

Misthoprasia: the Lease-sale of Ships

The term *misthoprasia*, whose literal meaning is “lease-sale”, occurs only in three contracts on papyrus from Roman Egypt, all three to do with ships¹. In this paper I try to answer two questions: What was the *misthoprasia* of ships in Roman Egypt, and why was it often used instead of straight sale or lease? How important might lease-sale have been in the financing of maritime commerce in the Graeco-Roman world? I start by reviewing the three contracts.

The earliest and most complex case is BGU IV 1157, a draft contract of 10 B.C. (d), which refers back to three earlier contracts of 26 (a + b) and 11 B.C. (c)². No translation has been published, so I offer my own.

“(ll. 1–4) To Prô[tarchos]

fr[om Ammônios son of . . . , (?) and from Pnepherôs and Piesiês sons of (?) P]iesiês. [Whereas, according to three contracts - - -

a) (ll. 4–7) according to the first one,] which happened [in the] fourth [year of Ca]esar, P[-achon/-auni] (May/June 26 B.C.), both Pnepherôs and Piesiês, and also Petearnphois son of Piesiês, [acknowledged that they had received (?)] from Ammônios one thousand and thirty-two silver drachmas at interest;

b) (ll. 7–9) according to the other one, Ammônios agreed that, on recovery of those (drachmas) and the interest, he would offer the three a contract (συγχώρησις) about *misthoprasia* of the wood-carrying(?) skiff belonging to him, thirty-five cubits <long> and eleven cubits wide (= 20 × 6 m);

c) (ll. 9–13) according to [[the other contract]] the third, which happened in the nineteenth year of Caesar, Epeiph (July 11 B.C.), that Ammônios, [[on recovery]] after receipt from Pnepherôs and Piesiês <sc. Petearnphois> of three hundred silver drachmas towards the aforesaid principal [[of their own free will]], {he has offered} has offered Petearnphois of their <sc. his> own free will a contract about the *misthoprasia* of the third part of the said skiff;

d) (ll. 13–26) we accordingly make a contract together on these terms: Ammônios <agrees> that, after recovery from Pnepherôs and Piesiês of the remaining {70} seven hundred and thirty-two silver drachmas of the loan and the interest which has accrued, {and} he will free them of responsibility for the said contracts of the loan and the *misthoprasia*, and that herewith he has leased to them, Pnepherôs and Piesiês, for a period of fifty years from Pharmouthi of the current twentieth year of Caesar (April 10 B.C.), the remaining [two] parts [of the same skiff - - -] to work it (?) [- - - -] the delivering(?), and to come to whatever agreement they want, and from then on [- -] neither of them, nor anyone else on his <their(?)> behalf, is to be liable about [- - -] and of the interest, and that he will guarantee the two parts of the skiff [- - - -] immediately, without delay, and without effect on the validity [of the contracted terms, to pay as penalty] the principal plus one half [and the damages and costs as if by legal judgement]”.

The text comes from a papyrus roll recycled to make cartonnage for a mummy deposited in the Abusir el-Melek cemetery, in the Heracleopolite nome. The roll had been used on both sides in a notary’s office,

¹ This paper has been written during my tenure of a Leverhulme Research Professorship. I am grateful to Joachim Hengstl for bibliographic advice. The most important discussions of *misthoprasia* are: F. Pringsheim, *The Greek Law of Sale*, Weimar 1950, 262–265; J. Vélissaropoulos, *Les naoclères grecs*, Geneva & Paris 1980, 273–279; G. Purpura, *Misthoprasiai ed exercitores*, Ann. Sem. Giur. Univ. Palermo 40 (1988) 39–61, who lists earlier opinions at 43 n. 11.

² Ed. W. Schubart (1903), without plate. Günther Poethke kindly supplied a photograph, but I am not capable of improving on Schubart’s autopsy. No corrections are listed in BL I–X, but III 57 notes Pringsheim’s suggested restoration in l. 5 of ὁμολογήκασιν ἀπέχειν, which I follow. In l. 2 of the preface I do not accept Schubart’s restored mention of Petearnphois, because I do not believe he was involved in the new contract (d); indeed in l. 6 he is given his patronymic as if this was the first mention of him. Schubart’s restoration of l. 4 is speculative.

or perhaps a notarial bank, to make rough drafts, some in two versions, of documents to be submitted to officials in Alexandria. This text, like most of them, is a *συγχώρησις* (“agreement”) contract, used exclusively by Alexandrians, addressed to *Prôtarchos* who headed the civic court³. It is difficult to interpret for three reasons: because of the lacunae at its beginning and end, because it is only a draft, still with uncorrected errors, and because the first three contracts are summarised very baldly. The basic story seems to be as follows. In the first contract (a), of May or June 26 B.C., Pnepherôs, Piesiês and Petearenphois jointly borrowed 1,032 dr. at interest from Ammônios, while in the second (b), implicitly of the same date, Ammônios in turn leased-sold to them, “on recovery” of the loan and the interest, a boat he owned, of about ten tonnes burden, designed for harvesting reeds and papyrus, or possibly to transport timber⁴. Details of the parties are lost in the initial lacuna. In general the contracts in this roll seem to have been drafted in Alexandria, and in order to use *συγχώρησις* contracts Ammônios must have been a citizen of Alexandria. Piesiês is a Delta name, so probably the three men were Egyptians from the Delta marshes; all three may have been brothers, sons of a Piesiês, or possibly Pnepherôs and Piesiês were brothers and Petearenphois the latter’s son⁵. In the third contract (c), fifteen years later in July 11 B.C., Ammônios leased-sold one third of the same boat to Petearenphois alone, “after receipt” from Pnepherôs and Piesiês (so it says, but see below) of 300 dr., almost a third of the principal of the original loan. Finally, in the new contract (d) being drafted in April 10 B.C., Ammônios acknowledges cancellation of the contracts of 26 B.C. with Pnepherôs and Piesiês (a–b), and agrees to lease (i.e. lease-sell?) them two thirds of the same boat for fifty years, “after recovery” of the remaining 732 dr. of the original loan, again with interest. The lacunose last lines contained some terms about use of the boat and repayment of a loan(?) and interest, and the guarantee and penalty clauses usual in transfers of property.

The first question is where the *misthoprasia*, whatever it was, occurred in these contracts. Pringsheim and Vélissaropoulos both thought it significant that contract (b) is phrased in future terms and does not include the guarantee clause (*βεβαίωσις*) normal in transfers of possession. Pringsheim thought *misthoprasia* was a sale presented as a lease, so he took contracts (c) and (d) to be the contracts of *misthoprasia*. He argued that in contract (b) of 26 B.C. Ammônios had merely agreed to lease-sell his boat to the three Egyptians at an indefinite future date, and had tied them to the deal with contract (a) for a fictive loan equivalent to the purchase price, but did not transfer ownership of it, or ‘very probably’ even possession, until they had paid him the price in two instalments in 11 and 10 B.C. Pringsheim was drawn to this interpretation by his general belief that Greek law did not recognise transfer of ownership without full payment⁶. Vélissaropoulos, on the other hand, argued that contract (b) granted the lessees-purchasers immediate use of the boat in return for accepting, in contract (a), a loan at interest to cover the purchase price, and that they later gained full ownership of the boat through contracts (c) and (d), the contracts of *misthoprasia*, when they had completed repayment of the loan and the interest on it. The situation would then resemble a modern hire-purchase arrangement.

Neither interpretation is entirely satisfactory. We have only a skeletal summary of the contents of contract (b), in which omission of the standard *βεβαίωσις* is unsurprising. The use here of the future infinitive (“he would offer”) does not mean that the contract of *misthoprasia* was not concluded then, for future infinitives are used in contract (d), as they often are in contracts of all types, with the sense that the terms shall take effect from now on⁷. Furthermore, contract (b) is referred to in contract (d) as “the said contract of the *misthoprasia*”, and it had to be cancelled. So contract (b) of 26 B.C. was itself a valid *misthoprasia*. This implies that the loan of contract (a) was fictive, as Pringsheim opined, for contract (b) was predicated on its — notional — repayment. But Pringsheim’s reconstruction, as Vélissaropoulos noted,

³ Still fundamental: W. Schubart, *Alexandrinische Urkunden aus der Zeit des Augustus*, APF 5 (1913) 35–131; cf. M.Chr. I pp. 65–67.

⁴ The boat is called a *σκαφή ξυληγός* (though *ξυλ-* is doubtfully read); cf. *Dig.* 32. 1. 55. 5 (Ulpian): in Egypt ‘wood’ includes reeds, papyrus and shrubs, and ships which collect these from marshes are called ‘naves ξυληγαί’. A skiff is an undecked oar-powered boat.

⁵ According to the *NB* and the Duke Data-Bank of Documentary Papyri, the name Pnepherôs is best attested in the Fayyum, and Haremêphis and variants (cognate to the so far unique Petearenphois) in Upper Egypt, but both also occur in Delta texts.

⁶ Pringsheim discussed *misthoprasia* under the rubric of “sale on credit” to show it was not sale on credit.

⁷ Contract (b) has aorist participle and future infinitive; contract (c) has perfect participle (after deleting aorist) and perfect infinitive; contract (d) has perfect participle and future – perfect – future infinitives. This syntactic variation is a matter of style, not substance. Cf. below on P.Lond. III 1164h.

is highly implausible: why would the purchasers have accepted liability for a fictive loan if they did not gain any legal right to use the boat? We should, incidentally, note that contract (d) talks only of “leasing”, not of *misthoprasia*, but evidently, since (d) was, like (c), replacing contract (b), this was just a slip by the drafter, and it too must be a contract of lease-sale⁸.

My own interpretation is as follows. In 26 B.C. the three Egyptians jointly agreed with Ammōnios a contract (b) of lease-sale (*misthoprasia*) of his boat, and, at the same time, a contract (a) of loan of 1,032 dr. The loan was fictive, for contract (b) was predicated on its repayment, but the lessors’ liability remained live in the form of contract (a)⁹. In 11 B.C. Petearnphois, for reasons unknown, split from the other two and separately agreed with Ammōnios a new contract (c) of lease-sale of a third of the boat, presumably cancelling his obligations under contracts (a) and (b) of 26 B.C. I assume that in his summary of contract (c) the drafter wrote Pnephērōs and Piesiēs by mistake in place of Petearnphois because their names were uppermost in his mind as the two involved in the new contract¹⁰. In 10 B.C., inevitably, the other two Egyptians had to agree with Ammōnios a new contract (d) of lease-sale of the remaining two-thirds of the boat, which specifically cancelled their obligations under contracts (a) and (b). Almost certainly the Egyptians had to accept new fictive loans alongside these new lease-sales, Petearnphois for 300 dr., Pnephērōs and Piesiēs for 732 dr. Although these sums are mentioned in the context of discharging the fictive loan of 26 B.C., contracts (c) and (d) are predicated on their — notional — repayment, and “the interest” referred to in the lacunose end of contract (d) must relate to a new loan, not the previous loan cancelled at the start of the contract. The lack of reference to any loan contracted by Petearnphois in 11 B.C. is simply because it was not necessary in the drafting of contract (d)¹¹.

The summaries of contracts (b) and (c) talk of a “contract of *misthoprasia*” as if it were a known type of contract whose terms did not need repeating, and even the full draft contract (d) gives few details, which are lacunose. Despite the lacunae, contract (d) clearly ends with guarantees appropriate to a transfer of ownership and grants the lessors-purchasers full use of the boat, as had, presumably, the full versions of contracts (b) and (c)¹². However, contract (b) of 26 B.C. had not extinguished all Ammōnios’ rights, for the changes of 11 and 10 B.C. required new contracts with him, not just agreement between the three buyers, and contract (d) also specifies a lease-period of fifty years, again probably copying the full versions of (b) and (c). Thus these contracts of *misthoprasia* gave the lessees-purchasers use, equivalent to ownership, of a boat for fifty years, theoretically in return for a lump payment which in fact they had not made. At the same time, the lessor-seller obliged them to subscribe to separate contracts for fictive loans equivalent to their notional payments for the boat. The contracts of *misthoprasia* focus on the transfer of the boat and say nothing about the obligations, financial or other, actually imposed on the lessees-purchasers, that is the practical reality of *misthoprasia*.

The second case of a contract of *misthoprasia* is P.Lond. III (p. 163) 1164h, of 15 April 212¹³. The surviving copy was pasted into a τόμος συγκολλήσιμος by the notarial bank in Antinoopolis through which the down-payment was made¹⁴. In this self-styled contract of *misthoprasia* Pbēkis, a metropolite (presumably) of Panopolis, leased to Harmirumios alias Melas, a metropolite of Tentyra, his 400-artaba (12-tonne) Hellenic boat with all its fittings, which are carefully itemised, for sixty years at a rent (φόρος) of 8,000 dr. The boat had just been built, at Pbēkis’ expense, in a shipyard at Antinoopolis, where this lease-

⁸ It does not seem possible to read μεμισθωπεπρακέναι in place of μεμισθωκέναι in l. 17.

⁹ Other indications that the loan was fictive are its convenient but inexact division (300 + 732 dr.) in contracts (c) and (d), and the lack of specification of the rate or sum of the interest.

¹⁰ As Pringsheim noted (264 n. 6), the wording ‘and also Petearnphois’ (καὶ ἔτι ...) in the drafter’s summary of contract (a) already points to Petearnphois’ subsequently separate arrangement.

¹¹ If unpublished fragments of this roll remain, they may contain drafts of the new loan contracts of 11 and 10 B.C., and also of contract (c).

¹² Ll. 19–21; with καὶ ὅτι ἂν θέλωσι συντελεῖν, cf. P.Lond. III 1164h. 18: καὶ διοικεῖν καὶ ἐπιτελεῖν περὶ αὐτοῦ ὡς ἂν αἰρῶνται τρόπον.

¹³ Ed. F. G. Kenyon, H. I. Bell (1907); see BLI 285, IV 44, VII 89, VIII 185. Reprinted with corrections and translation by A. S. Hunt, C. C. Edgar, *Sel. Pap.* I (1932) no. 38; their translation is reprinted by A. C. Johnson, *Roman Egypt* (ed. T. Frank, *An Economic Survey of Ancient Rome* II; Baltimore 1936) 421–422, no. 269 (miscited as ‘1164b’).

¹⁴ A notarial bank could register contracts itself and send monthly summaries to the state registry office: see R. Bogaert, *Les opérations des banques de l’Égypte romaine*, *Anc. Soc.* 30 (2000) 135–269, at 258–262. Although, as Bogaert says, Ammōnios’ bank is the only known case to be specifically called ‘notarial’, his data show that other banks fulfilled this function.

sale was agreed. Harmirumios is said to have paid 6,000 dr. directly though the bank, and undertook to pay the remaining 2,000 dr. when he was in the Panopolite, when Pbêkis would give him the shipbuilder's receipt for payment, and the other "guarantees of prior ownership", and a receipt for the 2,000 dr. When this would happen is rather vague (next visit?, some time?). Meanwhile, Harmirumios and his agents were to take delivery of the boat, on the terms they 'shall possess and own the boat which has been leased to him according to *misthoprasia*, and shall manage and dispose of it in whatever way they choose without hindrance, and may also transfer the lease of it and levy freight-charges and collect all the proceeds from it, and may also take it apart and remodel it'¹⁵. In his subscript Pbêkis says he will give βεβαίωσις for the transfer, which means from now on, not at some future date¹⁶. Perhaps the 6,000 dr. was the cost of the boat paid to the Antinoopolite shipbuilder, and 8,000 dr., a nice round 20 dr. per art. tonnage, was its notional value. The price is called a "rent" (φόρος), and the remaining 2,000 dr. are called "revenues" (φόροι, an unusual plural), which raises the suspicion that Harmirumios was not actually making the payment as recorded in the contract. Note, lastly, what Harmirumios alias Melas was expected to do with the ship: sub-lease it or levy freight-charges (ναύλα) "and collect all the proceeds from it".

The third case is P.Oxy. XVII 2136, of 20 October 291¹⁷. In this very fragmentary document, Aurelius Nemesas of the Cynopolite nome, resident in Ptolemais Euergetis, leased-sold to two Oxyrhynchites his 70-artaba (2-tonne) Hellenic boat with its fittings for fifty years at a rent (φόρος) of 21,000 drachmas, which they are said to have paid on the spot. Nemesas declares that he will guarantee the Oxyrhynchites ownership and full use of the boat, specifically including rights to the "proceeds" (περιγενόμενα?) from it. Again the price, which is a nice round 300 dr. per art. tonnage, is called a "rent", which raises the suspicion that it had not actually been paid as described.

These three contracts are the only known cases of the use of the term *misthoprasia*, but before asking what it was, I add the evidence of the only certain contract from Roman Egypt for lease of a ship, and another fragmentary contract of lease or lease-sale of a boat¹⁸. The lease contract is P.Köln III 147, which is dateable to the reign of Augustus, and probably comes from the same context, if not the same archive, as BGU IV 1157, the Alexandrian contract of *misthoprasia* discussed above¹⁹. Only the end of the contract survives, which gives us only one side of the agreement, but, as the editor argued, it seems to be for the fixed-term lease of a ship. The contract is specifically called a lease (μίσθωσις), the extant part opens with a reference to "within the (set) time", and the lessee formally lists and acknowledges his responsibilities, which does not occur in the *misthoprasia* contracts. In the lessee's declaration, at least, there is no hint that his position was tantamount to ownership, or, for example, that he could sub-lease the ship; his role was limited to captaining and managing it. He is responsible for returning the ship in good condition "with no damage except wear and tear" to one of the harbours of Alexandria, but the lessor bears the risk of storm damage, harbour fires and seizure by enemies or pirates, which all, incidentally, point to a seagoing ship²⁰. If the lessee infringes the terms of the contract, he must pay the cost of any damage and "whatever I may owe for the shares of the freight charges (τὰ τῶν ναύλων μέρη)", plus one half as a penalty and another 700 drachmas²¹. From this I take it that the rent was a share in the operating profits of the ship.

¹⁵ Cf. *Dig.* 30. 24. 4 (Pomponius): a ship totally rebuilt, part by part, is still the same ship 'if it keeps the same keel' ('carina eadem manente').

¹⁶ Cf. J. Hengstl, ZRG 100 (1983) 565, correcting Vélissaropoulos (n. 1 above) 275.

¹⁷ Ed. A. S. Hunt (1927). No corrections are listed in BL I–X.

¹⁸ SB XIV 11552 (A.D. 221) is a contract to charter a ship with its crew for a specific round trip (ναύλωσις), not a contract to lease an empty ship; charter for a set ναύλον (freight-charge) was used instead of a freight contract (ναυλωτική) because the charterer was to accompany the trip and had not specified the freight in either direction. See n. 31 below on P.Lond. V 1714, a lease of A.D. 570.

¹⁹ Ed. R. Hübner (1980); cf. BL VIII 156; reprinted with English translation and comments by S. R. Llewelyn, R. A. Kearsley, *New Documents Illustrating Early Christianity* 6 (1992) 82–86 (no. 12). The papyrus seems to be a fair copy of first-person acknowledgement (ὁμολογία), not a συγχώρησις so Hübner is probably right that the text is not from the same roll as the BGU IV texts. However, Cornelia Römer tells me that it too is cartonnage, and was purchased from a dealer who sold other material apparently from Abusir el-Melek (and cf. BGU IV 1123 and 1125, other ὁμολογία contracts).

²⁰ The phrase τι βίαιον ἐκ θεοῦ ... κατὰ χ(ε)ιμῶνα denotes the violence of Poseidon (storms) or Zeus (lightning). The lessor is, implicitly, responsible for fires started aboard ship, say by a cooking accident.

²¹ Ναύλα, and hence μέρη, are mistranslated by Hübner as "Teilzahlungen der Schiffspachtsumme" (comparing SB XIV 11552, but cf. n. 18 above), and by Llewelyn and Kearsley as "the portions of the rent".

The last, fragmentary, contract is BGU IV 1179 descr., which Schubart described as the conclusion of a συγχώρησις for the sale of a boat for 300 dr., dated 25 March 13 B.C. However, the fuller description which Schubart later gave to Arangio Ruiz suggests that it was a contract of *misthoprasia*, or perhaps a straight lease²². The surviving portion begins with a reference to a skiff which one party may “sub-lease to others”, “and even ... [take apart?]”, and then to “the half part (μέρος)”. At the very end comes a fairly standard set of penalty clauses for a seller who does not hand over the contracted object, which is where 300 dr. occur, as the super-penalty. Caution is advisable pending proper publication of the text, but the point at which ‘the half part’ is mentioned suggests it was not a half share of the boat, but perhaps of the revenues to be earned from it.

So what was *misthoprasia*, and why was it used for boats alone? Its very name, “lease-sale”, implies it was a hybrid in practice or in legal theory. According to the majority view in the past, it was a sale disguised as a lease, for one of two possible reasons: either the ships ultimately belonged to the state and so could not legally be sold, or the seller wanted to retain the fiscal privileges granted to shippers and merchants contracted to the *annona*. Both reasons are spurious: private ownership of ships existed even in Ptolemaic Egypt, the small river boats in these contracts had nothing to do with the *annona*, and, as Arangio Ruiz remarked long ago, a contract called *misthoprasia* was not going to fool anyone²³. Alternatively, *misthoprasia* has been taken to be, as Preisigke put it, “Vermietung einer Sache auf sehr lange Zeit, sodaß die Vermietung einem Verkaufe gleichkommt”, “lease of an item for a very long time, so that the lease resembles a sale”²⁴. Vélissaropoulos gave this view a modernising conceptual gloss: *misthoprasia* was sale of the exploitation of a ship (“la mise en valeur”), but not its ownership, which was expressed as a long-term lease because by its end the ship would have rotted away and could not be returned²⁵. Purpura instead insisted that these contracts were long-term, not indefinite, and that P.Lond. III 1164h itemised the boat’s equipment as if its return was expected. He therefore suggested that if the boat sank within the period, it was treated as sold (ending the contract to the lessor’s loss), but if it survived, it was treated as leased and had to be returned. However, both Vélissaropoulos and Purpura assume that the lessees-purchasers normally paid the full price up front as the contracts assert, which leaves the puzzle of why, since outright sales of boats did occur in Roman Egypt, they accepted the obligations and restrictions of a *misthoprasia*²⁶.

In my view *misthoprasia* was the long-term lease of a boat in return for a share in the operating profits, as in the short-term lease P.Köln III 147. This fits the fact that all the lessees were small men who were going to exploit the ships to gain an income, not just use them to transport their own goods. It explains why the price of these ships is called a rent (φόρος), and in P.Lond. III 1164h even “revenues” (φόροι). The three contracts, however, present the arrangement as a sale, with full payment of the price, and do not specify the post-contract obligations of the lessees, because their primary legal function was to document the transfer of effective ownership, which required, as Pringsheim saw, an assertion that the price had been paid. P.Lond. III 1164h, incidentally, itemises the equipment to clarify what the buyers were getting with

²² V. Arangio Ruiz, *Rivista di papirologia giuridica per l’anno 1910*, BIDR 24 (1911) 204–276, at 275–276 (*Postilla*). Again, Günter Poethke kindly supplied a photograph, from which I can only confirm Schubart’s fuller description.

²³ This debate is summarised by A. J. M. Meyer-Termeer, *Die Haftung der Schiffer im griechischen und römischen Recht*, Zutphen 1978, 9–10 nn. 107–121; cf. Purpura (n. 1 above) 49–51, citing Arangio Ruiz. To proponents of state ownership (n. 112) add Pringsheim (n. 1 above), and R. Taubenschlag, *The Law of Greco-Roman Egypt in the Light of the Papyri*, 2nd ed., Warsaw 1955, 270–271. To proponents of annonal privileges (n. 114) add Hunt (P.Oxy. XVIII 2136 introd.), Johnson (n. 13 above), and Pringsheim again. There is still no evidence at all for the unlikely hypothesis of Ptolemaic privileges for all shipowners. Johnson’s ingenious alternative, that the buyers hoped, as nominal lessees, to evade any attempt to distrain on their boats, is countered by the *lex exercitoria* (see below on *Dig.* 14. 1. 1. 15).

²⁴ *Fachw.* (1915) 126, based on P.Lond. III 1164h; repeated in *WB* II (1927) 108, adding BGU IV 1157. Cf. Gaius, *Inst.* 3. 145: it can be arguable whether a contract is a sale or a lease, for instance if an object is leased in perpetuity. Followed by Hengstl (n. 16 above), and *Klauseln in hellenistischen Rechtsurkunden*, in: ed. B. Funck, *Hellenismus. Beiträge zur Erforschung von Akkulturation und politischer Ordnung in den Staaten des hellenistischen Zeitalters*, Tübingen 1996, 355–375, at 365.

²⁵ Vélissaropoulos (n. 1 above), with misleading comparison to modern “empty hull charter” (“l’affrètement coque-nue”); for one thing, as Purpura (n. 1 above) 48–49 noted, the boats came fully equipped.

²⁶ Two cases are known: P.Mert. I 19, of A.D. 156; W.Chr. 31 = P.Lond. II (p. 209) 317, purchase from a boatbuilder, of A.D. 173; cf. P.Mon. I 4 + 5 verso, of A.D. 581.

their newly built ship. In the contracts of 26, 11 and 10 B.C. the lessor had the lessees subscribe to contracts for fictive loans for the notional purchase price of the boat as an extra security, but in practice, if the mobile lessees had few or no landed assets, this was unlikely to prove of much practical use. In the *misthoprasia* of 212 I suspect that the bank noted the price as an as yet unexecuted credit to the account of the lessor and corresponding debit to the account of the lessee. The contracts of 26 and 11–10 B.C. may also have been made through a notarial bank, and perhaps it was often through banks that lessors kept track of their lessees, who needed, or were expected, to keep using the same bank to finance the running of the boat. The *misthoprasia* of 291 may or may not have been accompanied by a fictive loan or debit. In reality, the only hope for a disgruntled lessor was to recover the boat, which was probably possible in a Roman or provincial court from the *misthoprasia* contract alone, vague as it deliberately was.

We are left largely in the dark about the unwritten terms of *misthoprasia*, which doubtless varied from case to case. They must have covered division, recording and settlement of the expenses and revenues, and termination of the arrangement. Probably, as Purpura guessed and is specified in the short-term lease of P.Köln III 147, if the boat was lost by *force majeure*, the contract was ended and the lessor bore the loss. We might expect that the contract would expire, and the boat become the rent-free property of the lessors, at the end of the fifty- or sixty-year period, but the contract of 10 B.C., which revised an original contract of 26 B.C., specified a fresh lease-period of fifty years. Although a boat, if properly maintained, or virtually rebuilt as P.Lond. III 1164h envisages, will have lasted the course, very few lessors or lessees can have lived that long. In practice, I suspect, most *misthoprasia* agreements were ended by the lessees, or their heirs, handing the boat back to the lessor, because, for example, they did not wish to continue as shippers, or they wanted to acquire a new boat. The lessor had no real choice but to accept this.

More generally, *misthoprasia* must have offered both parties something which straight sale or lease did not. The lessor-seller, instead of receiving a lump price from a sale, or the statutory maximum 12% per annum interest on a cash loan to men wishing to acquire a boat, gained a long-term share in the operating profits of the boat, which must have been potentially more remunerative in order to offset the risks he bore of losing the ship through *force majeure*, and of fraud by the lessees. The lessees-purchasers presumably lacked the means to buy a boat themselves, so needed to lease²⁷. The difference between a *misthoprasia* and a short-term lease like P.Köln III 147 was the effective transfer of ownership. One gain to the lessor-seller was that the boat then ceased to count in his property assessment for taxation and liturgies. It enabled the lessees-purchasers, as owners, to raise cash loans for operating expenses, or perhaps even maritime loans, on the security of the boat²⁸. Most importantly, in the right circumstances, *misthoprasia* fostered a more stable long-term business relationship than a short-term lease. Leasing a boat, like other maritime deals, relied heavily on trust. The mobility of the parties to the three extant *misthoprasia* contracts is noteworthy: an Alexandrian and Delta residents at Alexandria; men from Panopolis and Tentyra at Antinoopolis, where the boat was built; a Cynopolite and two Oxyrhynchites at Ptolemais Euergetis, with a signatory from Leontopolis. The practical terms were agreed verbally, and only the transfer of ownership was properly documented in the so-called contracts of *misthoprasia*, that is only the aspect which affected relations with the state (taxation) and third parties (security for loans)²⁹.

Misthoprasia was a largely informal arrangement, heavily dependent on trust, between otherwise unrelated parties, through which richer men could make a direct but hands-off long-term investment in shipping, and poorer men could obtain substantial financial backing to establish themselves as independent shippers. How important was it in the financing of maritime commerce in the Graeco-Roman world³⁰? The only specific attestations of *misthoprasia* are the three from Roman Egypt, but they date right across the period, from 26 B.C. to A.D. 291. In addition we have one Augustan-period short-term lease of a ship,

²⁷ *Misthoprasia* did not offer them “insurance” against loss of the boat, because they could not recover its value; they were merely freed — if they survived — from paying “rent” on it after its loss.

²⁸ A verbally agreed ban on such borrowing could not have been enforced. Although this might have represented an extra element of risk for the lessor, if his lessees defaulted on other loans whose creditors claimed the boat, Roman law, would probably have granted him the status of preferred creditor; cf. n. 35 below.

²⁹ The same was probably true for short-term leases. There is no reason to suppose that the main text of P.Köln III 147 specified how “the shares of the freight charges” were to be calculated, recorded and paid.

³⁰ For an overview see D. Rathbone, *The financing of maritime commerce in the Roman empire, I–II AD*, in: ed. E. Lo Cascio, *Credito e moneta nel mondo romano* (forthcoming).

another Augustan *misthoprasia* or lease of a skiff, and one four-year lease of a Nile boat of A.D. 570³¹. For comparison, we have only two Roman-period sales of boats, of A.D. 156 and 173, plus one of 581. The number of Augustan contracts merely reflects the chance survival, as cartonnage in the Abusir el-Melek cemetery, of a group of documents of that period from Alexandria, the great centre for shipping and finance. Their existence implies that *misthoprasia* had Hellenistic roots³². Other possible evidence comes from the third century A.D. *Misthoprasia* agreements required careful accounts of running costs and income, and on rectos of letters from the Heroninos Archive we have two fragments of accounts which record the half-share of the costs of a ship's voyage³³. Philostratus' *Life of Apollonius of Tyana* has Apollonius recount that in his previous incarnation he was the poor captain of a seagoing Alexandrian ship, partnered with three apparently non-sailing "captains", whose finest deed was to evade Phoenician pirates who offered him ten times his share of the freight charge (ναύλον) for a rich cargo³⁴. The story presupposes an audience familiar with freight ships run by captains with sleeping partners, perhaps under a *misthoprasia* or lease agreement. In Ulpian's summary of the *lex exercitoria*, the rules of legal responsibility in shipping contracts, the *exercitor* ("entrepreneur") is defined as "the man to whom all payments and revenues accrue, whether he be the owner of the ship or has leased it from the owner for a lump sum (*aversio*) for a set period or in perpetuity"³⁵. This lessor who has, notionally, paid a lump sum to lease a ship and has the status of owner is precisely a lessor by *misthoprasia*. Ulpian's knowledge does not imply that Roman law had adopted *misthoprasia*, only that Roman businessmen and courts had become familiar with it. Probably it was used mainly in Greek-speaking contexts because users of Roman law could achieve the same result through the flexible Roman institution of *societas*, in which, incidentally, verbal agreement and personal trust were equally important components. We cannot quantify the use of *misthoprasia* in the Hellenistic and Roman East beyond saying that it has, perhaps fortuitously, more attestations in the Egyptian papyri than short-term leases and straight sales, and that it was common enough to be known to Roman jurists. We may also guess that there was more shipping and more use of *misthoprasia* in the Roman period. However, two qualitative aspects of *misthoprasia* deserve emphasis: first, that it was a long-term and risky investment for variable returns, and secondly that it occurred between strangers whose sole bond, apart from the contract, was trust. I also note that the existence of banks which could arrange and record fictive loans and payments may have facilitated recourse to *misthoprasia*. These are precious indications of a business culture which fits better with a "modernist" than a "primitivist" view of the economy of the Roman empire.

³¹ P.Lond. V 1714. Because no rent is mentioned and the terms include that the lessee must carry goods on demand for the lessor (and will live on the boat), it has been taken as a "service contract", but this owes much to presuppositions about Byzantine socio-economic conditions, and the terms make good sense as a lease for share in the profits; cf. A. Jördens, P.Heid. V (1990) p. 265.

³² Hengstl (n. 24 above) 365 suggests that the Pech Maho lead tablet of the mid-fifth century B.C. (SEG XLI 891) may be a *misthoprasia*. Interpretation of this text is highly controversial, but I think it is probably a straight purchase of a ship with payment in two instalments.

³³ P.Fay. 104 and SB VI 9365 (= P.Flor. III 335). Note that P.Flor. I 69, another document from the same milieu, is an account of wages in a shipyard. Did the Posidonios or Appianus estates build ships for exploitation through *misthoprasia*?

³⁴ Philostratus, *V. Apoll. Ty.* 3. 23–24. In the Loeb edition ναύλον is mistranslated as "freight"; the cargo in fact belonged to merchants, mentioned at the end.

³⁵ *Dig.* 14. 1. 1. 15: *exercitorem autem eum dicimus ad quem obventiones et reditus omnes perveniunt, sive si dominus navis sit sive a domino navem per aversionem conduxit vel ad tempus vel in perpetuum.* *Dig.* 42. 5. 26 (Paulus), cf. 42. 5. 34 (Marcianus), among rules about the confiscation of property: "He who has lent to build or fit out a ship, or indeed to buy one, is a preferred creditor" (*qui in navem exstruendam vel instruendam credidit vel etiam emendam privilegium habet*), could cover *misthoprasia*, but was probably generated by normal loans.