000, 321–322.

[149] Cf. Flach 1990, 27.

[150] Cf. Crawford 1989, 183.

The content of the fragments of the two laws that can be related to the name Mamilius is fairly different. One of them concentrates on the five or six feet wide boundary strip and the prohibition of usucapio of this land, whereas the other deals with the authority and duties of magistrates of towns and the procedure itself. However, the aim of the fragments was similar as both of them aimed at the stability of current ownership.[151] When trying to clarify their relationship we do not necessarily have to think in terms of the public law and private law dichotomy. The law called *lex municipii Salpensani*, which dates back to Domitian's time, regulates the freeing of slaves and appointing of guardians.[152] These regulations pertaining to the field of private law are naturally suitable to be part of the law of a municipium because, for example, the regulation of the conditions that made freeing a slave possible had a great impact on the whole community and

[151] Cary 1929, 114 refers to something similar when treating lex Mamilia Roscia Peducaea Alliena Fabia, but his conclusions lead in a totally different direction. What is more, he does not consider the lex Mamilia referred to in connection with land surveyors.

[152] Lex Salpensana XXVIII, XXIX (Dessau, ILS 6088).

influenced local civil law and other public law matters.

In the case of the two laws named after Mamilius we should differentiate on the basis of another distinguishing feature. The law named *lex Mamilia Roscia Peducaea Alliena Fabia* contains regulations of a procedural type, whereas the *lex Mamilia* preserved by land surveyors states a substantive type of provision: the usucapio of the boundary strip is forbidden. The common goal of both provisions was the prevention of land boundary disputes by maintaining the unobtainability of these boundary strips between plots. This was not only in the interest of the state (public regulation) but also of private parties (private law regulation). Therefore it is possible that the fragments belong to the same law instead of being fragments of two separate laws.

The regulation of land ownership is often part of the laws of towns. The laws of *lex Irnitana* and *lex Malacitana*, which date back to Domitian's age, contain provisions on the obligations of guarantors and witnesses, as well as on real es-

tate.[153] These laws naturally included solutions for possible later disputes on land tenure. The law of the *municipium* of Irni says in its rubric number LXXVI that it is the duty of *duumviri* to make proposals to the town council on the examination of town boundaries, lands and territories providing tax to the town. The examination was carried out by walking through these territories with the aim of detecting abuses.[154] The law of the town of Urso dating back to the age of Caesar sets a prohibition on selling common lands, woods or buildings and also sets a time limit of five yearsfor rental.[155] In addition to these provisions laws also make it clear that magistrates should act in a way that shall not damage the interests of individuals. The remaining fragments of the laws of Tarentum, Urso and Irni all have sections that provide for taking into consideration the interests of individuals when estab-

[153] Lex Irnitana LXIV; Lex Malacitana LXIII–LXV (Dessau, ILS 6089). Cf. Illés 2007, 45, who does not mention the parallelism provided by lex Malacitana.

[154] Illés 2007, 53.

[155] Lex coloniae Genetivae Iuliae s. Ursonensis LXXVIII (Dessau, ILS 6087).

lishing roads, ditches or channels (*sine iniuria privatorum*).[156]

The prohibition of usucapio in *lex Mamilia* would not have sounded strange in the basic law of a *municipium* or *colonia*, although our standpoint cannot be considered indisputable due to the fragmentary nature of the preserved laws of towns. The protection of individuals' interests in the case of community investments suggests that these interests could also have been protected from other individuals by legal regulations. The Digest lists as a public service mission of town magistrates the termination of the usucapio of anything that is town property. (Dig. 50.4.1.4). It does not seem impossible that the regulation of *usucapio* also referred to the boundary strips lying between individuals' lands and not only to public lands. The boundary strip – as we could see – was used as a road. The law called *lex Ursonensis* (LXXVIII) sets the following regulation: *Quae viae publicae itinerave publica sunt fuerunt intra eos fines, qui colon. dati erunt, quicumque*

[156] Lex municipii Tarentini 39 (Dessau, ILS 6086); lex Ursonensis LXXVII; lex Irnitana LXXXII. Cf. Galsterer 1988, 84; Illés 2007, 57.

limites quaeque viae quaeque itinera per eos agros sunt erunt fueruntve, eae viae eique limites eaque itinera publica sunto. Referring to *limites* (boundary strips, boundaries between lands) and roads in the same passage and setting them under the authority of public law could be a good explanation for the prohibition of usucapio in *lex Mamilia* as well if we also consider that according to Hyginus (92C) boundary strips between plots were meant to be used as roads.[157] It is not only by chance that it was the task of magistrates to keep an eye on them, and not only for the sake of town property. The stability of land ownership and transport was also a primary interest of the town community. It was the magistrates who possessed the public power that could preserve and guarantee the existing legal status. Furthermore, magistrates were also in possession of authentic or least reference data in connection with plots. During the *census* they made surveys which

[157] This is also emphasised by Hyginus Gromaticus 136C, according to whom: *linearii limites … latitudinem secundum Mamiliam accipiunt. In Italia etiam itineri publico seruiunt … hos conditores coloniarum fructus asportandi causa publicauerunt.*

they recorded in the*forma censualis*, which contained the name of the plot, the owner of the land and of the two adjoining plots, the location of the plot within the local administrative units, its size and how it was cultivated (Dig. 50.15.4pr).

The dating of *lex Mamilia* in relation to Cicero as a *terminus ante quem*, and the proposed dating of *lex Mamilia Roscia Peducaea Alliena Fabia* give us conforming dates. Urbicus' statement on the archaic language of the first law provides us only with a relative dating; and if we accept the idea that Urbicus wrote in late antiquity, his dating does not contradict our theory that lex Mamilia can also be considered as dating back to the first century B.C. The aim of the two laws, as we can deduce from fragments, is common: to guarantee that plot boundaries would not be disturbed. This is of paramount importance for individuals, the community and the state alike. Regulation on land tenure also appears in further municipal laws. All things considered we may draw the conclusion that the fragments are part of a single law and not two different ones.

Conclusion

Both when working as subcontractors and experts assisting justice, land surveyors frequently faced legal problems. Due to the economic and social importance of agricultural land their profession prevailed in late antiquity and their expertise was heavily relied on in an institutionalized form by central administration. In 330 Constantine issued a decree stating that a land surveyor (*agrimensor*) must be sent to clarify the ownership of the land if an action was started due to aggressive land grabbing. The imperial decree expected the land surveyor to make a careful inspection (*fidelis inspectio*) in order to reveal the truth (*patefacta veritate*). Contrary to previous practice where a land surveyor was only sent after the parties had requested or the governor had decided on sending one, Constantine's decree embedded this practice into procedural law and institutionalized it. This decree is quoted by the piece entitled

Commentum, which was preserved among land surveyors' writings and the author of which is unknown. The fact that it has been preserved there clearly tells us that legal products were not only dead letters but became an integral part of land surveyors' practice.[158]

What is more, this practice survived the fall of the Empire in western territories as well. In the 6th century AD Cassiodorus (*var.* 3.52) wrote a letter to king Theoderic, the powerful Gothic sovereign that ruled over Italy. The letter informs that two highly respected men called Leontius and Pascharius started a dispute about the boundary of their lands. The short presentation of the dispute tells us that both of them tried using violence (*viribus*) in order to ensure their concerns were addressed. On the other hand Cassiodorus suggested starting a legal action and hiring a land surveyor first to act as expert in the case. Even though we have no information on the outcome of the dispute between Leontius and Pascharius, the letter clearly reflects that the Roman age did not end suddenly at a certain point in the fifth or sixth century but lived on in its basic institutions.

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[158] Comm. 64,21–4C. Cf. Campbell 2000, xxxxiv, liii.

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