

ROMAN LAW AND MARITIME COMMERCE

EDITED BY PETER CANDY AND
EMILIA MATAIX FERRÁNDIZ



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EDINBURGH
University Press

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Edinburgh University Press Ltd
The Tun – Holyrood Road
12(2f) Jackson's Entry
Edinburgh EH8 8PJ

Typeset in 10/12 Goudy Old Style by
IDSUK (DataConnection) Ltd, and
printed and bound in Great Britain

A CIP record for this book is available from the British Library

ISBN 978 1 4744 7814 4 (hardback)
ISBN 978 1 4744 7816 8 (webready PDF)
ISBN 978 1 4744 7817 5 (epub)

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Acknowledgements

This book found its inception in the shared interest of the editors in the relationship between law and society in the Roman world, ancient maritime trade and the exciting possibilities presented by interdisciplinary research and the integration of a wide range of evidence into the writing of legal history. The production of this volume would not have been possible without the help and support offered by many people and institutions. We are very grateful to the ERC project *Law, Governance and Space: Questioning the Foundations of the Republican Tradition* (headed by Kaius Tuori) and to the Helsinki Collegium for Advanced Studies, for their generous support toward the organisation of the seminar ‘Law, Trade and the Sea: Discovering Maritime Trade in the Roman World’, which took place in Helsinki on 12–13 September 2019, at which many of the papers included in this volume were first presented. We would also like to thank the School of Law at the University of Edinburgh, St Catharine’s College, Cambridge, and the Eurostorie Centre of Excellence in Law, Identity and European Narratives (founded by the Academy of Finland) for supporting our research in a myriad of different ways. We are especially grateful to Professor Paul du Plessis, who provided much useful advice in organising the conference and for sharing his editorial experience. The labour of editing would have been much harder for us without the kind help of Heta Björklund, Sara Heinonen, and Ida Karjalainen, from the Eurostorie Centre of Excellence. We would also like to offer our warmest thanks to the editors of Edinburgh’s University Press, Laura Williamson and Sarah Foyle, for guiding us along the route to publishing this volume, as well as to the series editors and anonymous readers for their useful comments and advice.

PC and EMF

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Abbreviations

All abbreviated references to authors from classical antiquity and their works follow the standard conventions in the Oxford Classical Dictionary (4th edn). All abbreviated references to ostraka and papyri follow the standard conventions in these disciplines.

AE	<i>L'Année épigraphique: revue des publications épigraphiques relatives à l'antiquité romaine</i> (Paris 1888 →)
Aespa	Archivo Español de Arqueología (Madrid 1940 →)
AJAH	American Journal of Archaeology (Boston 1885 →)
AJLH	American Journal of Legal History (Philadelphia, PA, then Oxford 2016 →)
ANRW	Aufstieg und Niedergang der römischen Welt (Berlin 1989 →)
Arch. Class.	Archeologia classica (Rome 1949 →)
AUPA	Annali del seminario giuridico dell'università degli studi di Palermo (Palermo 1916 →)
Bas	Basilica
BIDR	Bullettino dell'Istituto di diritto romano (Rome 1888 →)
CIE	Corpus Inscriptionum Etruscarum
CIL	Mommsen, Th. et al., <i>Corpus Inscriptionum Latinarum</i> , 17 vols. (Berlin 1863 →)
C	Codex
CGG	Cahiers du Centre Gustave Glotz (Paris 1991 →)
Coll	Mosaicarum et Romanarum Legum Collatio
CP	Classical Philology (Chicago, IL 1906 →)
CTh	Codex Theodosianus
CQ	Classical Quarterly (Cambridge 1907 →)
D	Digest
DAGR	Daremberg, C., and Saglio, E. (eds) (1900) <i>Dictionnaire des antiquités grecques et romaines</i> (Paris: Hachette)
DHA	Dialogues d'Histoire Ancienne (Besançon 1974 →)
FIRA	<i>Fontes Iuris Romani Antejustiniani</i>
G	Institutes of Gaius
IDélos	Dürnbach, F. et al., <i>Inscriptions de Délos</i> , 7 vols. (Paris 1926–1972)
IG	Dittenberger, W. et al., <i>Inscriptiones Graecae</i> (Berlin 1903 →)
IJNA	International Journal of Nautical Archaeology (New York 1972 →)
IK	Inschriften griechischer Städte aus Kleinasien (Bonn)

ILS	Dessau, H., <i>Inscriptiones Latinae selectae</i> , 3 vols. (Berlin 1892–1916)
Index	Index: quaderni camerti di studi romanistici (Naples 1970 →)
Inst	Institutes of Justinian
IRAT	Inscriptions Romanes Ager Tarraconensis
IVRA	Iura: rivista internazionale di diritto romano e antico (Naples 1950 →)
JJP	Journal of Juristic Papyrology (Warsaw 1946 →)
JLH	Journal of Legal History (London 1980 →)
JRA	Journal of Roman Archaeology (Ann Arbor, MI 1988 →)
JRS	Journal of Roman Studies (London 1911 →)
Labeo	Labeo: rassegna di diritto romano (Naples 1955 →)
Lenel, EP	Lenel, O. (1927) <i>Das Edictum Perpetuum</i> (Leipzig: Tauchnitz)
Lenel, Pal	Lenel, O. (1889) <i>Palingenesia Iuris Civilis</i> , 2 vols. (Leipzig: Tauchnitz)
MBAH	Münstersche Beiträge zur antiken Handelsgeschichte (Marburg 1982 →)
MEFRA	Mélanges de l'école française de Rome – Antiquité (Rome 1881 →)
Mon. Eph.	Monumentum Ephesenum
Nóm. naut.	Nómos Rhodíōn nautikós (= Rhodian Sea Law)
OGIS	Dittenberger, W., <i>Orientalis graeci inscriptiones selectae</i> , 2 vols, (Leipzig 1903–1905)
PS	<i>Pauli Sententiae</i>
RA	Revue Archéologique (Paris 1844 →)
RAN	Revue Archéologique de Narbonnaise (Narbonne 1968 →)
RDN	Rivista del Diritto della Navigazione (Rome 1935 →)
RHD	Revue d'Histoire du Droit (Leiden 1918 →)
RIDA	Revue Internationale des Droits de l'Antiquité (Brussels 1948 →)
SDHI	Studia Documenta Historiae et Iuris (Rome 1935 →)
SEG	<i>Supplementum epigraphicum graecum</i> (Leiden (Vols 1–25); Alphen aan den Rijn (Vols 26–27); Amsterdam (Vols 28–51); Leiden-Boston (Vols 52 →) 1923 →)
TAPhA	Transactions of the American Philological Association (Baltimore 1869 →)
TH	Tabula(e) Herculansen(s)
TLL	Thesaurus Linguae Latinae
TPSulp	Tabula(e) Pompeiana(e) Sulpiciorum
ZPE	Zeitschrift für Papyrologie und Epigraphik (Bonn 1967 →)
ZRG RA	Zeitschrift für Rechtsgeschichte. Romanistische Abteilung (Weimar 1880 →)

Chapter 7

Roman Documentation Concerning Shipping in Bulk

Gianfranco Purpura

According to a 'primitivist' conception, Rome conquered, explored and administered an empire in the last two centuries of the Republic with an oral mentality and very little use of written documents. Now, if not considered false, this view is at least understood to be far from the truth.¹ In fact, everyday documents are increasingly demonstrating the use of complex and sophisticated practices to achieve quite remarkable administrative results.

The use of writing and the systematic use of documents were essential to the development of an immense territory and the subsequent increase in trade. The spread of writing can be connected, more than has previously been assumed, to contact with Hellenistic civilisation.² Romans used many different kinds of lists, such as those concerning various social and privileged orders, 'registers' of tribes and centurions, creditors and debtors of the *aerarium*, subjects exempted from tax or those entitled to benefit from the sale of public grain. In addition, other lists ranked the beneficiaries of lots associated with the *coloniae*, public domains and water disbursements. Moreover, even during the ancient period, territorial and geographical maps and 'passports'³ were essential.⁴ Documentation was especially important in the world of business, especially in maritime dealings and in ports.⁵ In these environments, documentation lent support to an oral tradition and made the use of writing indispensable. Scripts were sometimes personally traced on merchandise or by an intermediary on the same containers, since many rich private financiers were illiterate,⁶ as was sometimes also true of the seamen involved in maritime transport.

Although an oral mentality remained deep-rooted in public practice (for example, by the persistence of a secondary evaluation of documents and the consolidated habit of reading them aloud and quoting them by heart and, therefore, in an approximate manner),⁷ in the context of commercial and maritime activities this was obviously not possible.⁸

P. Bingen 77 comprises a fragment of a register from a large port (perhaps Alexandria) in the second century AD that contains detailed information concerning the docking of eleven ships over two days, some carrying the goods of several merchants. The document contains precise and technical information regarding the place of departure (for example, of a grain ship with capacity for as much

as 22,500 *artabae* coming from Ostia), the cargo transported, the type of ship, its capacity, the duration of the voyage, the name of the vessel, the owner, the captain, the crew, the individual on whose behalf the cargo was transported and, perhaps, even the berths at which the vessels were to be docked.⁹ The document demonstrates, beyond any doubt, the widespread use of writing, not only in the bureaucratic practices of port officials, but also in the economic transactions between merchants and seamen. In this latter connection, rich documentation has survived in the papyri and wax tablets (especially in private archives, such as the Puteolan archive of the Sulpicii) and also in the individual records of daily life – the objects of economic traffic – on which inscriptions were frequently traced, and which have sometimes been poorly understood or neglected, and to which this contribution will draw special attention.

More specifically, the chapter aims at directing attention towards bulk transport, which both gave rise to legal issues concerning the discharge of cargo to numerous merchants (*vectores*)¹⁰ and facilitated the itinerant trade of commodities (in reality the most common kinds of goods transported around the empire), particularly to avoid the ‘breaking of the cargo’ by the repeated loading and unloading of numerous goods at a variety of destinations.¹¹ It is also clear that bulk transport, in addition to avoiding this nuisance and permitting loading and unloading to be carried out more quickly, could have made possible a significant reduction in the size of the vessel and the use of a few large suitable containers, such as *pithoi* or *dolia*.¹² These were more advantageous than numerous individual amphorae or other separate containers. For the purposes of identification, pozolan stoppers were used for wine amphorae and clay or lead seals in connection with baskets and sacks containing various goods¹³; and when it came to the transport of fungible goods belonging to various merchants (such as *garum* or other products transported in large containers) who entrusted their merchandise to a ship with multiple destinations connected by a single route, wooden and lead labels were used.¹⁴

Although this practice was closely related to business models adopted at different times, it is only in Roman imperial navigation, or rather at the end of the Republican age and at the beginning of the Empire, that trading ships with large quantities of heterogeneous merchandise belonging to different merchants embarked not only on direct routes, but also on itineraries with numerous stops and frequent ‘cargo breaks’. Although large cargoes, such as the more than 4,200 amphorae and other wares recently traced to Alonnessos (c. 420–400 BC),¹⁵ were already being transported during the classical Greek age, it seems that only from the second century BC onwards did large cargo ships, like those at the Albenga, with an estimated load of between 500–600 tons consisting of 11,500–13,000 Dressel 1B wine amphorae together with sacks of hazelnuts and wheat, the Spargi (c. 110 BC), which was about 35m long and eight or ten metres wide, or the Madrague de Giens (c. 75–60 BC), with a load of about 375–400 tons and 6,000–7,000 amphorae, become common as carriers of heterogeneous loads, both for direct and segmented routes.¹⁶

That fact, in truth, has been somewhat controversial, since according to some maritime historians of the ancient world, such as J Rougé¹⁷ or L Casson,¹⁸ Roman imperial navigation mainly took place along fast, direct routes.¹⁹ Others, however, have argued that, just as in the Middle Ages, slow itinerant transport and trade, characterised by cabotage (tramping), was prevalent or at least just as common as navigation along direct routes.²⁰ On the basis of the wreck of the *Cala Culip IV*, it has been possible to differentiate between the Mediterranean's principal ports, which large ships on direct routes tended to travel between, and secondary ports, which smaller vessels engaged in redistribution by *cabotage* travelled to from the main ports.²¹ According to X Nieto:

‘Quand il s’agit de bateaux de grande taille, avec une capacité de plus de 7,000 amphores, comme dans le cas de Spargi ou de la Madrague de Giens, il nous paraît fort improbable qu’une telle opération de réorganisation ait pu être envisagée pour seulement livrer quelques douzaines ou même centaines d’amphores. En outre, il est douteux qu’elle eût pu être rentable, tant à cause de l’allongement considérable de la durée du voyage qu’elle aurait occasionnée que par le coût de la main-d’oeuvre qu’elle aurait réclamée.’²²

He concludes:

‘Aussi pensons-nous plutôt que ces embarcations de transport en gros avaient à acheminer des cargaisons homogènes depuis la région productrice jusqu’au port principal par une route directe.’

At first sight, the transfer of particularly bulky goods that were not easy to remove from the ship, such as whole *dolia* and marble blocks, seems rather unlikely and would appear to indicate the use of direct routes. Equally, the arrangement of the stowed goods on board could certainly impose a loading-unloading sequence that in some cases necessitated the following of a strict order (that is, because certain goods could not be removed before others), which is also incompatible with a redistributive model.²³ However, as the *Cabrera III* or the *Sud Perduto 2* wrecks show,²⁴ transport in bulk, even in amphorae carrying undifferentiated consignments, all of the same type and quality, reopens the possibility of itinerant routes even for large ships. This would have made it possible to perform different deliveries at multiple stops on planned voyages, so as to provide the additional flexibility to temporarily reroute the vessel to take advantage of news about the opening of a favourable market.

It has recently been shown that, for nautical reasons, there could not have been a clear contrast between deep-water and coastal navigation during the Roman period and that even in the case of the former, these routes were necessarily subject to interruption in certain areas and at certain times of the year.²⁵ It seems to me that only without ‘cargo breaks’, and therefore with deliveries in bulk, would it have been possible to benefit from any intermediate commercial stopovers. Indeed, even small boats frequently engaged in operations that could

be described as ‘cabotage’ (that is, sailing from cape-to-cape, from gulf-to-gulf),²⁶ could have been involved in long-distance trade. If this were the case, they would not have been engaged exclusively in local commerce and their role would not have been limited to mere redistribution. It therefore seems possible to conclude: ‘c’est sans doute la combinaison des deux pratiques au sein des mêmes routes qui a constitué la norme’.²⁷

The slow pace of most of the trips documented in P. Bingen 77, compared to the expected sailing times of small *akatoi* (*actuaria*) – that is, vessels engaged in short- and medium-distance commercial transport with mixed forms of propulsion – has been explained with reference to temporary stopovers for weather reasons.²⁸ However, it could also be explained with reference to the execution of occasional short-distance intermediate journeys, carried out in connection with an improvised itinerant trade (which could also involve large ships), which was not necessarily constrained by a pre-arranged route.²⁹

Based on the recent discovery in the port of Marseille of crate fragments bearing the customs seals of one of the stations of the *Quadragesima Galliarum*,³⁰ and from the infrequency of epigraphic mentions by the staff in charge of collecting *portorium* (*portitores*), it has been inferred that interprovincial traffic must necessarily have passed through a limited number of ports equipped with the infrastructure capable of ensuring the collection of customs duties. The infrastructure was designed to certify the clearance of transported goods through customs at exclusive sites within the relevant fiscal area at which authorisation for marketing and redistribution was sought.³¹ These processes created an incentive to trade along direct binary routes along which merchandise was only disembarked at specific customs stations, thus avoiding the extension of sailing times and related bureaucratic requirements.

Looking to the *Monumentum Ephesenum* (9 July, AD 62), however, §9, ll. 22–26 provides a long list of ports, together with the location of the coastal settlements in the Roman province of Asia, where customs offices were located (with such a great degree of detail that we know the size of the different *stationes*).³² In addition, §16, ll. 40–42 indicate that in the absence of contractors *in loco*, the receipt of the *professio* was entrusted to the highest magistrate in the nearest city; and that numerous local communities were entitled to maintain for their own benefit, with the permission and under the control of Rome, the privilege of gathering taxes that they had collected before the Roman conquest, further expanding the already detailed list of places where it would have been possible to dock and pay duties, even for large ships. From a practical perspective, it does not seem that there was any real issue arising from the payment of taxes, not least because of an alleged shortage of customs stations in the coastal areas of Asia, or in other areas of the empire for that matter, since it would have been possible to pay tax at the nearest city. This was the consequence of a political framework that spanned a unified Mediterranean that was increasingly inclined not to suffer any kind of hindrance in merchant exchanges, even over long distances.

According to A Bresson,³³ however, upon landing in Greek cities during the Roman period, any merchandise that was to be put up for sale was unloaded and,

the relevant import duties having been paid, export duties were levied on the unsold goods that had to be re-embarked. In places where sale by samples was practiced (δείγμα), this inconvenience could be avoided by exhibiting a sample for a limited period, which saved the need to load and unload the cargo. Not only could this hindrance therefore be avoided by increasing the frequency of sale by sample, but also (and above all) by concentrating these sales in those ports open to foreigners and at which local redistribution took place.

If, however, boats of a certain size could dock without hindrance, due to the presence of custom stations, in places where trading in commodities in bulk out of holds that had become increasingly capacious was considered practicable, it is necessary to explain how this had become possible without the need to 'break the cargo' and therefore to waste time and manpower – all plausible economic objections that have been put forward. In short, it is due to the use of sample jars (δείγματα), little amphorae, little sacks, and small sealed flasks – that made this approach more and more feasible – both for dry goods and for liquids.

The practice of late-Republican bulk transportation is attested to in the following well-known text:

'D. 19.2.31 (Alf. 5 dig. a Paulo epit.):

Several people shot their grain together into Saufeiuis' ship, after which the latter returned his share of the grain to one of them out of the common pile and the vessel was lost. The question was asked whether the others could proceed against the *nauta* with respect to their share of the grain by raising an action for *onus aversum*? He responded that there were two kinds of things placed out [in virtue of a contract of letting and hiring], either on terms that the very same thing is given back (such as when clothes are placed out to a fuller for cleaning) or property of the same kind (as when refined silver is given to a smith to make vases or gold to make rings): in the former case the thing remains the property of the owner, whereas in the latter he becomes *in creditum*. The same principle exists in relation to *depositum*: for if someone made a deposit of a certain amount of money and neither enclosed it nor handed it over under seal, but rather by counting it out, the person with whom the deposit was made was bound to do nothing more than to deliver back an equivalent sum. Accordingly, it would appear that the grain was made Saufeiuis' and had been handed over in the appropriate way. Now if each person's grain had been separately enclosed by means of partitions or wicker baskets or some other kind of container, so that the consignment of each could be told apart, we are not able to make an interchange, but rather the person to whom the grain belongs can bring a *vindicatio* to recover what the *nauta* had delivered. And so he rejected actions for *onus aversum*, because if, on the one hand, the goods were of such a kind that, on being handed over to the *nauta*, they immediately became his and the merchant *in creditum*, it did not appear to be a case of *onus aversum*, inasmuch as they belonged to the *nauta*; but if, on the other hand, the same thing that was handed over was owed in return, the *actio furti* would lie for the *locator*, so that an *iudicium* for *onus aversum* was superfluous. If then the goods were handed over in such a way that they could be delivered back in kind, the conductor is liable only to the extent of his fault (this much being owed in matters contracted for the benefit of both parties); and it is hardly blameworthy that he [i.e., the *nauta*] restored the grain to one of them out

of the common pile, seeing that it was necessary for him to make a return to one or other person first, even though he made the position of the one better than that of the others by doing so.³⁴⁷

Though the text is among the most controversial of the Digest's fragments, modern scholarship is inclined to acknowledge its substantial genuineness.³⁵ Following the transport of a quantity of wheat in bulk that had been embarked by several merchants on Saufeius' ship, Saufeius had returned a portion of the common grain at a port of call to one of the merchants.³⁶ Later, the ship perished with all the cargo, provoking the other merchants (*ceteri*) to ask Alfenus whether they could bring an action for 'diminution of the load'. The action, however, was excluded in the jurist's response, which referred to a fundamental distinction used by Roman lawyers to frame agreements for the transport of goods within the contract of letting and hiring: namely, between *duo genera rerum locatarum*, which is to say, on the one hand, those things for which the *nauta* was obliged to return identical goods that had been handed over (*idem*) and, on the other, those for which they committed to return only a quantity of the same kind (*eiusdem generis*).

In the first case, the goods were affixed with a mark upon loading, so that they could be identified exactly upon delivery (χειρέμβολον).³⁷ This identification was made both in the interest of the merchant, who desired that the same goods should be returned, while remaining their owner and bearing the consequent risk in the case of loss (*casum sensit dominus*)³⁸; and, above all, in that of the *nauta*, who loaded the cargo and was therefore exempted from bearing the risk of transportation, since they did not become owner of the merchandise.

In the second case, however, which concerned transport in bulk, a *mutatio dominii* occurred, so that the *nauta* held the object of the contract *in creditum*, which bound them only to deliver a different object consisting of the same material (*eiusdem generis*), owing to the indestructibility of the *genus* even in the case of *vis maior*.³⁹ So far as bulk transport was concerned, then, the merchant ended up having to bear the risk. Consequently, a merchant on Saufeius' ship who had received back their share of wheat should, according to the text, have considered themselves fortunate; and equally Saufeius, by returning the first consignment of grain, free from fault or liability. The question remains, though, why the other merchants, who remained creditors following the change of ownership that resulted from the transport in bulk, asked Alfenus for an opinion about raising an action for 'diminution of the load'?

It is clear that, at the time the *quaestio* was put to Alfenus, for merchants loading goods in bulk the distinction between the *duo genera rerum locatarum*, which could have grounded the argument that the *mutatio dominii* had transferred the risk to Saufeius, was already precluded.⁴⁰ From this point of view, the explanation proposed by L Ménager that the entire ship had been leased as a whole by several merchants for a joint transport in bulk cannot be accepted.⁴¹ Indeed, it would have made no sense to invoke the *mutatio dominii* and the consequent shouldering of the risk by the *nauta*, who would have been responsible only for the good

condition of the boat. In these circumstances, the wheat would have remained the property of the merchants, which cannot be reconciled with Alfenus' declaration that, '*secundum quae videri, triticum factum Saufei et recte datum*'. Could Saufei have been accused of *aversio* if the merchants had leased the ship for themselves? The only option is to assume a *locatio ad onus vehendum*, which necessarily involved a planned route under Saufei's command and the acquisition of the property by the *conductor* in bulk⁴²; and therefore not merely the availability of abstract shares owned by each of the merchants, as would have been normal,⁴³ for the purposes of carrying out the *opus*.

It seems that following the increase in trade, of risks and the consequent recognition of the edictal clause relating to *receptum* – which is believed to have been in operation by the end of the second century BC⁴⁴ – the mercantile owners of goods identified by a *χειρέμβολον* could pay the *navicularius* a slightly higher freight to assume responsibility under a *receptum*. As it was, the risk under the *receptum* was equivalent in scope to the risk that carriers already assumed on account of the change of ownership under a contract *ad onus vehendum* for the transport of the goods of multiple merchants that were identified by *genus*. If this inevitably raised the cost of transporting goods identified and guaranteed by *receptum*, which merchants used frequently to their advantage in response to the increasing danger of piracy in the second and first centuries BC, the introduction of the *receptum* basically ended up equating, in terms of the risk transferred to the *navicularius*, the regime that governed goods *signatae* that were subject to a *receptum* with those transported in bulk (which remained less costly to ship). This advantage may have resulted in a more frequent recourse to this sort of transport, which is known to have become more popular during the first century BC.⁴⁵ However, the fact that the carrier, both under the *receptum* and when conducting transport in bulk, was now burdened by the considerable risks associated with *vis maior*, compelled the praetor to mitigate this responsibility by accepting, only a few decades after the time of Alfenus Varus, an *exceptio* that could be pleaded in connection with contracts guaranteed by *receptum* and which the jurist Labeo considered to be 'not inequitable'.⁴⁶

This explanation also permits us to assume that the unlimited liability that should have resulted from the automatic application of the principles governing the handling of things identified by *genus* was excluded – even in the case of transport in bulk. In fact, if the *nauta* who had undertaken the *receptum* and therefore bound themselves *salvas merces in portum perducere* (in return for a higher freight) could have been exempted from the risks of shipwreck and piracy, but not from other perils falling under so-called *casus minores* (that is, for example, *incendium*, *iactus mercium*, *ictus fulminis*, *mortes servorum*, *latronum hostiumve incursus*, *fugae servorum*, *ruina*, *rapinae*, *tumultus*, *animalium casus mortisque* and so forth) – which would still have justified the *receptum*⁴⁷ – it follows that, even before the *exceptio labeoniana*, a subjective responsibility limited only to *culpa* had been recognised in all ordinary cases of *locatio conductio* concerning transport for *navicularii* who did not demand a higher freight. This recognition would have fitted well with a

competitive and consolidated maritime practice that was adapted to conditions in which a ship could disappear along with its entire cargo and crew. Certainly, in the case of a bulk transport interrupted by *vis piratarum* or *naufragium*, nothing could be attributed to Saufeius that constituted a violation of the regular responsibility to furnish *diligentia*.

For this reason, the *ceteri* had no other choice than to try to advance – in the words of the request to Alfenus as it has been (rather unhappily) reported in the text of the Digest⁴⁸ – a desperate attempt to make out a breach of contract for ‘diversion from the planned route’.⁴⁹ The merchants, claiming therefore to have been disadvantaged, were aiming not just to obtain a share of the quantity of grain that had actually been returned, but at the full recovery of their respective consignments on account of unequal treatment. The alternative proposed by Alfenus was either an *actio furti* in case of transport of identifiable goods or its exclusion in the event of bulk transport, due to the *mutatio domini*. On the facts, this excluded Saufeius from liability for *furtum*, *culpa*, or from any allegation of unequal treatment, ‘since he had to return it to somebody first’.

Altogether, it is apparent that the Roman jurists, when confronted by the customs that were widely diffused in Mediterranean Hellenistic practice among merchants of various nationalities, who would come to be known at least from the Augustan age as *ναυλωτικάί* or *ναυλωσεις*, tried to frame them – as in the case of maritime loans or general average – using the Roman legal instruments that were known and available to them.⁵⁰ In the case of the lease of an entire ship (*locatio/conductio per aversionem*), either for a certain time period or for a journey (which was the simplest and easiest way to solve the problem of transporting goods when a suitable means of transport was lacking); or in which space was hired for the stowage of goods on board a vessel with a predetermined destination (*locatio rei*); the merchant was designed as the *locator*, who assumed the risk of loss or damage to the goods, and the *nauta* as the *conductor*, having been employed by the merchant. The same was true if several merchants had joined together to hire a single ship or distinct spaces, occupied by marked goods, with the intention that it should follow a predetermined route either with a single stopover or multiple landings. However, if the merchandise had not been marked upon loading and was to be transported in bulk *ad onus vehendum* – thus providing the *nauta* with greater autonomy, at least at that early stage of Roman transport – it would have travelled at the risk of the *nauta*, who quite naturally would have been rather reluctant to accept it.

With the recognition of the *receptum*, Roman carriers would have been placed on a par with foreigners, bearing the risk for goods for which a higher freight had been paid and which would necessarily have to be marked to identify them. However, the increase in the responsibility of Roman *nautae*, both for marked goods on account of the *receptum* and for unmarked goods on account of the *mutatio domini*, would have led at first to the recognition of the exclusion of liability for *force majeure* in relation to bulk goods. This accorded with Mediterranean practice, which had for some time conceived of the contract of transport as a ‘μίσθωσις’

and, in particular, as an ‘ἐργολαβία’.⁵¹ In that sort of contract, the *nauta* presented themselves as the *conductor*, who took up the performance of a task (*opus*) that obliged them to answer only if there had been a specific incident while the goods were in their custody or if a lack of diligence could be specifically attributed to them (though not in the case of *force majeure*, where responsibility could only be assumed by the inclusion of an explicit clause, as in the case of the *receptum*).⁵²

Finally, the *exceptio labeoniana* also recognised that *navicularii* who entered into a *receptum* could be exempted from shipwreck and attacks by pirates, though the clause *receptum salvam fore* continued to provide protection to merchants for losses caused by minor perils (*casus minores*): a point of no small significance.

Without a *receptum*, therefore, and whether the goods were marked or unmarked, all merchandise now travelled at the merchant’s risk, as was already the case in the Hellenistic practice of *annona* transport, where the responsibility of the carrier for river transport had its contractual, non-legal basis in Graeco-Egyptian law. As A Cenderelli persuasively argued in contrast to AJM Meyer-Termeer,⁵³ the repeated inclusion of express clauses of guarantee in nautical contracts (ναυλωτικαὶ συγγραφαί) by consignors, cannot be explained, as Meyer-Termeer believed, by an attempt to make the carrier more attentive towards the custody of the cargo and to establish proof of the obligation to this effect; but rather by the fact that the regime of river transport in Egypt did not automatically include absolute or unlimited responsibility in relation to the ship or goods respectively and was therefore subject to agreement in return for a higher freight, as was true of the Roman regime at the end of the Republican age.

The progressive and natural juxtaposition of Roman with Hellenistic maritime practices might have been cultivated by specific contacts made for this purpose. It has been suggested, for example, that the visit to Egypt by several Romans, such as Lucius Mummius in 112 BC, was carried out precisely to learn about methods of advanced agricultural administration, the transport of grain along the Nile to Alexandria, Ptolemaic trade and so forth, aspects of which later spread westward.⁵⁴

In the Roman world, these practices informed, for example, the method by which merchandise was embarked, supported by the *locatio mercis vehendae*, attested to by witnesses, but recorded *ad probationem tantum* by a probationary act, which could have taken the form of a *testatio* (that is, a kind of ceremony before witnesses). The creation by the *nauta* and their subordinates of various kinds of χειρέμβολα (on pozzolana, lead, clay, wood and so forth) in connection with the receipt, stowage and custody of goods was aimed first at avoiding the risks implicit in bulk transport and then toward identification of merchandise; but it no longer gave effect to the transfer of the risk, which the *nauta* could now voluntarily assume by entering into a *receptum*. Hence the preparation of three lists to accompany the goods: one for the merchant, another for the *nauta* and the last for the recipient.⁵⁵

In fact, the control of the goods to be handed over to the recipient, identified by the marks and verified on arrival, by issuing a receipt, would have been greatly facilitated by the use of written documents.⁵⁶ This mercantile practice

had already carried on for some time in Egypt and elsewhere across the Mediterranean, where transport documents were used to ensure the correct identification of merchandise, its quality and quantity and to set out the various standard measures (such as the *σηκῶματα*, or *mensae ponderariae*) that were employed to check volume and weight.⁵⁷ These controls were performed both at the time of boarding (*παράδοσις*), with the delivery of a perforated *tessera* hung on a special instrument, and at the time of unloading, when the return of the *tessera* enabled the continuous monitoring of the handling of the goods during weighing (*ζυγοστασία*) and storage.⁵⁸ In addition, the *δείγματα*⁵⁹ was indispensable not only for sales by sample, but also in the documentation concerning bulk transport for the verification of the quality of the property that was returned. Certainly, the use of *δείγματα*,⁶⁰ archaeological examples of which have been found increasingly in the commercial environment of ancient ports, lent itself well to the practice of conducting sales by sample, as it enabled the costs associated with the unloading of goods and customs procedures to be postponed until the sale of the merchandise was assured (which was symbolised by the delivery of the sealed sample in advance).

A sample could also travel under seal in the hands of a supervisor (*ἐπίπλοος*).⁶¹ This was done to ensure the quality of the goods following loading, navigation and unloading, and to reduce the chance of disputes arising upon arrival (that is, when the goods were unsealed) by checking for damage to the merchandise or for evidence of fraud. In the end, a sample, in the case of the bulk transport of low-quality goods (excluding, therefore, products that, on account of their own particular specificity, could only be returned *in specie*) was perfectly adequate for the purpose of verifying the return of quantities of goods of the same kind belonging to different carriers. These goods were carried in bulk, avoiding the waste of time and effort associated with the emptying of the hold for the return of merchandise that, perhaps, had been placed under many other goods in the bottom of the hull of a large ship. For quality control in the case of liquids, it was necessary to take the liquid from the transport containers, barrels, amphorae or *dolia* and then compare it to the unsealed sample. For this purpose, terracotta or bronze 'pipettes', which have been frequently found at shipwreck sites, were used. These were perforated at the bottom and worked by submerging the lower end of the vessel to enable the syphoning of the liquid from the amphorae, *dolia* or barrels through a hole at the other end of the pipe for comparison with the contents of the *δείγμα*.⁶²

There are now many small containers known with traces of writing, which come from commercial and port environments, and which may have been *δείγματα*. Of course, not all of them were used for the same purpose. One of the first to be identified⁶³ was connected with a public grain transport dated 1 November, 2 BC,⁶⁴ which consisted of two different vessels sailing in convoy with one or two *δείγματα*, though the consignment itself was considered homogeneous and unitary. The samples were sealed by the two pilots and accompanied by two legionary *ἐπίπλοοι*, who were entrusted with the supervision of an identical quantity of wheat (that is, 433 ¼ *artabae* each, in addition to a supplement of half

an *artaba* for each supervisor, perhaps as scrap). But why, given that there were two different vessels with two pilots and two supervisors entrusted with identical quantities, would the fiscal grain be transported in common with one or two samples for both?

One possible explanation is that the two hulls were not of equal size. One was smaller, loaded at most up to the parapet (. . . ἐῖς παράφραγμα), that is, up to the ridge of the side, while the other was of greater capacity and was therefore capable of containing the rest of the grain, including the supplement.⁶⁵ In this case, by sailing in convoy in the calm waters of a great river, it was possible to create a δεῖγμα, and perhaps even a duplicate for safety, which mentioned the total burden of both cargoes totaling 866 ½ *artabae*. This mention would have been completely unjustified if there had been two separate transports that were not considered as a unit. In practice, it seems that, having loaded the smaller of the two vessels with half the grain and assigned it to a supervisor, the prudent approach was to load the surplus onto another boat of greater capacity. This vessel carried an identical quantity (besides the supplement), which explains the existence of one or two δεῖγματα, each sealed by the two pilots, entrusted to the custody of the two ἐπίπλοοι, and loaded into two different ships.

It is likely that such practices, which were certainly also used in the private Hellenistic trade of goods transported in bulk, both in connection with ships carrying the loads of several merchants with δεῖγματα, or even, as we have seen, several ships with one or more δεῖγματα, gave rise to the Roman practice of using sample jars. These are attested to by archaeological finds such as those discovered at Pompeii, which usually reveal the nature and content of the *exemplar*, the recipient, the carrier and sometimes even the means of transport.⁶⁶ It is impossible, however, to infer from these finds whether the transport to which they were connected was in bulk (particularly of wheat), though neither can this be excluded. Since samples of wheat were intended for the use of a specific shipper, there was no reason to mention other merchants who might possibly have been loading the same products in bulk onto the same ship. It was only the shared responsibility of the pilots and overseers of a state cargo embarked on two ships that, since they were considered as a unit, led to the double-mention in SB VI 9223. The use of samples was motivated not by legal formality, but practical necessity, which leads us to add another text to the two short Pompeian inscriptions reported above that have been the object of intense scholarly examination: *CIL* IV 9591.⁶⁷ However, even this *exemplar*, although it presents a text rich in details not reported in other samples, does not clarify whether it was accompanying a bulk transport of merchandise belonging to different *vectores*. Indeed, it has been noted that ‘from these specimens it can be deduced that many small anepigraphic containers (*amphorae* or jars) may have been *deigmata*’, without it being possible to work out the precise use for which the container was intended.⁶⁸

For this reason, samples have tended to be divided into two basic categories: the first of which pertains to ‘accompanying samples’,⁶⁹ which ensured that a load was not adulterated during transport and that the product was identical to the

one handed over on departure. These control samples are best known from, for example, the leather bag of the pilot Chaeremone (which briefly stated the nature of the product, the carrier, the place of departure and the destination, but which lacked any other information), and especially for the transport of fiscal wheat or barley on the Nile.⁷⁰ Certainly, these samples were also employed in the trade between private individuals of dry products and liquids and, above all, for the transport of fungible goods belonging to multiple merchants carried in bulk within the same ship (that is, goods *eiusdem generis* to be returned on arrival).

The second category of *exemplaria* or δειγματα consists of 'tasting samples' – sent for publicity purposes – which were intended to advertise to potential buyers products that were stored at a distance or on a ship moored at the quay. The availability of these samples avoided the need to unload the merchandise and pay import duties before the transaction was complete. These numerous samples, like the one found in Arles that 'advertised' the Alban wine of a certain Valerius Proculus, available in 140 *dolia* from 60 containers (*sexsagenaria*) and to be placed on the market following the receipt of any orders, did not bear the name of the recipient in the dative.⁷¹ According to D Djaoui, it is also possible that the multiple Baetican oil jars found in the ports of Arles, as well as in Fos (in 14 specimens), in Rome, or in Ostia, were *exemplaria*⁷²; many for tasting, but others accompanying a cargo. Since these jars are often devoid of *tituli picti* or graffiti, it is difficult to identify their use with any degree of certainty.

It must also be kept in mind that the use of writing (for example, in tracing the recipient's signature, sometimes in the form of initials) does not always lend an insight into the use of the container, since the sample bearing the transporter's seal, now destroyed, could have been entrusted to a supervisor – a δειγμακαταγωγός in the context of fiscal transport – or to a private carrier. This remitted the sample to the personal custody of an ἐπίπλοος, who on arrival could have handed it over directly to the recipient for inspection, without any need for specific writing relating to other *vectores* or to the quantity, which in any case had to be determined in the accompanying documents, which, as has already been said, were drawn up in triplicate (so called 'delivery notes').⁷³

A rudimentary 'delivery note', graffitied with spelling errors and other infelicities, has been identified on a Lamboglia 2 amphora from the first century BC. The interior of the amphora, which was found in 2006 in the service canal of the island of St Francis of the Desert in Venice's northern lagoon, contained significant resinous traces.⁷⁴ In fact, at least five names (given in the genitive of possession),⁷⁵ which were evidently those of the recipients, are mentioned, each followed by the number of amphorae to be delivered and the respective weight of each batch.

The text stands as evidence for the transport on a single vessel of a consignment of goods shipped by several merchants, most likely '38, 35 tonnellate di carico, alle quali corrisponderebbero più di 30.000 litri di vino' acquired 'direttamente dal/dai produttori vinicoli, stabilendo il prezzo in base alla sua qualità e quantità, concordando inoltre che il prodotto venisse consegnato in anfore (e cioè vinificato)'.⁷⁶

However, in the absence of any indication that goods of different types were to be returned to different merchants, it must be assumed that the cargo was homogeneous (that is, all of the same quality) and differed only with respect to the number of amphorae and their collective weight.⁷⁷ The persistence of the quality of a cargo *eiusdem generis*, which may be treated as if it had been transported in bulk, even if the consignments were not actually mixed together, as in the case of ships with *dolia*⁷⁸ or amphorae containing wine that was of the same kind and, therefore, to be returned indiscriminately, could have been guaranteed by one or more accompanying samples.

Finally, once again, as in the case of the anepigraphic *exemplaria*, we can observe the unsystematic, occasional use to writing, insofar as poorly traced notes were graffitied on ordinary objects, by people whose profession compelled them to adapt to the indispensable requirements of written documentation.

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NOTES

1. Nicolet (1994), pp. X–XI. The original text (<http://www1.unipa.it/dipstdir/docenti.htm> (last accessed 30 September 2021)) was translated from Italian into English by Emilia Mataix Ferrándiz and Peter Candy, who offered me the opportunity to publish in this collection of studies. I am very grateful to them both for the opportunity offered to me and the effort made.
2. On the gap between Romans and Greeks, cf Russo (1996).
3. Purpura (2005), pp. 131–155.
4. Nicolet (1994), pp. XI–XII. On the absence of nautical maps, cf Arnaud (2005), pp. 46–60.
5. Purpura (1996), pp. 361–382.
6. Cf, for example, Tab. Pomp. 13 (= *TPSulp.* 78 r), in which it is declared that the surety, who was present, was illiterate ('... *coram ipso, quod is litteras nesciret* ...'). Purpura (1981–82), pp. 449–474. For a different interpretation, see Wolf (1979), pp. 33–36; Ankum (1981), pp. 156–173; Gofas (1994), pp. 260–266; with the contribution of Thür (1993), pp. 267–271; Jakab (2000), pp. 244–273 (with bibliography); and the chapter by P Candy later in this volume.
7. Purpura (1999), pp. 90–91.
8. Cavallo (1991), pp. 239 and 244.
9. Heilporn (2000), pp. 339–359, esp. p. 344; Drexhage and Ruffing (2008), pp. 153–165.
10. Cf D. 19.2.31 (*Alf. 5 dig. a Paulo epit.*) and the literature cited in Purpura (2014), pp. 138–143, on the well-known text about bulk transport from the end of the Roman Republic.
11. For the practice of transporting the goods of different merchants on a single ship, see, for example, D. 14.2.2 (Paul. 34 *ad ed.*): '*Cum in eadem nave varia mercium genera complures mercatores coegissent praetereaue multi vectores servi liberique in ea navigarent* ...' and D. 14.1.1.3 (Ulp. 28 *ad ed.*): '*Magistri autem imponuntur locandis navibus vel ad merces vel vectoribus conducendis* ...'.
12. At the Galata Museum of the Sea in Genoa, the date of the birth of the modern container is given as 1956.
13. These are the little-studied commercial lead labels: Rostovtzeff (1900), pp. 7–416; Lafaye (1919), p. 132; Salinas (1971) (brief notes in *Id.* (1871), extracted from the *Rivista Sicula*); *Id.* (1864); Pace (1958), pp. 418–420; Rocco (1971), pp. 27 and 36. It has been argued that a commercial lead label with the image of a boar in the recto and a *kantharos* on the verso was used to mark the exported merchandise of Verres, just

- as in the case of another governor, Q. Iunius Blesus, proconsul of Africa in AD 22–23: Manganaro (1988), p. 40 nt. 194; Purpura (1997), pp. 71–72. On the use of other containers, such as barrels, cf Marlière and Torres Costa (2007), pp. 85–106.
14. The Annaba wreck (Algeria) contained ‘African’ amphorae with lead strips wrapped around the handles, indicating that the contents came from various *officinae*. Lequément (1975), pp. 667–680, assumed that these workshops were African industries for the processing of fish. For a lead label from a facility dedicated to the preparation of *garum* at S. Vito Lo Capo (Trapani), see Oliveri (2015), p. 24.
 15. Hadjidaki (1996), pp. 561–593.
 16. According to Heilporn (2000) pp. 352–359, the ship from Ostia in P. Bingen 77, l. 10, was similar in size.
 17. Rougé (1964), pp. 61–75.
 18. Casson (1971), pp. 270–291.
 19. McCormick (2001), pp. 103–114; Beltrame (2012), p. 174.
 20. Pryor (1987), pp. 25–39; *Id.* (1989), pp. 271–280; Duncan-Jones (1990), pp. 7–29; Reynolds (1995), pp. 131–135; Horden and Purcell (2000); Arnaud (2005), p. 6.
 21. Nieto (1997), pp. 152–154.
 22. Nieto (1997), p. 154.
 23. Beltrame (2012), p. 176.
 24. Nieto (1997), p. 154; Arnaud (2005), p. 112. The cargo of the Augustan Sud Perduto 2 wreck has been attributed based on inscriptions to three different *vectores*: those of Port-Vendres II, a small boat sunk between AD 41/2 and 50 and to at least nine different shippers; Bernard (2007), pp. 461–471; Colls et al. (1977), p. 139; Arnaud (2012), p. 72.
 25. Arnaud (2005), pp. 5–46; 97–148; 231–232.
 26. Arnaud, (2005), p. 60.
 27. Arnaud, (2005), pp. 118–125.
 28. Heilporn, (2000), p. 342.
 29. Arnaud, (2005), pp. 107–125.
 30. France and Hesnard (1995), pp. 78–93; France (2001).
 31. Arnaud (2005), p. 115; *Id.* (2012), p. 64.
 32. *Mon. Eph.* § 30, ll. 71–72; Merola (2001), pp. 209–219; Purpura (2005), pp. 188–200.
 33. Bresson (2008), pp. 101–105; Arnaud. (2012), p. 65.
 34. For the translation, Candy (2021), p. 313:

‘In navem Saufeii cum complures frumentum confuderant, Saufeius uni ex his frumentum reddiderat de communi et navis perierat: quaesitum est, an ceteri pro sua parte frumenti cum nauta agere possunt oneris aversi actione. respondit rerum locatarum duo genera esse, ut aut idem redderetur (sicuti cum vestimenta fulloni curanda locarentur) aut eiusdem generis redderetur (veluti cum argentum pusulatum fabro daretur, ut vasa fierent, aut aurum, ut anuli): ex superiore causa rem domini manere, ex posteriore in creditum iri. idem iuris esse in deposito: nam si quis pecuniam numeratam ita deposuisset, ut neque clusam neque obsignatam traderet, sed adnumeraret, nihil aliud eum debere apud quem deposita esset, nisi tantumdem pecuniae solveret. secundum quae videri triticum factum Saufeii et recte datum. quod si separatim tabulis aut heronibus aut in alia culpa clusum uniuscuiusque triticum fuisset, ita ut internosci posset quid cuiusque esset, non potuisse nos permutationem facere, sed tum posse eum cuius fuisset triticum quod nauta solvisset vindicare. et ideo se improbare actiones oneris aversi: quia sive eius generis essent merces, quae nautae traderentur, ut continuo eius fierent

et mercator in creditum iret, non videretur onus esse aversum, quippe quod nautae fuisset: sive eadem res, quae tradita esset, reddi deberet, furti esse actionem locatori et ideo supervacuum esse iudicium oneris aversi. sed si ita datum esset, ut in simili re solvi possit, conductorem culpam dumtaxat debere (nam in re, quae utriusque causa contraheretur, culpam deberi) neque omnimodo culpam esse, quod uni reddidisset ex frumento, quoniam alicui primum reddere eum necesse fuisset, tametsi meliorem eius condicionem faceret quam ceterorum.'

35. Albanese (1971), pp. 88–100; De Marco (2003), pp. 143–149; Fiori (1999), 68–79; Cardilli (1995), pp. 261–276. For a recent treatment, see Longo (2019), pp. 226–229, esp. p. 229; Varvaro (2008), pp. 37–47 and 118–121 accepts the authenticity of the text and considers it in the context of the history of the category of *res quae pondere numero mensura constant*.
36. De Marco (2003), p. 141 nt. 4 believes that the close temporal relationship between the start of the unloading operations and the loss of the ship, as postulated by De Santis (1945), p. 94, on the basis of the tightness of the syntax in the expression '*reddiderat de communi et navis perierat*', indicates that upon arrival at the destination the unloading started with the return of the grain to one of the merchants, which was then immediately followed by the loss of the ship. Cf also, Benke (1987), p. 194 nt. 118. For the port itself, or rather the continuation of the journey to other ports, see Cardilli (1995), p. 271 nt. 104. On the other hand, the inquiry concerning the 'diversion of the cargo' suggests that not all the shippers had contracted with Saufeius to go to the same destination (cf De Marco (2003), p. 141 nt. 2). Albanese (1971), p. 89 doubts that the restitution could have taken place before departure.
37. On the *χειρέμβολον* and for the diverse theories that have been advanced, cf Purpura (2014), pp. 127–152, esp. pp. 133–143. On some seals from Pisa, cf Firmati (2014), pp. 383–391; and for a *signaculum* on Dressel 20 amphorae, cf Berni Millet and Pi (2013), pp. 167–190; and, generally, Mayer i Olivé (2005), pp. 223–239.
38. The assumption of the risk by the merchants, both at the time of Alfenus and Justinian, is also attested to in *Sen. Ben.* 7.10.2: '*nullam excusationem (maiores) receperunt . . .*' and in *Inst.* 3.14.2: '*Et is quidem qui mutuum accepit, si quolibet fortuito casu quod accipit amiserit, veluti incendio ruina naufragio aut latronum hostiumve incursu, nihilo minus obligatus permanet*'. '*Is quidem qui mutuum accepit*' does not refer to the borrower of the *pecunia traiectica*, nor to a *nauta*-carrier in bulk, *sine recepto*, after the time of Alfenus.
39. 'Dalla *locatio* di cose generiche derivava una responsabilità illimitata in caso di mancata consegna, come fin troppo chiaramente si evince dal testo in questione': De Robertis (1965), p. 101 nt. 35; p. 107 nt. 78; Cardilli (1995), pp. 263–276; Purpura, (2014), p. 141.
40. On the freedom from liability of the *nauta*, cf De Robertis (1965), p. 104 nt. 53: 'è certo che per il naufragium, anche nell'ipotesi più radicale di contratto garantito mediante *receptum*, soccorreva, fin dall'età di Labeone, apposita eccezione liberatoria: e siamo solo a qualche lustro di distanza da Alfeno Varo'. Fiori (1999), p. 76, hypothesises that the *complures* had proposed a legal reconstruction of the case that was not accepted in the response, by requesting a criminal action similar to the *actio furti* in the belief that they were the owners of the wheat: 'Se così fosse, potremmo immaginare che al contrario Alfeno, ritenendo che non vi fosse alcuna comunione tra i mercanti e che la proprietà del grano fosse passata a Saufeio, abbia risposto che non c'è stata alcuna *aversio*'.
41. Ménager (1960), p. 182.

42. D. 19.2.31 (Alf. 5 dig. a Paulo epit.): ‘*quoniam alicui primum reddere eum necesse fuisset . . .*’.
43. In this regard, there has been talk of a *locatio irregularis*. Fiori (1999), p. 80: ‘la giurisprudenza tardo-repubblicana non escludeva il ricorrere di una *locatio conductio* anche in quei negozi in cui si realizzava un trasferimento di proprietà’. Amirante, L. (1958), pp. 59–65, indicates ‘che il responso non distingue due tipi di locazione, ma soltanto due genera di *res locatae*. Sicché, l’eventuale passaggio del dominio è soltanto “una conseguenza della qualità della cosa consegnata” e non implica in alcun modo una distinzione nell’ambito del *locatum-conductum*’.
44. Cf the lucid summary of the issue by De Robertis (1952), pp. 5–13 and the reconstruction by Ménager (1960), pp. 177–182, esp. pp. 197–198. According to traditional opinion the *receptum* was introduced by the Praetor to increase the responsibility of the *nauta* for the goods of merchant *vectores*. Cf De Robertis, (1952), pp. 32–51, on the other hand, for whom the *receptum* reduced the *nauta*’s responsibility, since it would have made him responsible only for the goods for which the *receptum* had been paid (also, Rougé (1966), p. 384). Note, however, that according to the pre-existing rules governing contracts of letting and hiring the *res signatae*, for which a *receptum* had not been paid, could still have continued to be transported at the risk of the merchant *vector*, even if this were less convenient for the *nauta*, who neither received the revenue generated by a *receptum* nor enabled transport to take place without ‘breaking the cargo’. According to Gonzalez Romanillos (2004), pp. 277–286, the *receptum* was only designed to cover the theft of, and damage to, goods that were on board.
45. Purpura (2014), pp. 143–145.
46. D. 4.9.3.1 (Ulp. 14 ad ed.): ‘*Labeo scribit, si quid shipwreck aut per vim piratarum perierit, non esse iniquum exceptionem ei dari*’: on which, De Robertis (1952), p. 85, 102; *Id.* (1958), pp. 256–66; *Id.* (1965), p. 106; Cardilli (1995), p. 264.
47. De Robertis (1952), p. 86 and nt. 4.
48. Purpura (2014), pp. 139–140. Consequently, neither the untechnical expression ‘*actio oneris aversi*’, nor the references to a *confusio* (*frumentum confunderunt*) or *communio* (*reddere de communi*) among the *complures*, are interpolations or in any way indicate the use of language that ought not to be attributed to Alfenus: De Santis, (1945), pp. 98–114; De Sarlo (1939), p. 57; Metro (1995), pp. 210–216. For the inaccuracy of the *complures*: Wilinski (1960), pp. 353–359; De Robertis, (1965), p. 271 nt. 102; Fiori, (1991), p. 76.
49. The term ‘*aversio*’, therefore, ought not to be translated in its technical sense (that is, as ‘misappropriation of the cargo’, but in its main and non-technical sense, indicating that the carrier had followed an unsuitable route that favoured only one of the merchants (cf the chapter by É Jakab later in this volume). According to Biscardi (1975), pp. 267–268, the theories concerning the character of the mysterious *actio oneris aversi* can be substantially reduced to three (since the thesis that it was an special *actio furti*, recognised by the *ius civile*, is now abandoned): (a) the *actio oneris aversi* was a contractual action similar to the *actio locati*, which early fell into desuetude following the generalisation and development of its counterpart (Huvelin (1929), pp. 115–119); (b) the *actio oneris aversi* was the *actio locati* as applied to the case of *oneris aversio* (Beseler (1925), p. 467); (c) the *actio oneris aversi* was the praetorian *actio furti adversus nautas* by another name (Solazzi (1936), pp. 268–280). More recently, Bessenÿö (2001), pp. 23–55, has suggested that it was a *condictio triticaria*, on the basis that Saufeius’ relationship with the *complures* was configured as a *mutuum* (p. 54) and the view of Forschner (2011), pp. 1–23, who considers it an obsolete penal action. As De Marco

- (2003) has convincingly argued, however, the expression has not been properly understood, since the *complures* did not use it in a technical sense. The marked generality of the *quaestio* put to the jurist as a last resort by the dissatisfied merchants, who were accustomed to agree upon the routes to be followed for each navigation, as in the *syngraphe* of Lacritus and those recorded in the orations of pseudo-Demosthenes more generally (see, also, the famous Callimachus loan reported in D. 45.1.122.1 (Scaev. 28 dig.)), could suggest that they proposed a diversion, which ended up making the condition of one better than that of the others, who therefore aimed at the recovery of their respective shares. But Alfenus, right at the end of the *responsum* (*‘quoniam alicui primum rede eum necesse fuisset’*), excludes the admissibility of the proposed action – we remember – in relation to clearly identified goods, the misdirection of which could have led to *culpa (actio locati)* or even liability for *furtum (actio furti adversus nautas)*.
50. Vélissaropoulos (1980), pp. 268–311; Arnaud (2019), pp. 378–380. According to Arnaud, P. Koel. 3 147 (30/27 BC) is the oldest extant document, before P. Oxy XLV 3250 (AD 62) (on which, see the chapter by P Candy later in this volume), which Vélissaropoulos considered the most ancient. It should be noted that, according to Arnaud, in the period before the empire, small batches of goods could frequently be exempted from the use of written forms. In fact, it appears that no more than seven documents are known for the first three centuries of the empire.
 51. Vélissaropoulos (1980), pp. 282–300.
 52. Already, De Dominicis (1950), pp. 72–73; Purpura, (2014), p. 147; on *custodia, receptum*, and contractual liability, see Pelloso (2016), pp. 263–302.
 53. Cenderelli (1981), pp. 180–185. Cf also Jakab (2006), pp. 91–101; Purpura (2014), p. 147.
 54. Frösen (1980), p. 175.
 55. This person introduces themselves in an epistolary form in *TPSulp.* 80 (= Tab. Pomp. 47), which Bove interpreted as a *mandatum per epistulam* with χειρέμβολον (Bove (2006), pp. 21–25). On this question, however, see Purpura (2014), pp. 134–136 and 148–149. In the *annona* transport from Egypt they released ‘una lettera di carico con le ricevute richieste in tre copie. Una spetta allo stratego, una al sitologo del magazzino centrale e la terza per accompagnare il carico. Il sitologo invia il suo rapporto sul carico direttamente ad Alessandria’: Frösen (1980), pp. 171–176.
 56. P. Grenf. II 108 (AD 167), for example, has been interpreted as a receipt released by the recipient of the goods that also confirmed the regularity of the delivery (*‘quas has res intra scriptas meas sanas salvas recepisse scripsi’*); others, however, have considered it a copy of the agreement by which the *nauta* assumed the *periculum*, following entry into a *receptum*. De Robertis (1952), p. 157 nt. 1; Carvajal (2008), pp. 599–602.
 57. Geraci (2012), pp. 347–352.
 58. Minaud (2004), pp. 460–468; Purpura (2013), pp. 1–20; *Id.* (2014), p. 132.
 59. For Roman archaeological discoveries at the port of Marseille and Pompeii, see Liou and Morel (1977), pp. 189–197. The text on the little amphora found at Marseille reads as follows: ‘*Massil(iam) ou Massil(iensi) Rubrio / [..]sino / hord(ei) Cavar(um) / sicci mundi / i m(odii) mille (et quingenti)*’ (To Marseille, for Rubrius . . . sinus, 1,500 *modii* of barley (from the land of) the Cavares, dry, clean . . .). For the Alexandrian evidence, Guéraud (1933), pp. 62–64; *Id.* (1950), pp. 107–112, which, in addition to the previous find, has a leather bag with the inscription: ‘*Exemplar / hordei missi per Chae/remonam Anubionis / gubernatorem - ex no/mo memphite a <d> metropolin*’ (Barley sample sent with the pilot Chaeremone, son of Anubius, from the Memphite nome to the metropolis); on

which, see Geraci (2004), pp. 163–178. Concerning the different uses of δείγματα, in both Greek and Roman commerce, cf Rougé (1966), 419–421; D'Escurac (1976), pp. 231–239; Amelotti (1984), pp. 3009, 3010 nt. 4 and 3019; Gofas (1970); *Id.* (1993), pp. 233–245; Geraci (2012), pp. 155–181; *Id.* (2018), pp. 231–246. For papyri and other literature relating to trade between private individuals from the third century BC to the fifth/sixth century AD: P. Cairo Zen. III 59522; P. Cairo Zen. IV 59696; P. Col. I 51; P. Oxy. I 113; CTh. 14.4.9. A tablet from Herculaneum (TH 4) dated 2 September, AD 60, which contains the words ‘*signa salvo praestari*’ (relating to the integrity of the seals on wine containers in a *stabulum*) guaranteed – in a manner similar to the δείγματα *frumentari* – both the quantity and quality of wine made available for tasting (the *degustatio*), especially since this took place through sealed *ampullae* accompanying the *dolia* so as to avoid opening the container: Bramante (2014), p. 150; Vera (2006), pp. 309–315. The hole found in the lower part of the body of numerous amphorae, closed by a stopper, probably served to facilitate the *degustatio*, without breaking the seal of the amphora (cf Purpura (1975), p. 63, figure 8).

60. Gofas, (1993), pp. 139–145; *Id.* (1977), pp. 121–129.
61. P. Stras. 31, 6 (third century AD).
62. Djaoui (2015), pp. 207–214; Djaoui, Sieurac, and Genot (2015). A ritual sprinkler, operating on the same principle and dating to the eighth century BC, was found, together with other vases, under the Mugonia Gate in Rome (cf *Archeologia Viva*, 83, Sept/Oct. 2000, p. 47). For intentionally pierced amphorae, cf above, nt. 59.
63. SB VI 9223: ‘Νομοῦ ὄξ(υργγίτου) / Ἀμμώνιος Ἀμμωνίου κυβερνήτης πλοίου δημοσίου οὗ ἐπίσημον α.α.ς, δι’ ἐπιπλοῦς Λουκίου Οὐκλατίου στρατιώτου / λεγεῶνος κβ σπείρης β κεντερωνάας Μαξίμου Στολτίου, καὶ Ἑρμίας Πετάλου κυβερνή(της) ἐτέρου πλοίου / οὗ ἐπίσημον Αἴγυπτος, δι’ ἐπιπλοῦς Λουκίου Καστρικίου στρατιώτου λεγεῶνος κβ σπείρης δ’ κεντερωνάας / Τίτου Πομπηίου. Ἔστιν δ<ε>ἶγμα οὗ ἐμβεβλήμεθα ἀπὸ γενη(μάτων) κη (ἔτους) Καίσαρος, ὁ μὲν Ἀμμώνιος εἰς παράφραγμα / (πυροῦ) (ἀρταβῶν) υλγδ ὁ δὲ Ἑρμίας ὁμοίως (πυροῦ) (ἀρταβῶν) υλγδ (γίγονται) αἱ ἐμβεβλημένα δια Λεωνίδου καὶ Ἀπολλωνίου σιτολ(όγων) ἀπηλιώ(του) / μερίδος κάτω<<ι>> τοπαρχ(ίας) (πυροῦ) (ἀρτάβαι) ὠξςL καὶ προσμεμετρήμεθα ταῖς ἑκατὸν ἀρτάβ(αις) (πυροῦ ἀρτάβης) (ἡμισυ), τὴν δὲ ἐμβολὴν πεποι- / ἡμεθα ἀπὸ β τοῦ Ἀθῦρ ἕως δ τοῦ αὐ(τοῦ) μηνός καὶ συνεσφραγίσμεθα τῇ ἀμφο(τέρων) σφραγίδι, τοῦ μὲν Ἀμμο(νίου) / ἦς <ε>ἰκὼν Ἀμμωνος, τοῦ δὲ Ἑρμίου ἦς <ε>ἰκὼν Ἀρποκράτης. (Ἔτους) κθ Καίσαρος Ἀθῦρ δ. (2^a mano) Ἑρμίας καὶ Ἀ<μ>μώνι<ο>ς ἐσφραγίσμ<ε>θ<α> τὰ δ<ε>ἶγματα. (Ἔτους) <κθ> Καίσαρος Ἀθῦρ ιθ’ (‘Del nomo Ossirinichite. Ammonios figlio di Ammonios, pilota di un’imbarcazione pubblica il cui emblema è A . . . sotto la scorta del sovrintendente (ἐπίπλοος, ‘sopraccarico’) Lucius Oclatius, soldato della XXII legione, 2a coorte, centuria di Maximus Stoltius, ed Hermias, figlio di Petalos, pilota di un’altra imbarcazione il cui emblema è l’Egitto, sotto la scorta del sovrintendente (ἐπίπλοος, ‘sopraccarico’) Lucius Castricius, soldato della XXII legione, 4a coorte, centuria di Titus Pompeius. Questo è il campione (δείγμα) del carico che abbiamo ricevuto in consegna dai raccolti dell’anno 28 di Cesare (Augusto): Ammonios fino al parapetto artabe di grano 433 e 1/4, ed Hermias egualmente artabe di grano 433 e 1/4, fanno in totale, caricate sotto la responsabilità di Leonidas e di Apollonios, sitologi della meris occidentale della toparchia inferiore, artabe di grano 866 e 1/2, e abbiamo aggiunto un supplemento di 1/2 artaba di grano ogni cento artabe. Abbiamo effettuato il carico dal 2 di Hathyr fino al 4 dello stesso mese e abbiamo apposto i nostri due rispettivi sigilli (. . . συνεσφραγίσμεθα τῇ ἀμφο(τέρων) σφραγίδι . . .), quello di Ammonios il cui

marchio è un'immagine d'Ammon e quello di Hermias la cui impronta è una figura di Arpocrate. L'anno 29 di Cesare (Augusto), 4 di Hathyr (1 novembre 2 a.C.). [2a mano]: Io Hermias e io Ammonios abbiamo sigillato i campioni. L'anno 29 di Cesare (Augusto), 19 di Hathyr (16 novembre 2 a.C.)' (translated into Italian by Geraci (2012), p. 355). Guéraud (1950), p. 111, correctly notes that 'le transport est effectué par deux barques jumelles: il faut concevoir les deux quantités de blé, non pas comme deux cargaisons qui se trouvent être égales, mais comme les deux moitiés d'une cargaison unique et homogène: c'est pour cela que leur égalité est poussée jusqu'au 1/4 d'artabe, que le deigma se réfère indifféremment aux deux bateaux, et que l'ipographe est au nom des deux kybernatai. Tout ceci n'exclut d'ailleurs pas qu'il ait pu exister un second vase semblable au nôtre, de sorte que chaque bateau ait eu le sien. La chose est même vraisemblable si j'ai correctement rétabli le texte fautif de la ligne 10. Mais les choses sont faites de telle manière qu'un seul vase puisse, au besoin, faire foi pour toute la cargaison des deux bateaux'. Unfortunately, the uncertainty of the reading of l. 10 (see Guéraud, p. 114) cannot be resolved with reference to the image presented in Guéraud's publication, which is compounded by the difficulty of checking the document that belongs to the Cairo Museum (no. 88756). It seems, however, that the considerations at p. 114 are well-founded and therefore that two separate sample jars were prepared for reasons of safety for each boat, while the loads in the two hulls were considered a homogeneous unit. Moreover, the papyri show that even for a single boat, several sample jars could be prepared: H. Zilliacus (1939), pp. 62, ll. 13–14 and 32–34; with the observations of Guéraud, (1950), pp. 108 and 114.

64. For an accurate list of shipwrecks with archaeologically verifiable cargoes of cereals, see Salido Dominguez (2013), pp. 139–177.
65. In the Hellenistic age, these were typically small river boats (250, 300, 700 *artabae*). Large boats could have exceeded 10,000 *artabae* and even as much as 18,000 *artabae*: Hauben (1997), pp. 437. For maritime vessels of the second century AD, P. Bingen 77 indicates an increase in tonnage, though the average remains less than 2,500 *artabae*, apart from a hull of 22,500 and another of 7,000 *artabae*. See above, nt. 9.
66. *Notizie degli Scavi di Antichità* (1946), p. 110; CIL IV 5894 with *Add.*, p. 725: 'Ante (misum) [e]xemplar tritici / in nave C. Senti Omeri; / Ti Claudi Orpei / vect(oris)' (Wheat sample (sent) in the ship of Gaius Senti Homer, of the carrier Titus Claudius Orpheus) and Inv. 12316: 'Exemplar tritici / Plutioni Calventi C(ai) ser(vo)' (Wheat sample (sent) to Plutio, slave of Calventius Caius); on which, Varone (2005), pp. 105–106.
67. CIL IV 9591: 'Ante exemplar / tr(itici) m(odiorum) X̄VCC (quīndecim milium ducentorum) / in n(ave) cumba amp(horarum) MDC (mille sescentarum) tutela Iouis et / Iuno(nis) parasemi Victoria P. Pompili / Saturi mag(ister) M. Lartidius Vitalis domo Clupeis. (vacat) Vect(ura) Ostis a(. . .) IIC- (duobus centesimis) sōl(ven)do / [in margine] Gratis m(odii) CC (ducenti) / S(ine) F(raude) pr(idie) Idus octobr(es)' (Sample preceding 15,200 *modii* of wheat transported on the cargo ship (*cumba*) under the protection of Jupiter and Juno with the insignia of Victory owned by Publius Pompilius Satorus. Captain of the ship Marcus Lartidius Vitalis, originally from Clupea. (*vacat*) a 2 per cent transport fee to be paid at Ostia. (In the margin) 200 free *modii*. Without fraud, 14 October). So according to the recent revisions by Andreau, Rossi and Tchernia (2017), pp. 329–337; and *Id.* (2019), pp. 201–216. The *exemplar*, however, also has an inscription on its reverse (that is, 'b') side, which, like the inscription on side (a) is written in black (and not red) ink: Varone (2005), p. 104 nt. 133; *Id.* (2015), p. 20. Thus, in a third hand, 'Rustico ab . . .'. This was not taken into consideration, as it was thought to be

- connected to the domestic re-use of the container in Pompeii. However, there is no indication in the dative of the recipient, for whom the sample was made. Aubert (1999), p. 156, based on a version of the text that has now been revised by Andreau, Rossi, and Tchernia, read 'Rustico', though this interpretation does not take into account the inscription on side (b). 'Rustico' is indicated with the same black ink as the writing on side (a). I am therefore more inclined to accept a proposal by De Romanis to dissolve at l. 6 the *a*(. . .) in *a(ccipienda)* and the *S(ine) F(raude)* of Della Corte (1946), pp. 110–112 = AE 1951, 165, in favour of *S(olutio) F(acta)*, a choice followed by Varone, Mataix Ferrándiz, and Ligios. Suddenly the interpretation of the discovery could be rather different. Cf Marichal (1974–1975), pp. 524–527; Geraci (2012), p. 356; Zucca et al. (2016), pp. 304–307; Varone (2005), pp. 104–105; *Id.* (2015), pp. 20–21; Mataix Ferrándiz (2020), pp. 787–820; Ligios (2020).
68. Geraci (2012), p. 356 nt. 48; Andreau, Rossi, and Tchernia (2017), p. 11 nt. 40.
 69. So Andreau, Rossi and Tchernia (2017), p. 7.
 70. Guéraud (1933), pp. 62–64. For the text, see above at nt. 59. Guéraud observes that it is not a question of barley sent directly to Alexandria via the Memphite nome, but rather to the nome's metropolis. The vagueness of the expression *ex nomo memphite* could indicate that it was not possible to indicate exactly which of the various collections of villages was the origin, which in any case could have been useful when it came to re-using the same container for other consignments coming from other locations within the same nome.
 71. Djaoui and Tran (2014), pp. 1–16.
 72. Djaoui (2014), pp. 161–178. For Fos, see Marty (2002), p. 211; for Rome and Ostia, see Pavolini (2000), figures 34, 58, and 75.
 73. See above, nt. 55.
 74. Toniolo (2007), pp. 183–187; Cresci Marrone (2009), pp. 213–215; *Id.* (2011), pp. 212–214; *Id.* (2015), p. 302. I would like to thank PA Gianfrotta for reporting the discovery to me.
 75. Based on a recent rereading of the report by Cresci (2015), p. 56: 'Le particolarità paleografiche nella resa delle lettere appaiono cronologicamente compatibili all'uso primario del contenitore come veicolo di derrate e non a un suo successivo riutilizzo'. See, also, Toniolo (2007), p. 184.
 76. Toniolo (2007), p. 186.
 77. On the need to check the size and weight, see Geraci (2012), pp. 159–160; *Id.* (2018), p. 347.
 78. Purpura (2014), pp. 149–151.