



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Εθνικόν και Καποδιστριακόν
Πανεπιστήμιον Αθηνών
ΤΜΗΜΑ ΟΙΚΟΝΟΜΙΚΩΝ ΕΠΙΣΤΗΜΩΝ

ΠΜΣ “Οικονομική Επιστήμη” (MPhil in Economics)

Course: Η Πολιτική Οικονομία του Finance

The Political Economy of Finance

Νίκος Στραβελάκης με Νίκο Θεοχαράκη

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Διάλεξη 4:

Προκλασικές θεωρίες για τον τόκο και το finance

Νίκος Θεοχαράκης

Η Βίβλος για τον τόκο

Η Βίβλος για τον τόκο

34 καὶ ἐὰν δανείζητε παρ' ὧν ἐλπίζετε ἀπολαβεῖν, ποία ὑμῖν χάρις ἐστί; καὶ γὰρ ἁμαρτωλοὶ ἁμαρτωλοῖς δανείζουσιν ἵνα ἀπολάβωσι τὰ ἴσα. 35 πλὴν ἀγαπάτε τοὺς ἐχθροὺς ὑμῶν καὶ ἀγαθοποιεῖτε καὶ δανείζετε μηδὲν ἀπελπίζοντες, καὶ ἔσται ὁ μισθὸς ὑμῶν πολὺς, καὶ ἔσεσθε υἱοὶ ὑψίστου, ὅτι αὐτὸς χρηστός ἐστιν ἐπὶ τοὺς ἀχαρίστους καὶ πονηροὺς.

κατὰ Λουκᾶν στ' 34-5

34 And if ye lend to them of whom ye hope to receive, what thank have ye? for sinners also lend to sinners, to receive as much again. 35 But love ye your enemies, and do good, and lend, hoping for nothing again; and your reward shall be great, and ye shall be the children of the Highest: for he is kind unto the unthankful and to the evil.

Luke 6:34-35

25 ἐὰν δὲ ἀργύριον ἐκδανείσης τῷ ἀδελφῷ τῷ πενιχρῷ παρὰ σοί, οὐκ ἔση αὐτὸν κατεπεύγων, οὐκ ἐπιθήσεις αὐτῷ τόκον.

Ἐξοδος κβ'

25 If thou lend money to any of my people that is poor by thee, thou shalt not be to him as an usurer, neither shalt thou lay upon him usury.

Exodus 22:25

Η Βίβλος για τον τόκο

Ψαλμός τῷ Δαβίδ. - ΚΥΡΙΕ, τίς παροικήσει ἐν τῷ σκηνώματί σου; ἢ τίς κατασκηνώσει ἐν ὄρει ἁγίῳ σου; 2 πορευόμενος ἄμωμος καὶ ἐργαζόμενος δικαιοσύνην, λαλῶν ἀλήθειαν ἐν καρδίᾳ αὐτοῦ, 3 ὃς οὐκ ἐδόλωσεν ἐν γλώσσει αὐτοῦ, οὐδὲ ἐποίησε τῷ πλησίον αὐτοῦ κακὸν καὶ ὄνειδισμὸν οὐκ ἔλαβεν ἐπὶ τοῖς ἔγγιστα αὐτοῦ. 4 ἐξουδένωται ἐνώπιον αὐτοῦ πονηρευόμενος, τοὺς δὲ φοβουμένους τὸν Κύριον δοξάζει· ὁ ὀμνύων τῷ πλησίον αὐτοῦ καὶ οὐκ ἀθετῶν· 5 τὸ ἀργύριον αὐτοῦ οὐκ ἔδωκεν ἐπὶ τόκῳ καὶ δῶρα ἐπ' ἀθώοις οὐκ ἔλαβεν. ὁ ποιῶν ταῦτα, οὐ σαλευθήσεται εἰς τὸν αἰῶνα

Ψαλμός 14

Lord, who shall abide in thy tabernacle? who shall dwell in thy holy hill? 2 He that walketh uprightly, and worketh righteousness, and speaketh the truth in his heart. 3 He that backbiteth not with his tongue, nor doeth evil to his neighbour, nor taketh up a reproach against his neighbour. 4 In whose eyes a vile person is contemned; but he honoureth them that fear the Lord. He that sweareth to his own hurt, and changeth not. 5 He that putteth not out his money to usury, nor taketh reward against the innocent. He that doeth these things shall never be moved.

Psalm 15

Η Βίβλος για τον τόκο

35 Ἐὰν δὲ πένηται ὁ ἀδελφός σου ὁ μετὰ σοῦ καὶ ἀδυνατήσῃ ταῖς χερσὶ παρὰ σοί, ἀντιλήψῃ αὐτοῦ ὡς προσηλύτου καὶ παροίκου καὶ ζήσεται ὁ ἀδελφός σου μετὰ σοῦ. 36 οὐ λήψῃ παρ' αὐτοῦ τόκον, οὐδὲ ἐπὶ πλήθει· καὶ φοβηθήσῃ τὸν Θεόν σου, ἐγὼ Κύριος, καὶ ζήσεται ὁ ἀδελφός σου μετὰ σοῦ. 37 τὸ ἀργύριόν σου οὐ δώσεις αὐτῷ ἐπὶ τόκῳ καὶ ἐπὶ πλεονασμῷ οὐ δώσεις αὐτῷ τὰ βρώματά σου.

Λευιτικὸν κε' 35-37

35 And if thy brother be waxen poor and fallen in decay with thee; then thou shalt relieve him: yea, though he be a stranger, or a sojourner; that he may live with thee. 36 Take thou no usury of him, or increase: but fear thy God; that thy brother may live with thee. 37 Thou shalt not give him thy money upon usury, nor lend him thy victuals for increase.

Leviticus 25:35-37

7 καὶ ἄνθρωπον οὐ μὴ καταδυναστεύσῃ, ἐνεχυρασμὸν ὀφείλοντος ἀποδώσει καὶ ἄρπαγμα οὐχ ἄρπᾶται, τὸν ἄρτον αὐτοῦ τῷ πεινῶντι δώσει καὶ γυμνὸν περιβαλεῖ 8 καὶ τὸ ἀργύριον αὐτοῦ ἐπὶ τόκῳ οὐ δώσει καὶ πλεονασμὸν οὐ λήψεται καὶ ἐξ ἀδικίας ἀποστρέψει τὴν χεῖρα αὐτοῦ, κρίμα δίκαιον ποιήσει ἀνὰ μέσον ἀνδρὸς καὶ ἀνὰ μέσον τοῦ πλησίον αὐτοῦ 9 καὶ τοῖς προστάγμασί μου πεπόρευται καὶ τὰ δικαιώματά μου πεφύλακται τοῦ ποιῆσαι αὐτά· δίκαιος οὗτός ἐστι, ζωῆ ζήσεται, λέγει Κύριος.

Ιεζεκιήλ ιη' 7-9

7 And hath not oppressed any, but hath restored to the debtor his pledge, hath spoiled none by violence, hath given his bread to the hungry, and hath covered the naked with a garment; 8 He that hath not given forth upon usury, neither hath taken any increase, that hath withdrawn his hand from iniquity, hath executed true judgment between man and man, 9 Hath walked in my statutes, and hath kept my judgments, to deal truly; he is just, he shall surely live, saith the Lord God.

Ezekiel 18:7-9

Η Βίβλος για τον τόκο

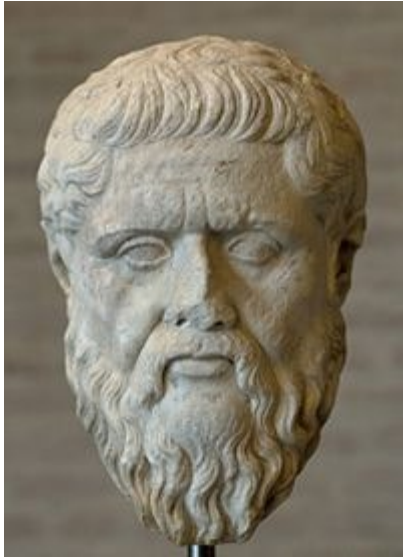
20 Οὐκ ἐκτοκιεῖς τῷ ἀδελφῷ σου τόκον ἀργυρίου καὶ τόκον βρωμάτων καὶ τόκον παντὸς πράγματος, οὐδ' ἐὰν ἐκδανείσης. 21 τῷ ἀλλοτρίῳ ἐκτοκιεῖς, τῷ δὲ ἀδελφῷ σου οὐκ ἐκτοκιεῖς, ἵνα εὐλογῆσῃ σε Κύριος ὁ Θεός σου ἐν πᾶσι τοῖς ἔργοις σου ἐπὶ τῆς γῆς, εἰς ἣν εἰσπορεύῃ ἐκεῖ κληρονομησαὶ αὐτήν.

Δευτερονόμιον κγ' 20-21

19 Thou shalt not lend upon usury to thy brother; usury of money, usury of victuals, usury of any thing that is lent upon usury: 20 Unto a stranger thou mayest lend upon usury; but unto thy brother thou shalt not lend upon usury: that the Lord thy God may bless thee in all that thou settest thine hand to in the land whither thou goest to possess it.

Deuteronomy 23: 19-20

Οι αρχαίοι Έλληνες για τον τόκο



Πλάτων
427-347 π.Χ.

Νόμοι V., 742c

Οι αρχαίοι Έλληνες για τον τόκο

PLATO

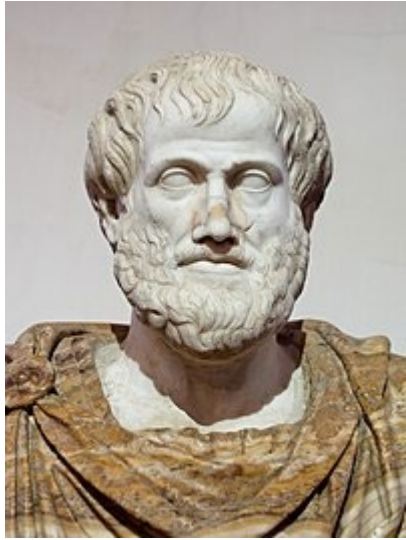
C
ιδιούμενος δ' ἂν τις φαίνηται, δημόσιόν τε γιγνέσθω καὶ ὁ
ξυνειδὼς καὶ μὴ φράζων ἀρᾷ καὶ ὀνειδεί μετὰ τοῦ ἀγαγόντος
ἔνοχος ἔστω, καὶ ζημίᾳ πρὸς τούτοις μὴ ἐλάττωνι τοῦ ξενικοῦ
κομισθέντος νομίσματος. γαμοῦντα δὲ καὶ ἐκδιδόντα μὴτ' οὖν
διδόναι μῆτε δέχεσθαι προῖκα τὸ παράπαν μῆδ' ἤντιν οὖν, μῆδὲ
νόμισμα παρακατατίθεσθαι ὅτῳ μὴ τις πιστεύει, μῆδὲ δανείζειν
ἐπὶ τόκῳ, ὡς ἔξδ' ἂν μὴ ἀποδιδόναι τὸ παράπαν τῷ δανεισαμένῳ
μῆτε τόκον μῆτε κεφάλαιον.

D
Ταῦτα δ' ὅτι βέλτιστά ἐστι πόλει ἐπιτηδεύματα ἐπιτηδεύειν, ὧδε
ἂν τις σκοπῶν ὀρθῶς ἂν αὐτὰ διακρίνοι, ἐπαναφέρων εἰς τὴν
ἀρχὴν αἰεὶ καὶ τὴν βούλησιν. ἔστι δὴ τοῦ νοῦν ἔχοντος
πολιτικοῦ βούλησις, φασί, οὐχ ἤνπερ ἂν οἱ πολλοὶ φαίεν, δεῖν
βούλεσθαι τὸν ἀγαθὸν νομοθέτην ὡς μεγίστην τε εἶναι τὴν
πόλιν ἢ νοῶν εὖ νομοθετοῖ καὶ ὅτι μάλιστα πλουσίαν,
κεκτημένην δ' αὖ χρυσία καὶ ἀργύρια καὶ κατὰ γῆν καὶ κατὰ
θάλατταν ἄρχουσαν ὅτι πλείστον προσθεῖεν δ' ἂν καὶ ὡς
ἀρίστην δεῖν βούλεσθαι τὴν πόλιν εἶναι καὶ ὡς
E
εὐδαιμονεστάτην τὸν γε ὀρθῶς νομοθετοῦντα. τούτων δὲ τὰ μὲν
δυνατὰ ἐστὶ γίγνεσθαι, τὰ δὲ οὐ δυνατὰ· τὰ μὲν οὖν δυνατὰ
βούλοισι' ἂν ὁ διακοσμῶν, τὰ δὲ μὴ δυνατὰ οὐτ' ἂν βούλοιο
ματαιὰς βουλήσεις οὐτ' ἂν ἐπιχειροῖ. σχεδὸν μὲν γὰρ
εὐδαιμόνας ἅμα καὶ ἀγαθοὺς ἀνάγκη γίγνεσθαι· τοῦτο μὲν οὖν

LAWS, BOOK V

equivalent in home coinage; but should anyone be found out
keeping it for himself, the money shall be confiscated, and the
man who is privy to it and fails to inform, together with the man
who has imported it, shall be liable to cursing and reproach and, in
addition, to a fine not less than the amount of the foreign money
brought in. In marrying or giving in marriage, no one shall give or
receive any dowry at all. No one shall deposit money with anyone
he does not trust, nor lend at interest, since it is permissible for the
borrower to refuse entirely to pay back either interest or principal.

That these are the best rules for a State to observe in practice, one
would perceive rightly if one viewed them in relation to the
primary intention. The intention of the judicious statesman is, we
say, not at all the intention which the majority would ascribe to
him; they would say that the good lawgiver should desire that the
State, for which he is benevolently legislating, should be as large
and as rich as possible, possessed of silver and gold, and bearing
rule over as many people as possible both by land and sea; and
they would add that he should desire the State to be as good and
as happy as possible, if he is a true legislator. Of these objects some
are possible of attainment, some impossible; such as are possible
the organiser of the State will desire; the impossible he will neither
vainly desire nor attempt. That happiness and goodness should go
together is well-nigh inevitable,¹ so he will desire the people to be
both good and



Αριστοτέλης
384-322 π.Χ.

Οι αρχαίοι Έλληνες για τον τόκο

ARISTOTLE

1258 a 35 τοῦ οἰκονόμου, ἔστι δ' ὡς οὐ, ἀλλὰ τῆς ὑπηρετικῆς. μάλιστα δέ, καθάπερ εἴρηται πρότερον, δεῖ φύσει τοῦτο ὑπάρχειν. φύσεως γάρ ἐστιν ἔργον τροφῆν τῷ γεννηθέντι παρέχειν· παντὶ γάρ, ἐξ οὗ γίνεται, τροφή τὸ λειπόμενον ἐστιν. διὸ κατὰ φύσιν ἐστὶν ἡ χρηματιστικὴ πᾶσιν ἀπὸ τῶν καρπῶν καὶ τῶν ζώων.

40 Διπλῆς δ' οὐσῆς αὐτῆς, ὥσπερ εἶπομεν, καὶ τῆς μὲν

1258 b καπηλικῆς τῆς δ' οἰκονομικῆς, καὶ ταύτης μὲν ἀναγκαίας καὶ ἐπαινουμένης, τῆς δὲ μεταβλητικῆς ψεγομένης δικαίως (οὐ γὰρ κατὰ φύσιν ἀλλ' ἀπ' ἀλλήλων ἐστίν), εὐλογώτατα μισεῖται ἡ ὀβολοστατικὴ διὰ τὸ ἀπ' αὐτοῦ τοῦ νομίσματος εἶναι τὴν κτήσιν καὶ οὐκ ἐφ' ὅπερ ἐπορίσθη· μεταβολῆς γὰρ ἐγένετο χάριν, ὃ δὲ τόκος αὐτὸ ποιεῖ πλέον (ὅθεν καὶ τοῦνομα τοῦτ' εἴληφεν· ὁμοία γὰρ τὰ τικτόμενα τοῖς γεννώσιν αὐτὰ ἐστίν, ὃ δὲ τόκος γίνεται νόμισμα ἐκ νομίσματος)· ὥστε καὶ μάλιστα παρὰ φύσιν οὗτος τῶν χρηματισμῶν ἐστίν.

10 IV. Ἐπεὶ δὲ τὰ πρὸς τὴν γνῶσιν διωρίκαμεν ἰκανῶς, τὰ πρὸς τὴν χρῆσιν δεῖ διελθεῖν· πάντα δὲ τὰ τοιαῦτα τὴν μὲν θεωρίαν ἐλεύθερον ἔχει, τὴν δ' ἐμπειρίαν ἀναγκαίαν. ἔστι δὲ τῆς χρηματιστικῆς μερὴ χρήσιμα τὸ περὶ τὰ κτήματα³ ἐμπειροῦν εἶναι, ποῖα λυσιτελέστατα καὶ ποῦ καὶ πῶς, οἷον ἵππων κτήσις ποῖα τις ἢ βοῶν ἢ προβάτων, ὁμοίως δὲ

POLITICS, I. IV.

in a way it is not, but is a matter for the subsidiary art. But best of all, as has been said before, this provision ought to be made in advance by nature. For it is the work of nature to supply nourishment for her offspring, since every creature has for nourishment the residue of the substance from which it springs.²

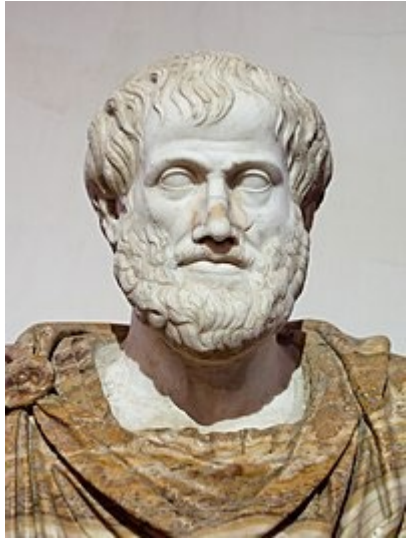
Hence the business of drawing provision from the fruits of the soil and from animals is natural to all.

23 But, as we said, this art is twofold, one branch being of the nature of trade while the other belongs to the household art; and the latter branch is necessary and in good esteem, but the branch connected with exchange is justly discredited (for it is not in accordance with nature, but involves men's taking things from one another). As this is so, usury is most reasonably hated, because its gain comes from money itself and not from that for the sake of which money was invented. For money was brought into existence for the purpose of exchange, but interest increases the amount of the money itself (and this is the actual origin of the Greek word: offspring resembles parent, and interest is money born of money); consequently this form of the business of getting wealth is of all forms the most contrary to nature.

1 IV. And since we have adequately defined the scientific side of the subject, we ought to discuss it from the point of view of practice; although, whereas the theory of such matters is a liberal study, the practical pursuit of them is narrowing. The practically useful branches of the art of wealth-getting are first, an expert knowledge of stock, what breeds are most profitable and in what localities and under what conditions, for instance what particular stock in

Trade justly disliked;
Usury unnatural.

Outline of practical
treatise on Trade:



Αριστοτέλης
384-322 π.Χ.

Risk-return
tradeoff

Οι αρχαίοι Έλληνες για τον τόκο

ARISTOTLE

1258 b 15 καὶ τῶν λοιπῶν ζῴων (δεῖ γὰρ ἔμπειρον εἶναι πρὸς ἄλληλά τε
τούτων τίνα λυσιτελέστατα, καὶ ποῖα ἐν ποίοις τόποις, ἄλλα
γὰρ ἐν ἄλλαις εὐθηνεῖ χώραις): εἶτα περὶ γεωργίας, καὶ ταύτης
ἤδη ψιλῆς τε καὶ πεφυτευμένης, καὶ μελιττουργίας, καὶ τῶν
20 ἄλλων ζῴων τῶν πλωτῶν ἢ πτηνῶν ἀφ' ὧν ἔστι τυγχάνειν
βοηθείας. τῆς μὲν οὖν οἰκειοτάτης χρηματιστικῆς ταῦτα μόρια
καὶ πρῶτα¹. τῆς δὲ μεταβλητικῆς μέγιστον μὲν ἐμπορία (καὶ
ταύτης μέρη τρία, ναυκληρία φορτηγία παράστασις· διαφέρει
25 δὲ τούτων ἕτερα ἐτέρων τῶν τὰ μὲν ἀσφαλέστερα εἶναι τὰ δὲ
πλείω πορίζειν τὴν ἐπικαρπίαν), δεύτερον δὲ τοκισμός, τρίτον δὲ
μισθαυρία (ταύτης δ' ἡ μὲν τῶν βαναύσων τεχνῶν,² ἡ δὲ τῶν
ἀτέχνων καὶ τῶ σώματι μόνῳ χρησίμων): τρίτον δὲ εἶδος
χρηματιστικῆς μεταξὺ ταύτης καὶ τῆς πρώτης (ἔχει γὰρ καὶ τῆς
30 κατὰ φύσιν τι μέρος καὶ τῆς μεταβλητικῆς), ὅσα³ ἀπὸ γῆς καὶ
τῶν ἀπὸ γῆς γινομένων ἀκάρπων μὲν χρησίμων δέ, οἷον
ὕλοτομία⁴ τε καὶ πᾶσα μεταλλευτική· αὕτη δὲ πολλὰ ἤδη
περιέλιφε γένη, πολλὰ γὰρ εἶδη τῶν ἐκ γῆς μεταλλευομένων
ἔστιν. εἰσὶ δὲ⁵ τεχνικώταται μὲν τῶν ἐργασιῶν ὅπου ἐλάχιστον
τῆς τύχης, βαναυσόταται δ' ἐν αἷς τὰ

POLITICS, I. IV.

horses or cattle or sheep, and similarly of the other animals also
(for the farmer must be an expert as to which of these animals are
most profitable compared with one another, and also as to what
breeds are most profitable on what sorts of land, since different
breeds thrive in different places); secondly, the subject of
agriculture, and this again is divided into corn-growing and fruit-
farming; also bee-keeping, and the breeding of the other creatures
2 finned and feathered which can be used to furnish supplies. These
then are the branches and primary parts of wealth-getting in the
most proper sense. Of the kind that deals with exchange, the
largest branch is commerce (which has three departments, ship-
owning, transport and marketing: these departments differ from
each other in the fact that some are safer and others carry larger
profits); the second branch is money-lending, and the third labour
for hire, one department of which is that of the mechanic^a arts and
the other that of unskilled labourers who are useful only for bodily
service. And there is a third form of wealth-getting that lies
between the latter and the one placed first, since it possesses an
element both of natural wealth-getting and of the sort that
employs exchange; it deals with all the commodities that are
obtained from the earth and from those fruitless but useful things
that come from the earth—examples are the felling of timber^b and
all sorts of mining; and of mining itself there are many classes,
3 since there are many sorts of metals obtained out of the earth.
The^c most scientific of these industries are those which involve the
smallest element of chance, the most mechanic those in which

its three branches.

Quarries and mines
an intermediate
class.

Οι αρχαίοι Έλληνες για τον τόκο



Δημοσθένης
384-322 π.Χ.

DEMOSTHENES

20 καὶ σχετλιάζοντος, ὃ ἄνδρες Ἀθηναῖοι, ἐπὶ τῇ τόλμῃ τοῦ Λάμπιδος, καὶ παρεχομένου πρὸς τὸν διαιτητὴν τὴν αὐτὴν μαρτυρίαν ἦν περὶ καὶ νῦν πρὸς ὑμᾶς παρέχομαι, τῶν ἐξ ἀρχῆς προσελθόντων αὐτῷ μεθ' ἡμῶν, ὅτε οὔτε τὸ χρυσίον ἔφη ἀπειληθέναι παρὰ τούτου οὔτε τὰ χρήματ' αὐτὸν ἐνθέσθαι εἰς τὴν ναῦν, οὕτως ὁ Λάμπις κατὰ κράτος ἐξελεγχόμενος τὰ ψευδῆ μαρτυρῶν καὶ ποιηρὸς ὢν, ὠμολόγει μὲν εἰρηκέναι ταῦτα πρὸς τοῦτον, οὐ μέντοι ἐντός γε ὧν εἶπεν αὐτοῦ.

Καί μοι ἀνάγνωθι ταύτην τὴν μαρτυρίαν.

ΜΑΡΤΥΡΙΑ

21 Ἀκούσας τοίνυν ἡμῶν, ὃ ἄνδρες Ἀθηναῖοι, ὁ Θεόδοτος πολλάκις, καὶ νομίσας τὸν Λάμπιν ψευδῆ μαρτυρεῖν, οὐκ ἀπέγνω τῆς δίκης, ἀλλ' ἀφήκεν ἡμᾶς εἰς τὸ δικαστήριον καταγνῶναι μὲν γὰρ οὐκ ἐβουλήθη διὰ τὸ οἰκείως ἔχειν Φορμίῳ τούτῳ, ὡς ἡμεῖς ὕστερον ἐπυθόμεθα, ἀπογνῶναι δὲ τῆς δίκης ὠκνεῖ, ἵνα μὴ ἐπιωρκήσκειν.

22 Ἐξ αὐτοῦ δὲ τοῦ πράγματος λογίσασθε, ὃ ἄνδρες δικασταί, παρ' ὑμῖν αὐτοῖς, ὁπόθεν ἔμελλεν οὗτος ἀποδώσειν τὸ χρυσίον. ἐνθένδε μὲν γὰρ ἐξέπλει οὐκ ἐνθέμενος εἰς τὴν ναῦν τὰ χρήματα καὶ ὑποθήκην οὐκ ἔχων, ἀλλ' ἐπὶ τοῖς ἐμοῖς χρήμασιν ἐπιδανεισάμενος· ἐν Βοσπόρῳ δ' ἀπρασίαν τῶν φορτίων κατέλαβε, καὶ τοὺς τὰ ἑτερόπλοια δανείσαντας μόλις

[914]

AGAINST PHORMIO

expressed strong indignation, men of Athens, at the effrontery of Lampis, and produced before the arbitrator the same testimony as I now produce before you—that, namely, of the persons who at the first went to him with me, when he stated that he had not received the money from Phormio, and that Phormio had not put the goods on board the ship—Lampis, being so plainly convicted of bearing false witness and of playing the rogue, admitted that he had made the statement to my partner here,^a but declared that he was out of his mind when he made it.

Now read me this deposition.

THE DEPOSITION

[The partner of Chrysippus now speaks.]

^bTheodotus, men of Athens, after hearing us several times, and being convinced that Lampis was giving false testimony, did not dismiss the suit, but referred us to the court. He was loth to give an adverse decision because he was a friend of this man Phormio, as we afterwards learned, yet he hesitated to dismiss the suit lest he should himself commit perjury.

Now, in the light of the facts themselves, consider in your own minds, men of the jury, what means the man was likely to have for discharging the debt. He sailed from this port without having put the goods on board the ship, and having no adequate security; on the contrary, he had made additional loans on the credit of the money lent by me. In Bosphorus he found no market for his wares, and had difficulty in getting rid of those who had lent money for the outward

Οι αρχαίοι Έλληνες για τον τόκο



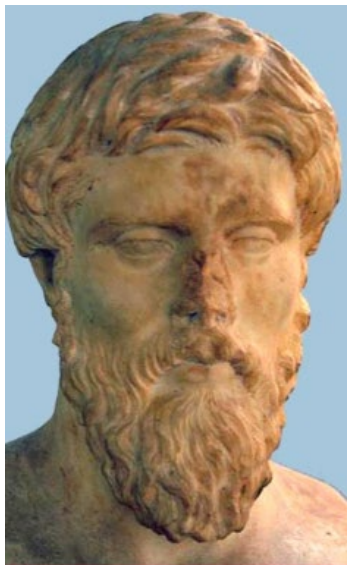
Δημοσθένης
384-322 π.Χ.

DEMOSTHENES

- 23 ἀπήλλαξεν. καὶ οὗτος μὲν ἐδάνεισεν αὐτῷ δισχιλίας δραχμὰς
ἀμφοτερόπλων, ὥστ' ἀπολαβεῖν Ἀθήνησι δισχιλίας
ἑξακοσίας δραχμὰς· Φορμίων δέ φησιν ἀποδοῦναι Λάμπιδι ἐν
Βοσπόρῳ ἑκατὸν καὶ εἴκοσι στατήρας Κυζικηνούς (τούτῳ γὰρ
προσέχετε τὸν νοῦν) δανεισάμενος ἐγγείων τόκων. ἦσαν δὲ
24 ἔφεκτοι οἱ ἐγγεῖοι τόκοι, ὁ δὲ Κυζικηνὸς ἐδύνατο ἐκεῖ εἴκοσι καὶ
ὀκτὼ δραχμὰς Ἀττικὰς. δεῖ δὴ μαθεῖν ὑμᾶς ὅσα φησὶ χρέματ'
ἀποδεδωκέναι. τῶν μὲν γὰρ ἑκατὸν εἴκοσι στατήρων γίνονται
τρισχιλίας τριακόσiai ἐξήκοντα, ὁ δὲ τόκος ὁ ἐγγεῖος ὁ ἔφεκτος
τῶν τριάκοντα μνῶν καὶ τριῶν καὶ ἐξήκοντα πεντακόσiai
25 δραχμαὶ καὶ ἐξήκοντα· τὸ δὲ σύμπαν κεφάλαιον γίγνεται τόσον
καὶ τόσον. ἔστιν οὖν, ὦ ἄνδρες δικασταί, οὗτος ὁ ἄνθρωπος ἢ
γενησεται ποτε, ὃς ἀντὶ δισχιλίων ἑξακοσίων δραχμῶν
τριάκοντα μνᾶς καὶ τριακοσίας καὶ ἐξήκοντα ἀποτίειν
προεῖλετ' ἄν, καὶ τόκον πεντακοσίας δραχμὰς καὶ ἐξήκοντα
δανεισάμενος, ἃς φησιν ἀποδεδωκέναι Φορμίων Λάμπιδι,
τρισχιλίας ἑνακοσίας εἴκοσιν; ἐξὸν δ' αὐτῷ ἀμφοτερόπλων
Ἀθήνησιν ἀποδοῦναι τὸ ἀργύριον, ἐν Βοσπόρῳ ἀπέδωκε, τρισὶ
26 καὶ δέκα μναῖς πλέον; καὶ τοῖς μὲν τὰ ἑτερόπλοια δανείσασι

AGAINST PHORMIO

- voyage. My partner here had lent him two thousand drachmae for 23
the double voyage on terms that he should receive at Athens two
thousand six hundred drachmae; but Phormio declares that he
paid Lampis in Bosphorus one hundred and twenty Cyzicene
staters^a (note this carefully) which he borrowed at the interest paid
on loans secured by real property. Now interest on real security
was sixteen and two-thirds per cent, and the Cyzicene stater was
worth there twenty-eight Attic drachmae. It is necessary that you 24
should understand how large a sum he claims to have paid. A
hundred and twenty staters amount to three thousand three
hundred and sixty drachmae, and the interest at the land rate of
sixteen and two-thirds per cent on thirty-three minae and sixty
drachmae is five hundred and sixty drachmae, and the total 25
amount comes to so much.^b Now, men of the jury, is there a man,
or will the man ever be born, who, instead of twenty-six hundred
drachmae would prefer to pay thirty minae and three hundred and
sixty drachmae, and as interest five hundred and sixty drachmae by
virtue of his loan, both which sums Phormio says he has paid
Lampis, in all three thousand nine hundred and twenty drachmae?
And when he might have paid the money in Athens, seeing that it
had been lent for the double voyage, has he paid it in Bosphorus,
and too much by thirteen minae? And to the creditors who lent 26
money for the outward voyage you had difficulty



Πλούταρχος
(45-120)

Οι αρχαίοι Έλληνες για τον τόκο

PLUTARCH'S MORALIA

ΠΕΡΙ ΤΟΥΤ ΜΗ ΔΕΙΝ ΔΑΝΕΙΖΕΣΘΑΙ

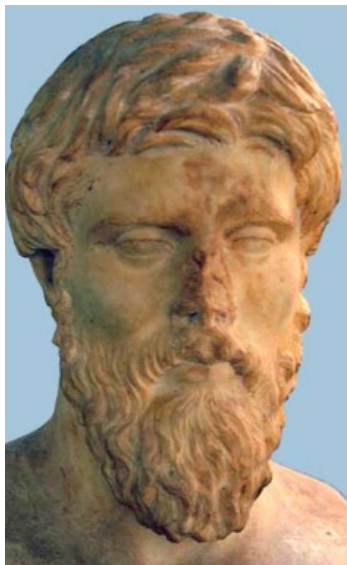
(827)

D, E 1. Ὁ Πλάτων ἐν τοῖς Νόμοις οὐκ ἔῤ̄ μεταλαμβάνειν ὕδατος ἀλλοτρίου τοὺς γείτονας, ἂν μὴ παρ' αὐτοῖς ὀρύξαντες ἄχρι τῆς κεραμίτιδος καλουμένης γῆς ἄγονον εὖρωσι νάματος τὸ χωρίον· ἡ γὰρ κεραμίτις φύσιν ἔχουσα λιπαρὰν καὶ πυκνὴν στέγει παραλαβοῦσα τὸ ὑγρὸν καὶ οὐ δύνῃσι δεῖν¹ δὲ μεταλαμβάνειν τ' ἀλλοτρίου² τοὺς ἴδιον κτήσασθαι μὴ δυναμένους· ἀπορία γὰρ βοηθεῖν τὸν νόμον. ἄρ' οὐ³ δὴ ἔδει καὶ⁴ περὶ χρημάτων εἶναι νόμον, ὅπως μὴ δανείζωνται παρ' ἐτέρων μὴδ' ἐπ' ἀλλοτρίας πηγὰς βαδίζωσι, μὴ πρότερον οἴκοι τὰς αὐτῶν ἀφορμὰς ἐξελέγξαντες καὶ συναγαγόντες ὥσπερ ἐκ λιβάδων τὸ χρήσιμον καὶ ἀναγκαῖον αὐτοῖς; νυνὶ δ' ὑπὸ τρυφῆς καὶ μαλακίας ἢ πολυτελείας οὐ χρῶνται τοῖς ἑαυτῶν, ἔχοντες, ἀλλὰ λαμβάνουσιν ἐπὶ πολλῶ παρ' ἐτέρων, μὴ δεόμενοι τεκμήριον δὲ μέγα· τοῖς γὰρ ἀπόροις οὐ δανείζουσιν, ἀλλὰ βουλομένοις εὐπορίαν τιν' ἑαυτοῖς κτᾶσθαι· καὶ μάρτυρα δίδωσι καὶ βεβαιωτὴν

ON BORROWING

THAT WE OUGHT NOT TO BORROW

1. Plato in the *Laws*^a forbids people to take any water from a neighbour's land unless they have dug on their own land down to a layer of potter's clay, as it is called, and found that the place will not produce a flow of water; for the potter's clay, being by nature oily and solid, holds back the water that reaches it and does not let it through; but, he says, those shall have a share of others' water who cannot get any of their own, for the law gives relief to those in want. Ought there not, then, to be a law about money also, that people shall not borrow from others or resort to other people's springs who have not first examined their resources at home and brought together, as from little trickles, what is useful and necessary to themselves? But now, because of their luxury and effeminacy or their extravagance, they make no use of what is their own, though they possess it, but take from others at a high rate of interest, though they have no need of doing so. There is strong evidence of this: loans are not made to people in need, but to those who wish to acquire some superfluity for themselves. And a man produces a witness and a surety to aver that,



Πλούταρχος
(45-120)

Οι αρχαίοι Έλληνες για τον τόκο

PLUTARCH'S MORALIA

(829) ἀγχοῦσι τὰς πόλεις. τοὺς μὲν γὰρ λαγῶς λέγουσι τίκτειν ἅμα καὶ τρέφειν ἕτερα καὶ ἐπικυῖσκεισθαι πάλιν, τὰ δὲ τῶν μαστιγιῶν τούτων καὶ βαρβάρων χρέα πρὶν ἢ συλλαβεῖν τίκτει· διδόντες γὰρ εὐθύς ἀπαιτοῦσι καὶ τιθέντες αἴρουσι καὶ δανείζουσιν ὃ λαμβάνουσιν ὑπὲρ τοῦ δανείσαι.

5. Λέγεται μὲν παρὰ Μεσσηνίοις

C ἔστι Πύλος πρὸ Πύλοιο, Πύλος γὰρ μὲν ἔστι καὶ ἄλλος·

λεχθήσεται δὲ πρὸς τοὺς δανειστάς

ἔστι τόκος πρὸ τόκοιο, τόκος γὰρ μὲν ἔστι καὶ

ἄλλος.

εἶτα τῶν φυσικῶν δήπου καταγελῶσι, λεγόντων μηδὲν ἐκ τοῦ μὴ ὄντος γενέσθαι· παρὰ τούτοις γὰρ ἐκ τοῦ μηκέτ' ὄντος μηδ' ὑφ'εστῶτος γεννᾶται τόκος· καὶ τὸ τελωνεῖν ὄνειδος ἡγοῦνται, τοῦ νόμου διδόντος· αὐτοὶ γὰρ¹ παρανόμως δανείζουσιν τελωνοῦντες, μᾶλλον δ', εἰ δεῖ τάληθές εἰπεῖν, ἐν τῷ δανείζειν χρεωκοποῦντες· ὃ γὰρ οὗ² γράφει λαμβάνων ἔλαττον χρεωκοπεῖται. καίτοι Πέρσαι γὰρ τὸ ψεῦδεςθαι δευτέρον ἡγοῦνται τῶν ἀμαρτημάτων, πρῶτον δὲ τὸ ὀφείλειν· ὅτι καὶ τὸ

D ψεῦδεςθαι τοῖς ὀφείλουσι συμβαίνει πολλάκις· ψεύδονται δὲ μᾶλλον οἱ δανείζοντες καὶ ῥαδιουργοῦσιν ἐν ταῖς ἑαυτῶν ἐφημερίσι, γράφοντες ὅτι τῷ δεῖνι τοσοῦτον διδώσιν, ἔλαττον διδόντες· καὶ τὸ ψεῦδος αἰτίαν ἔχει πλεονεξίαν, οὐκ ἀνάγκην οὐδ' ἀπορίαν, ἀλλ' ἀπληστίαν, ἧς ἀναπόλαυστόν

ON BORROWING

cities. They say that hares at one and the same time give birth to one litter, suckle another, and conceive again; but the loans of these barbarous rascals give birth to interest before conception^a; for while they are giving they immediately demand payment, while they lay money down they take it up, and they lend what they receive for money lent.

5. There is a saying among the Messenians,

Pylos there is before Pylos, and Pylos, a third, there is also,^b but as to the money-lenders we may say

Int'rest there is before int'rest, and int'rest a third there is also.

And then they make a laughing-stock forsooth of the scientists, who say that nothing arises out of nothing; for with these men interest arises out of that which has as yet no being or existence. And they think it is a disgrace to be a tax-collector, which the law allows; for they themselves lend money contrary to law, collecting taxes from their debtors, or rather, if the truth is to be told, cheating them in the act of lending; for he who receives less than the face value of his note is cheated. And yet the Persians regard lying as the second among wrongdoings and being in debt as the first^c; for lying is often practised by debtors; but money-lenders lie more than debtors and cheat in their ledgers, when they write that they give so-and-so much to so-and-so, though they really give less; and the cause of their lie is avarice, not necessity or want, but insatiable



Γρηγόριος Νύσσης
(335-394)

Οι Χριστιανοί πατέρες για τον τόκο

ΤΟΥ ΕΝ ΑΓΙΟΙΣ ΓΡΗΓΟΡΙΟΥ
ΕΠΙΣΚΟΠΟΥ ΝΥΣΣΗΣ
ΚΑΤΑ ΤΩΝ ΤΟΚΙΖΟΝΤΩΝ.
—
S. P. N. GREGORII
EPISCOPI NYSSENI
ORATIO CONTRA USURARIOS.

Jacobo Gretsero Soc. Jesu theologo interprete.

Τῶν φιλαρέτων ἀνθρώπων, τῶν ζῆν (1) κατὰ λό-
γον προαιρουμένων, νόμοις ἀγαθοῖς ὁ βίος καὶ προσ-
τάγμασι κεκανόνισται· ἐν οἷς καθορᾶται τοῦ Νο-
μοθέτου ἡ γνώμη πρὸς δύο γενικῶς ἀποτεινομένη
σκοπούς· ἓνα μὲν, τῶν ἀπειρημένων τὴν ἀπαγόρευ-
σιν ἔχοντα· ἕτερον δὲ, τὸν πρὸς τὴν ἐνέργειαν τῶν
καλῶν καταπειγόντα. Οὐ γὰρ ἔστιν ἄλλως εὐπολί-
τευτον βίον κατορθωθῆναι καὶ σώφρονα, εἰ μὴ τις
φεύγων ὡς ἔχει δυνάμειος τὴν κακίαν, διώξειεν ὡς
υἷος μητέρα (2) τὴν ἀρετὴν. Συνυχθέντες τοῖνον καὶ
σήμερον (3) ἵνα Θεοῦ προσταγμάτων ἀκούσωμεν,
ἠκρωμέθα τοῦ Προφήτου φονεύοντος τὰ μοχθηρὰ
τῶν δανεισμάτων τέκνα, τοὺς τόκους, ἐξαιροῦντος δὲ
τοῦ βίου τὴν ἐπ' ἐργασίᾳ χρῆσιν τῶν νομισμάτων·
δεξώμεθα δὲ εὐπειθῶς τὸ παράγγελμα· ἵνα μὴ ἡ
πέτρα (4) ἐκείνη γενώμεθα, ἐφ' ἣν καταπεσὼν ὁ Β
σπόρος, ξηρὸς καὶ ἀγονος ἐμεινεν, μηδὲ λεχθῆ πρὸς
ἡμᾶς ἅ ποτε πρὸς τὸν δυσάγωγον Ἰσραὴλ· Ἄκοῆ
ἀκούσατε, καὶ οὐ μὴ συνῆτε, καὶ βλέποντες
βλέψατε, καὶ οὐ μὴ ἴδητε.

Hominum virtutis studiosorum, et qui mores ex
rationis præscripto formant, vita continetur bonis
legibus et præceptis, in quibus videre est legisla-
torem duo generatim spectare : alterum, ut mala
vetet ; alterum, ut ad honestas actiones singulos
incitet. Non enim fieri potest, ut quis in societate
civilis vitam ad recti et temperantiae normam com-
ponat, nisi totis viribus improbitatem fugiat, vir-
tutemque maximo studio persequatur. Coacti igitur
hodie quoque in unum, ut divinis mandatis
audiendis operam demus, audivimus quomodo
propheta, pestifera fenoris germina, usuras in-
quam, succidat, et ex hominum consortio funditus
evellat pecuniæ ad usuram elocationem. Nostrarum
partium erit, morem gerere prophetæ monitis, ne
efficiamur illa petra, supra quam cum semen ceci-
disset, exaruit, nullumque fructum protulit, ne
forte audiamus quod olim ad præfractos et intra-
ctabiles Israelitas dictum est : *Auditu audietis, et
non intelligetis, et videntes videbitis, nec tamen vi-*

Οι χαλασοχώρηδες
Αλέξανδρος Παπαδιαμάντης
1892

Ήτο δε ο κυρ-Μανουήλος ο Στεριωμένος «καλός νοικοκύρης», εμποροπαντοπώλης και κτηματίας και σύμβουλος του δήμου ισόβιος, τόσον, ώστε μίαν φοράν μόνον, ότε ήλθε δέκατος τέταρτος, ήτοι δεύτερος παραπληρωματικός, ο ίσκιος του ή η καλή του τύχη «εψωμόφαγε» μετ' ολίγας εβδομάδας δύο των προ αυτού πλειοψηφησάντων και ούτως εισήλθεν εις το δημοτικόν συμβούλιον ως ενεργόν μέλος.

Ήτο δε άνθρωπος με επιρροήν, διότι ήξευρε να κάμνει «ευκολίας» εις τους χωρικούς. Μίαν οκάν αχύρου έδιδε τον χειμώνα εκ της προμηθείας του, μίαν οκάν κριθής ελάμβανε το θέρος εκ του αλωνίου. **Είχεν όλας τας αρετάς του μύρμηγκος και υπερείχεν αυτού κατά μίαν, ότι ήτο δανειστής.** Μίαν οκάν ελαίας έδιδε την μεγάλην τεσσαρακοστήν εις πτωχήν χήραν, μίαν οκάν έλαιον ελάμβανε το φθινόπωρον εις την αποθήκην, όπου είχεν αραδιασμένας περί τας δύο δωδεκάδας μεγάλους πίθους κτιστούς, ασβεστωμένους και χωμένους εις την γην. Περιεργον δε ότι, ενώ τα σταθμά του μαγαζίου του ήσαν όχι λιποβαρέστερα ή των άλλων παντοπωλών, τα μέτρα της αποθήκης του εφημίζοντο ως σωστά και μάλιστα ως πρόσβαρα.

Δι' όλων αυτών των μέσων, ως και διά τινων χρηματικών δανείων, τα οποία εδάνειζεν εις τους χωρικούς «το διάφορο κεφάλι», είχεν αποκτήσει ου μικράν περιουσίαν, δημοπρατήσας τας οικίας ή τας αμπέλους χωρικών τινων, οίτινες ουδ' έλειψαν έκτοτε από πλησίον του, ούτε έχθραν ή μνησικακίαν εφαινοντο τρέφοντες προς αυτόν, αλλά τουναντίον μάλιστα εφαινοντο ως να του ήσαν υπόχρεοι. Τούτο δε, διότι εις τα χωρία και εις τας μικράς πόλεις οι πτωχοί άνθρωποι δεν έχουσι κανέν μέσον πώς να γλυτώσουν από τας χείρας των μικρεμπόρων, των μικροκεφαλαιούχων και των δικολάβων. Αυτοί οι τύραννοί των είναι και οι προστάται των. Ο ίδιος, όστις επώλησε χθες τον βουν ή τον αγρόν του δεινός γεωργού, ο ίδιος θα δανείσει αύριον τον αυτόν γεωργόν ή θα τον πιστώσει, επιφυλαττόμενος μετ' ου πολύ να του πωλήσει την οικίαν ή την άμπελον. Και μετά τινα χρόνον, ότε δεν θα έχει πλέον ούτε αγρόν, ούτε βουν, ούτε άμπελον, ούτε οικίαν, αυτός πάλιν ο τύραννος, αυτός ο προστάτης θα τον μισθώσει, όπως καλλιεργεί αντί ευτελούς αμοιβής τον κατεσχημένον, τον πρώην ιδικόν του αγρόν ή άμπελον. Και ούτω αληθεύει κοινή τις παροιμία λεγομένη περί της λάσπης, εις την οποίαν, όσον προσπαθεί ν' απαλλαγεί τις, τόσον βαθύτερα χώνεται, ή περί της ψώρας, ήτις όσον μοχθεί να την εξαλείψει τις, τόσον πληθύνεται. Το αυτό και χειρότερον συμβαίνει, αν ο χωρικός εδοκίμαζεν εις το ήμισυ της οδού να απαλλαχθεί του πρώτου καλοθελητού, ορφανευμένος από τον βουν και τον αγρόν, σώζων την οικίαν και άμπελον. Θα αντικαθίστα απλώς τον καλοθελητήν, θα ήλλαζε προστάτην και τύραννον αλλά δεν θα εγλύτωνεν ούτε την άμπελον ούτε την οικίαν. Ο νέος καλοθελητής θα εφήρμοζεν απλώς το αυτό σύστημα με την επί το χειρόν διαφοράν προς ζημίαν του χωρικού, ότι θα ησθάνετο ολιγότερον προς αυτόν οίκτον. Τρίτος τρόπος θα ήτο να καταφύγει ο χωρικός εγκαίρως προς τον δικολάβον. Αλλ' ο δικολάβος είναι το χειρίστον κακόν. Θα εδίδασκε τον χωρικόν την στρεψοδικίαν και το ψεύδος, θα τον έπειθε να ψευδορκήσει, θα του μετέδιδε τα πρώτα σπέρματα της δικομανίας και της φυγοπονίας και θα του έτρωγεν επίσης τον βουν, τον αγρόν ή την οικίαν και την άμπελον.

Sant'Antonio e il cuore dell'avaro (particolare), affresco attribuito a Francesco Vecellio, 1511-12, Scuola del Santo, Sala Adunanze, Padova



Antonio di Padova
(1195-1231)



Francisco de Zurbarán
1627–1630

Tullio Lombardo, *Miracle of the Miser's Heart*
1520-25, Marble, 130 x 245 cm
Basilica di Sant'Antonio, Padua



52 Poi che nel viso a certi li occhi porsi,
53 ne' quali 'l doloroso foco casca,
54 non ne conobbi alcun; ma io m' accorsi

55 che dal collo a ciascun pendea una tasca
56 ch'avea certo colore e certo segno,
57 e quindi par che 'l loro occhio si pasca.

58 E com' io riguardando tra lor vegno,
59 in una borsa gialla vidi azzurro
60 che d' un leone avea faccia e contegno.

61 Poi, procedendo di mio sguardo il curro,
62 vidine un' altra come sangue rossa,
63 mostrando un'oca bianca più che burro.

64 E un che d'una scrofa azzurra e grossa
65 segnato avea lo suo sacchetto bianco,
66 mi disse: «Che fai tu in questa fossa?

67 Or te ne va; e perché se' vivo anco,
68 sappi che 'l mio vicin Vitaliano
69 sederà qui dal mio sinistro fianco.

70 Con questi Fiorentin son padoano:
71 spesse fiate mi 'ntronan li orecchi
72 gridando: “Vegna 'l cavalier sovrano,

73 che recherà la tasca con tre becchi!”».
74 Qui distorse la bocca e di fuor trasse
75 la lingua, come bue che 'l naso lecchi.

When I had set my eyes upon the faces
of some on whom that painful fire falls,
I recognized no one; but I did notice

that from the neck of each a purse was hung
that had a special color and an emblem,
and their eyes seemed to feast upon these pouches.

Looking about—when I had come among them—
I saw a yellow purse with azure on it
that had the face and manner of a lion.

Then, as I let my eyes move farther on,
I saw another purse that was bloodred,
and it displayed a goose more white than butter.

And one who had an azure, pregnant sow
inscribed as emblem on his white pouch, said
to me: “What are you doing in this pit?

Now you be off; and since you're still alive,
remember that my neighbor Vitaliano
shall yet sit here, upon my left hand side.

Among these Florentines, I'm Paduan;
I often hear them thunder in my ears,
shouting, ‘Now let the sovereign cavalier,

the one who'll bring the purse with three goats, come!’”
At this he slewed his mouth, and then he stuck
his tongue out, like an ox that licks its nose.



Inferno 17

Dante



-
- Salvador Dalí
 - Hell 17 - The usurers (Man on a Dragon)
 - Woodcut - 1963



Gustave Doré (1832–1883), *Inferno*,
Canto 17 verse 7 (c 1857), engraving

Forthwith that image vile of Fraud appear'd.
Canto XVII., line 7.

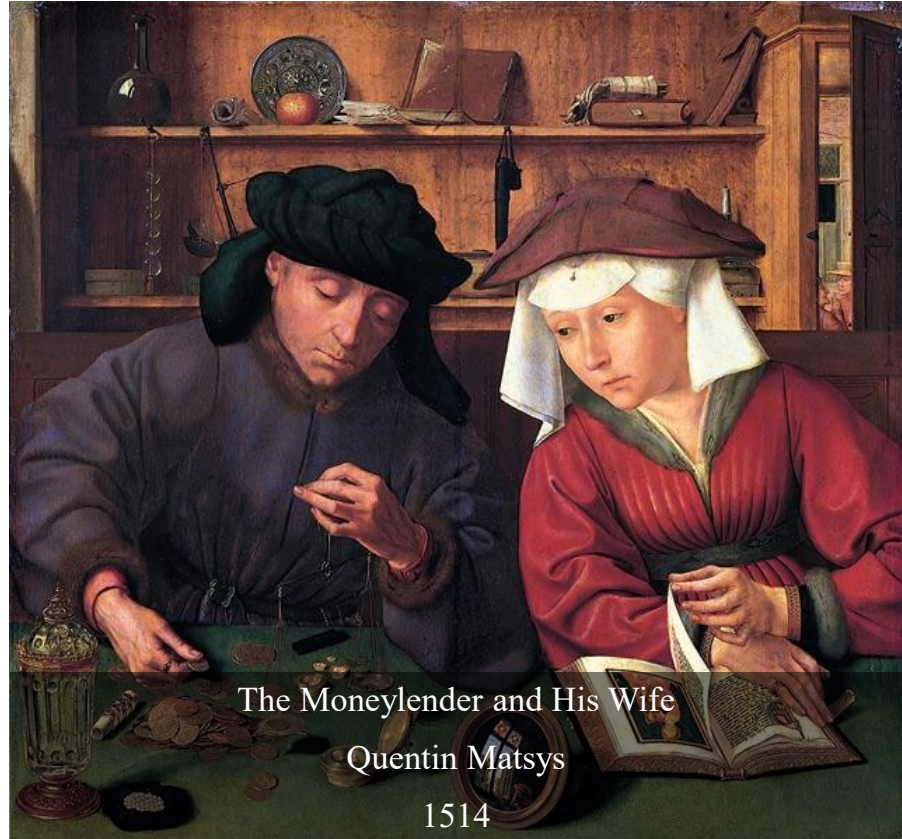




Jewish Usurer *Peregrinatio in terram sanctam* 1486, Author: Bernhard von Breydenbach, Artist: Erhard Reuwich



The Moneylenders
Quentin Matsys
1520

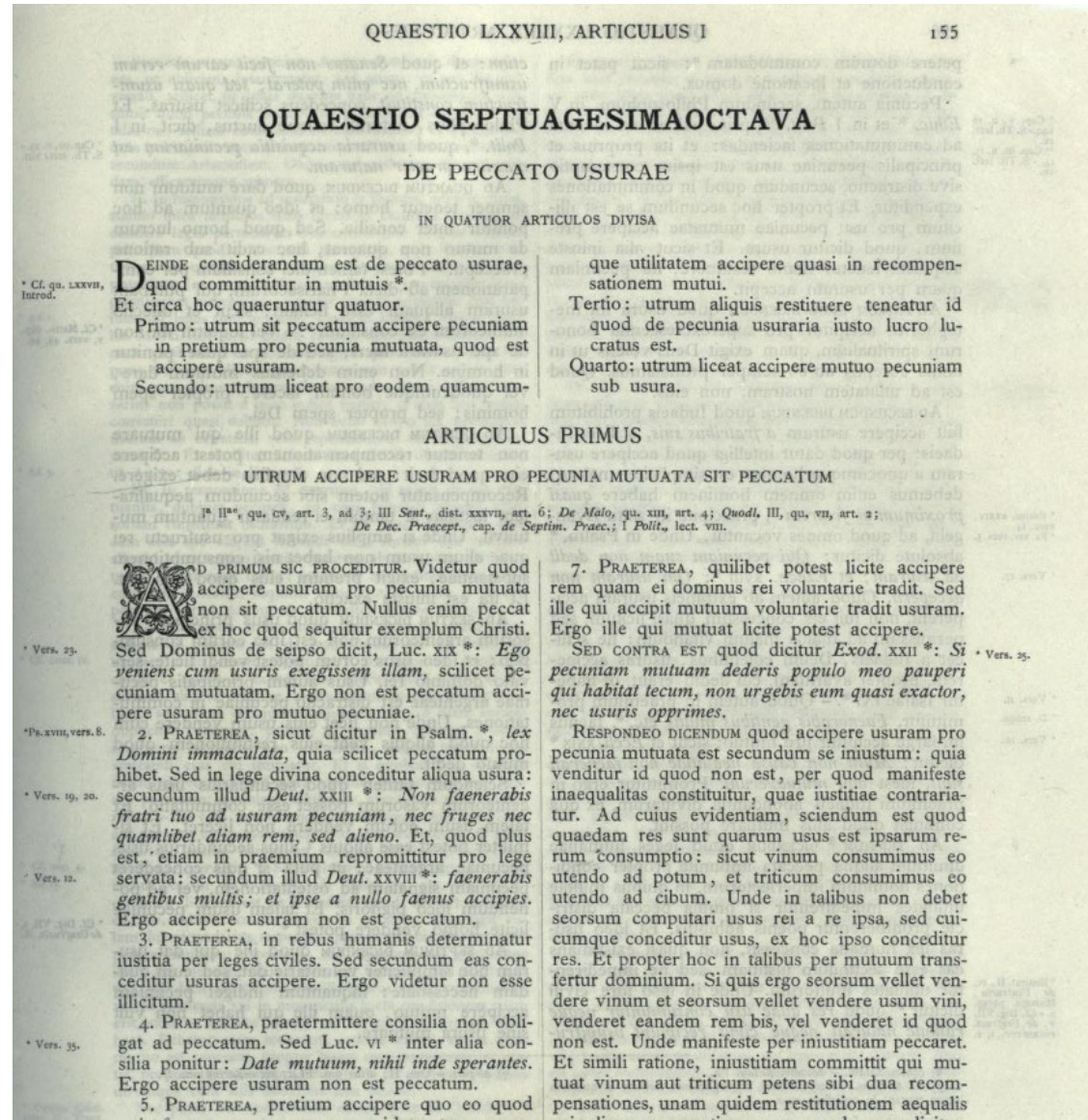


The Moneylender and His Wife
Quentin Matsys
1514

Οι Σχολαστικοί για τον τόκο



Θωμάς Ακινάτης
(1225-1274)



Summa Theologiae > Second Part of the Second Part > Question 78

Question 78. The sin of usury

Is it a sin to take money as a price for money lent, which is to receive usury?

Is it lawful to lend money for any other kind of consideration, by way of payment for the loan?

Is a man bound to restore just gains derived from money taken in usury?

Is it lawful to borrow money under a condition of usury?

Article 1. Whether it is a sin to take usury for money lent?

Objection 1. It would seem that it is not a sin to take usury for money lent. For no man sins through following the example of Christ. But Our Lord said of Himself (Luke 19:23): "At My coming I might have exacted it," i.e., the money lent, "with usury." Therefore, it is not a sin to take usury for lending money.

Objection 2. Further, according to Psalm 18:8, "The law of the Lord is unspotted," because, to wit, it forbids sin. Now usury of a kind is allowed in the Divine law, according to Deuteronomy 23:19-20: "Thou shalt not fenerate to thy brother money, nor corn, nor any other thing, but to the stranger": nay more, it is even promised as a reward for the observance of the Law, according to Deuteronomy 28:12: "Thou shalt fenerate* to many nations, and shalt not borrow of any one." ['Faeneraberis'—'Thou shalt lend upon usury.' The Douay version has simply 'lend.' The objection lays stress on the word 'faeneraberis': hence the necessity of rendering it by 'fenerate.'] Therefore, it is not a sin to take usury.

Objection 3. Further, in human affairs justice is determined by civil laws. Now civil law allows usury to be taken. Therefore, it seems to be lawful.

Objection 4. Further, the counsels are not binding under sin. But, among other counsels we find (Luke 6:35): "Lend, hoping for nothing thereby." Therefore, it is not a sin to take usury.

Objection 5. Further, it does not seem to be in itself sinful to accept a price for doing what one is not bound to do. But one who has money is not bound in every case to lend it to his neighbor. Therefore, it is lawful for him sometimes to accept a price for lending it.

Objection 6. Further, silver made into coins does not differ specifically from silver made into a vessel. But it is lawful to accept a price for the loan of a silver vessel. Therefore, it is also lawful to accept a price for the loan of a silver coin. Therefore, usury is not in itself a sin.

Objection 7. Further, anyone may lawfully accept a thing which its owner freely gives him. Now he who accepts the loan, freely gives the usury. Therefore, he who lends may lawfully take the usury.

On the contrary, It is written (Exodus 22:25): "If thou lend money to any of thy people that is poor, that dwelleth with thee, thou shalt not be hard upon them as an extortioner, nor oppress them with usuries."

I answer that, To take usury for money lent is unjust in itself, because this is to sell what does not exist, and this evidently leads to inequality which is contrary to justice. In order to make this evident, we must observe that there are certain things the use of which consists in their consumption: thus, we consume wine when we use it for drink, and we consume wheat when we use it for food. Wherefore in such like things the use of the thing must not be reckoned apart from the thing itself, and whoever is granted the use of the thing, is granted the thing itself and for this reason, to lend things of this kin is to transfer the ownership. Accordingly, if a man wanted to sell wine separately from the use of the wine, he would be selling the same thing twice, or he would be selling what does not exist, wherefore he would evidently commit a sin of injustice. On like manner he commits an injustice who lends wine or wheat, and asks for double payment, viz. one, the return of the thing in equal measure, the other, the price of the use, which is called usury.

On the other hand, there are things the use of which does not consist in their consumption: thus, to use a house is to dwell in it, not to destroy it. Wherefore in such things both may be granted: for instance, one man may hand over to another the ownership of his house while reserving to himself the use of it for a time, or vice versa, he may grant the use of the house, while retaining the ownership. For this reason, a man may lawfully make a charge for the use of his house, and, besides this, revendicate the house from the person to whom he has granted its use, as happens in renting and letting a house.

Now money, according to the Philosopher (Ethic. v, 5; Polit. i, 3) was invented chiefly for the purpose of exchange: and consequently, the proper and principal use of money is its consumption or alienation whereby it is sunk in exchange. Hence it is by its very nature unlawful to take payment for the use of money lent, which payment is known as usury: and just as a man is bound to restore other ill-gotten goods, so is he bound to restore the money which he has taken in usury.

Reply to Objection 1. In this passage usury must be taken figuratively for the increase of spiritual goods which God exacts from us, for He wishes us ever to advance in the goods which we receive from Him: and this is for our own profit not for His.

Reply to Objection 2. The Jews were forbidden to take usury from their brethren, i.e., from other Jews. By this we are given to understand that to take usury from any man is evil simply, because we ought to treat every man as our neighbor and brother, especially in the state of the Gospel, whereto all are called. Hence it is said without any distinction in Psalm 14:5: "He that hath not put out his money to usury," and (Ezekiel 18:8): "Who hath not taken usury [Vulgate: 'If a man . . . hath not lent upon money, nor taken any increase . . . he is just.']." They were permitted, however, to take usury from foreigners, not as though it were lawful, but in order to avoid a greater evil, lest, to wit, through avarice to which they were prone according to Isaiah 56:11, they should take usury from the Jews who were worshippers of God. Where we find it promised to them as a reward, "Thou shalt fenerate to many nations," etc., fenerating is to be taken in a broad sense for lending, as in Sirach 29:10, where we read: "Many have refused to fenerate, not out of wickedness," i.e., they would not lend. Accordingly, the Jews are promised in reward an abundance of wealth, so that they would be able to lend to others.

Reply to Objection 3. Human laws leave certain things unpunished, on account of the condition of those who are imperfect, and who would be deprived of many advantages, if all sins were strictly forbidden and punishments appointed for them. Wherefore human law has permitted usury, not that it looks upon usury as harmonizing with justice, but lest the advantage of many should be hindered. Hence it is that in civil law [Inst. II, iv, de Usufructu] it is stated that "those things according to natural reason and civil law which are consumed by being used, do not admit of usufruct," and that "the senate did not (nor could it) appoint a usufruct to such things, but established a quasi-usufruct," namely by permitting usury. Moreover, the Philosopher, led by natural reason, says (Polit. i, 3) that "to make money by usury is exceedingly unnatural."

Reply to Objection 4. A man is not always bound to lend, and for this reason it is placed among the counsels. Yet it is a matter of precept not to seek profit by lending: although it may be called a matter of counsel in comparison with the maxims of the Pharisees, who deemed some kinds of usury to be lawful, just as love of one's enemies is a matter of counsel. Or again, He speaks here not of the hope of usurious gain, but of the hope which is put in man. For we ought not to lend or do any good deed through hope in man, but only through hope in God.

Reply to Objection 5. He that is not bound to lend, may accept repayment for what he has done, but he must not exact more. Now he is repaid according to equality of justice if he is repaid as much as he lent. Wherefore if he exacts more for the usufruct of a thing which has no other use but the consumption of its substance, he exacts a price of something non-existent: and so his exaction is unjust.

Reply to Objection 6. The principal use of a silver vessel is not its consumption, and so one may lawfully sell its use while retaining one's ownership of it. On the other hand, the principal use of silver money is sinking it in exchange, so that it is not lawful to sell its use and at the same time expect the restitution of the amount lent. It must be observed, however, that the secondary use of silver vessels may be an exchange, and such use may not be lawfully sold. On like manner there may be some secondary use of silver money; for instance, a man might lend coins for show, or to be used as security.

Reply to Objection 7. He who gives usury does not give it voluntarily simply, but under a certain necessity, in so far as he needs to borrow money which the owner is unwilling to lend without usury.

Οι Σχολαστικοί για τον τόκο

damnum emergens
lucrum cessans
stipendium laboris
periculum sortis
ratio incertitudinis
poena



interisse

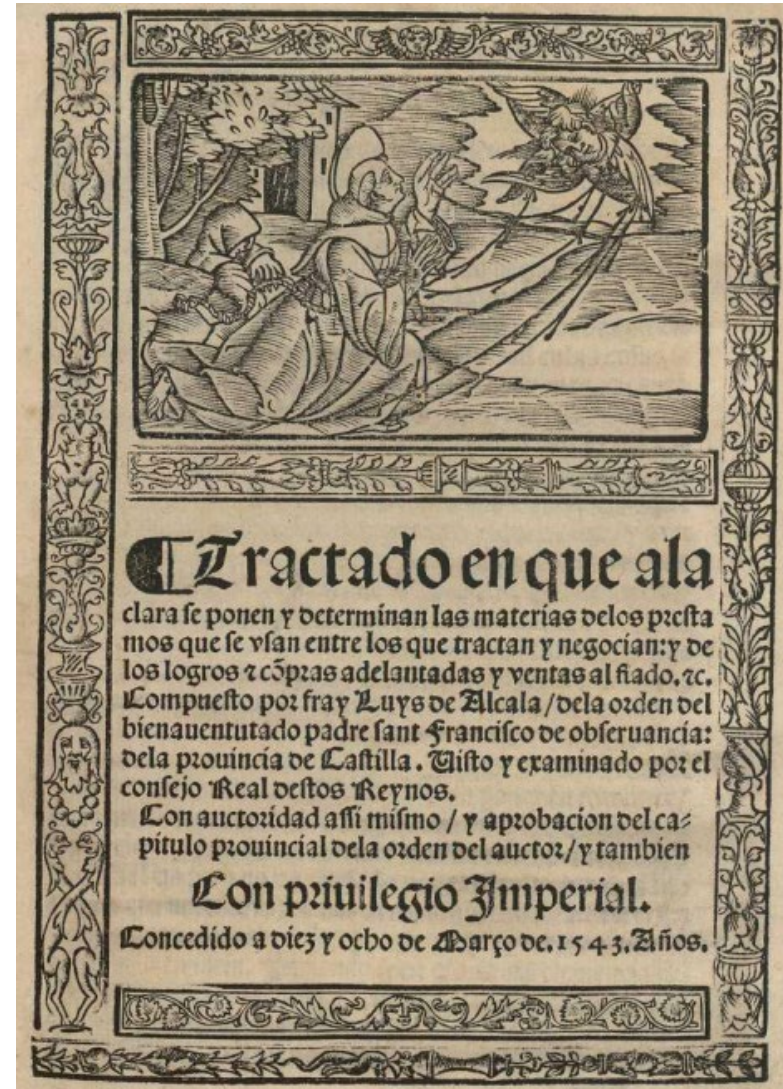
Οι Σχολαστικοί για τον τόκο

Tractado en que a la clara se ponen y determinan las materias de los prestamos que se vsan entre los que tractan y negocian: y delos logros y compras adelantadas y ventas al fiado, etc. 1543

A treatise in which the subject of the loans that are used between those who deal and negotiate are clearly set out and determined: and of the achievements and advance purchases and sales on credit, etc.

School of Salamanca

Luis de Alcalá (?1490-1549)



EPISTOLA ENCYCLICA SANCTISSIMI DOMINI
BENEDICTI XIV.

De Usuris aliisque injustis quæstibus. Bullariû, Tom. I.
N. 143.

(Spectat ad N. 42. et seq. DE CONTRACTIBUS. Tom. III.)

*Venerabilibus Fratribus, Patriarchis, Archiëpiscopis,
Episcopis et Ordinariis Italiæ.*

BENEDICTUS PAPA XIV. .

*Venerabilis Frater, salutem, et Apostolicam
Benedictionem.*

Vix pervenit ad aures nostras, ob novam contro-
versiam (nempe an quidam contractus validus judicari
debeat) nonnullas per Italiam disseminari sententias
quæ sanæ doctrinæ haud consentaneæ viderentur;
cum statim nostri Apostolici muneris partem esse
duximus, opportunum afferre remedium, ne malum
ejusmodi, temporis diuturnitate, ac silentio, vires



PAPAL ENCYCLICALS ONLINE

Your guide to online Papal and other official documents of the Catholic Church.

VIX PERVENIT

ON USURY AND OTHER DISHONEST PROFITS

Pope Benedict XIV - 1745



<https://www.papalencyclicals.net/Ben14/b14vixpe.htm>

To the Venerable Brothers, Patriarchs, Archbishops, Bishops and Ordinary Clergy of Italy.

Venerable Brothers, Greetings and Apostolic Benediction.

Hardly had the new controversy (namely, whether certain contracts should be held valid) come to our attention, when several opinions began spreading in Italy that hardly seemed to agree with sound doctrine; We decided that We must remedy this. If We did not do so immediately, such an evil might acquire new force by delay and silence. If we neglected our duty, it might even spread further, shaking those cities of Italy so far not affected.

Therefore We decided to consult with a number of the Cardinals of the Holy Roman Church, who are renowned for their knowledge and competence in theology and canon law. We also called upon many from the regular clergy who were outstanding in both the faculty of theology and that of canon law. We chose some monks, some mendicants, and finally some from the regular clergy. As presiding officer, We appointed one with degrees in both canon and civil law, who had lengthy court experience. We chose the past July 4 for the meeting at which We explained the nature of the whole business. We learned that all had known and considered it already.

2. We then ordered them to consider carefully all aspects of the matter, meanwhile searching for a solution; after this consideration, they were to write out their conclusions. We did not ask them to pass judgment on the contract which gave rise to the controversy since the many documents they would need were not available. Rather We asked that they establish a fixed teaching on usury, since the opinions recently spread abroad seemed to contradict the Church's doctrine. All complied with these orders. They gave their opinions publicly in two convocations, the first of which was held in our presence last July 18, the other last August 1; then they submitted their opinions in writing to the secretary of the convocation.

3. Indeed they proved to be of one mind in their opinions.

I. The nature of the sin called usury has its proper place and origin in a loan contract. This financial contract between consenting parties demands, by its very nature, that one return to another only as much as he has received. The sin rests on the fact that sometimes the creditor desires more than he has given. Therefore he contends some gain is owed him beyond that which he loaned, but any gain which exceeds the amount he gave is illicit and usurious.

II. One cannot condone the sin of usury by arguing that the gain is not great or excessive, but rather moderate or small; neither can it be condoned by arguing that the borrower is rich; nor even by arguing that the money borrowed is not left idle, but is spent usefully, either to increase one's fortune, to purchase new estates, or to engage in business transactions. The law governing loans consists necessarily in the equality of what is given and returned; once the equality has been established, whoever demands more than that violates the terms of the loan. Therefore if one receives interest, he must make restitution according to the commutative bond of justice; its function in human contracts is to assure equality for each one. This law is to be observed in a holy manner. If not observed exactly, reparation must be made.

III. By these remarks, however, We do not deny that at times together with the loan contract certain other titles-which are not at all intrinsic to the contract-may run parallel with it. From these other titles, entirely just and legitimate reasons arise to demand something over and above the amount due on the contract. Nor is it denied that it is very often possible for someone, by means of contracts differing entirely from loans, to spend and invest money legitimately either to provide oneself with an annual income or to engage in legitimate trade and business. From these types of contracts honest gain may be made.

IV. There are many different contracts of this kind. In these contracts, if equality is not maintained, whatever is received over and above what is fair is a real injustice. Even though it may not fall under the precise rubric of usury (since all reciprocity, both open and hidden, is absent), restitution is obligated. Thus if everything is done correctly and weighed in the scales of justice, these same legitimate contracts suffice to provide a standard and a principle for engaging in commerce and fruitful business for the common good. Christian minds should not think that gainful commerce can flourish by usuries or other similar injustices. On the contrary We learn from divine Revelation that justice raises up nations; sin, however, makes nations miserable.

V. But you must diligently consider this, that some will falsely and rashly persuade themselves-and such people can be found anywhere-that together with loan contracts there are other legitimate titles or, excepting loan contracts, they might convince themselves that other just contracts exist, for which it is permissible to receive a moderate amount of interest. Should any one think like this, he will oppose not only the judgment of the Catholic Church on usury, but also common human sense and natural reason. Everyone knows that man is obliged in many instances to help his fellows with a simple, plain loan. Christ Himself teaches this: "Do not refuse to lend to him who asks you." In many circumstances, no other true and just contract may be possible except for a loan. Whoever therefore wishes to follow his conscience must first diligently inquire if, along with the loan, another category exists by means of which the gain he seeks may be lawfully attained.



الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ الَّذِي يَتَخَبَّطُهُ الشَّيْطَانُ مِنَ الْمَسِّ ذَٰلِكَ بِأَنَّهُمْ
 قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا فَمَنْ جَاءَهُ مَوْعِظَةٌ مِنْ رَبِّهِ فَانْتَهَى فَلَهُ مَا
 سَلَفَ وَأَمْرُهُ إِلَى اللَّهِ وَمَنْ عَادَ فَأُولَٰئِكَ أَصْحَابُ النَّارِ هُمْ فِيهَا خَالِدُونَ ﴿٢٧٥﴾

Those who consume interest will stand 'on Judgment Day' like those driven to madness by Satan's touch. That is because they say, "Trade is no different than interest." But Allah has permitted trading and forbidden interest. Whoever refrains—after having received warning from their Lord—may keep their previous gains, and their case is left to Allah. As for those who persist, it is they who will be the residents of the Fire. They will be there forever.

2:276



...

يَمْحَقُ اللَّهُ الرِّبَا وَيُرِي الصَّدَقَتِ وَاللَّهُ لَا يُحِبُّ كُلَّ كَفَّارٍ أَثِيمٍ ﴿٢٧٦﴾

Allah has made interest fruitless and charity fruitful. And Allah does not like any ungrateful evildoer.

2:278



...

يَا أَيُّهَا الَّذِينَ ءَامَنُوا اتَّقُوا اللَّهَ وَذَرُوا مَا بَقِيَ مِنَ الرِّبَا إِن كُنتُمْ مُؤْمِنِينَ ﴿٢٧٨﴾

O believers! Fear Allah, and give up outstanding interest if you are 'true' believers.

2:280



...

وَإِن كَانَ ذُو عُسْرَةٍ فَنَظِرَةٌ إِلَىٰ مَيْسَرَةٍ وَأَن تَصَدَّقُوا خَيْرٌ لَّكُمْ إِن كُنتُمْ تَعْلَمُونَ ﴿٢٨٠﴾

If it is difficult for someone to repay a debt, postpone it until a time of ease. And if you waive it as an act of charity, it will be better for you, if only you knew.

3:130



...

يَا أَيُّهَا الَّذِينَ ءَامَنُوا لَا تَأْكُلُوا الرِّبَا أَضْعَافًا مُّضَاعَفَةً وَاتَّقُوا اللَّهَ لَعَلَّكُمْ تُفْلِحُونَ ﴿١٣٠﴾

O believers! Do not consume interest, multiplying it many times over. And be mindful of Allah, so you may prosper.

<https://quran.com/3/130>

4:160



...

فَبِظُلْمٍ مِّنَ الَّذِينَ هَادُوا حَرَّمْنَا عَلَيْهِمْ طَيِّبَاتٍ أُحِلَّت لَّهُمْ وَبِصَدِّهِمْ عَن سَبِيلِ اللَّهِ كَثِيرًا ﴿١٦٠﴾

We forbade the Jews certain foods that had been lawful to them for their wrongdoing, and for hindering many from the Way of Allah,

<https://quran.com/4/160>

4:161



...

وَأَخَذِهِمُ الرِّبَا وَقَدْ نُهُوا عَنْهُ وَأَكْلِهِمْ أَمْوَالِ النَّاسِ بِالْبَاطِلِ وَأَعْتَدْنَا لِلْكَافِرِينَ مِنْهُمْ عَذَابًا أَلِيمًا ﴿١٦١﴾

taking interest despite its prohibition, and consuming people's wealth unjustly. We have prepared for the disbelievers among them a painful punishment.

30:39



وَمَا آتَيْتُمْ مِّن رَّبٍّ لِّيَرْبُوًّا فِي أَمْوَالِ النَّاسِ فَلَا يَرْبُوا عِنْدَ اللَّهِ^ط وَمَا آتَيْتُمْ مِّن زَكَاةٍ تُرِيدُونَ وَجْهَ اللَّهِ فَأُولَٰئِكَ هُمُ الْمُضِعُونَ ﴿٣٩﴾

Whatever loans you give, 'only' seeking interest at the expense of people's wealth¹ will not increase with Allah. But whatever charity you give, 'only' seeking the pleasure of Allah—it is they whose reward will be multiplied.

<https://quran.com/30/39>

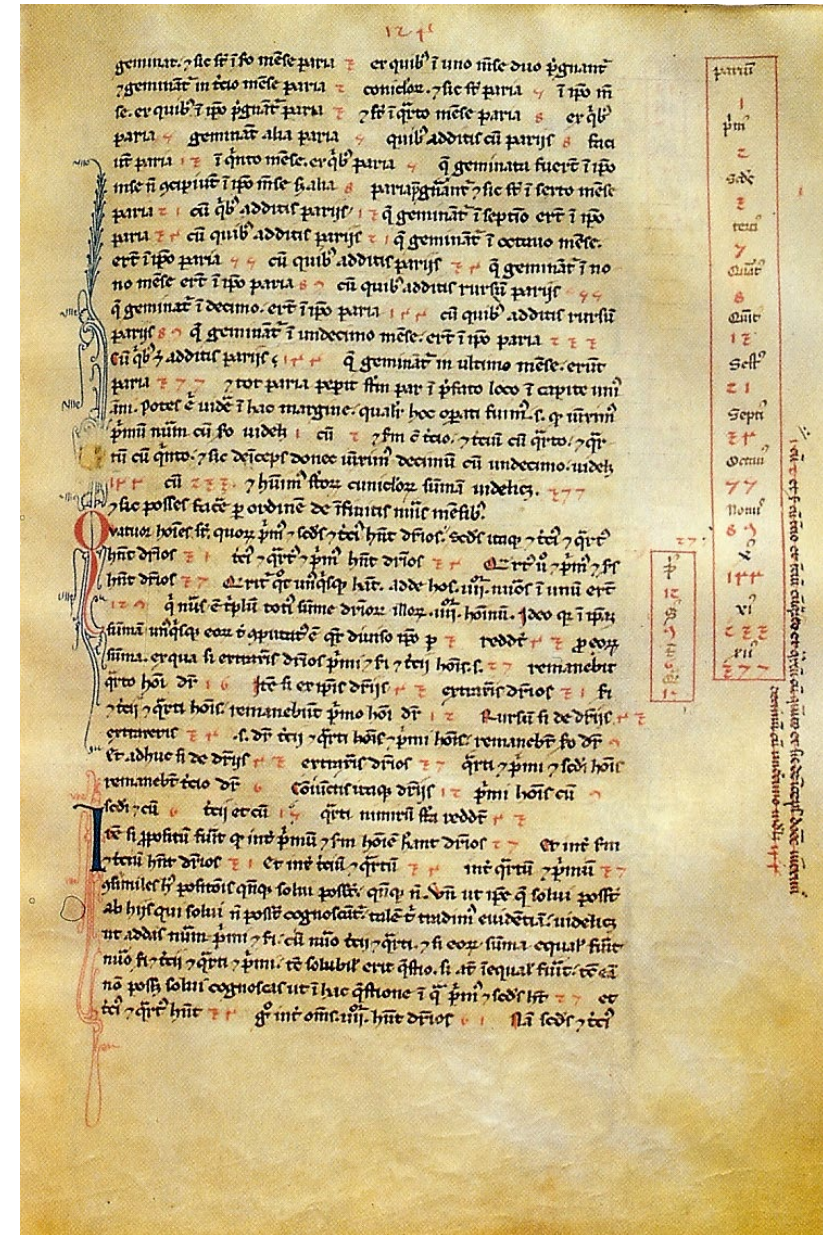
Μαθηματικοί υπολογισμοί του τόκου με ή χωρίς ανατοκισμό

Υπολογισμός των life annuities και της παρούσας αξίας

Liber Abaci (also spelled as Liber Abbaci; “The Book of Calculation”) is a historic 1202 Latin manuscript on arithmetic by **Leonardo of Pisa**, posthumously known as **Fibonacci**.



Fibonacci
(c. 1170 – c. 1240–50)

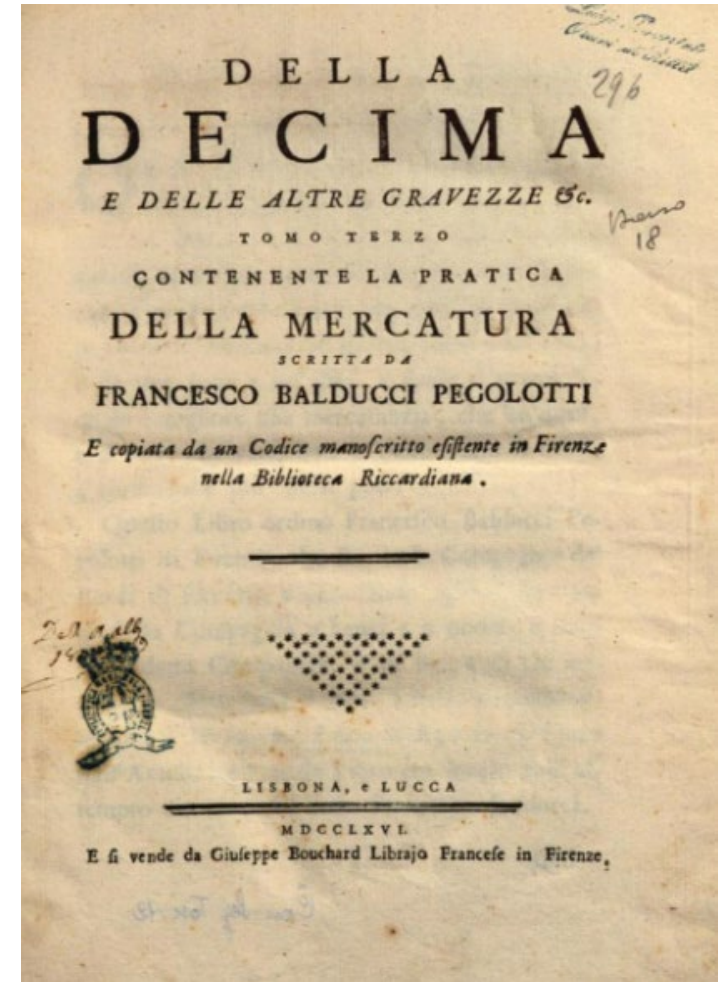


Francesco Balducci Pegolotti
(fl. 1290 – 1347)



Practica della mercatura
MS. 1472

Giovanni Francesco Pagnini dal
Ventura: *Della decima e di varie
altre gravezze imposte dal comune
di Firenze della moneta e della
mercatura de Fiorentini fino al
secolo XVI. Tomo terzo contenente
la pratica della Mercatura scritta
da Francesco Balducci Pegolotti.
E copiata da un Codice
manescritto esistente in Firenze
nella Biblioteca Riccardiana*
(Lisbona e Lucca: Boucard 1766)



The Practice of Commerce
1766

The earliest compound interest tables known (extract).
 Pegolotti's interest tables for 1%, 1½% and 2%, reproduced by
 permission of the Riccardian Library from Ricc. MS 2441, f.
 191v. (The heading is the three lines of text immediately above
 the tables and they follow on from text on the same page
 relating to the previous subject, showing that the tables form an
 integral part of the manuscript).

C. G. Lewin (2019). "The emergence of compound interest",
British Actuarial Journal, Vol. 24, e34, pp. 1–27
 doi:10.1017/S1357321719000254

Fardello da omnia p dirupj domie in p'ruotolo d'apj
 appo'no ualere il ruotolo p' d'no d'ualo il ruotolo
 della buona p'eta battua
 Quello che uengono guidardonate la x^o m^o anno
 opiu a d'isti p'agi e affare h'apo danno e p'ima ho
 mineremo a j^o l'anno e d'ua g'osia

La x ^o a j ^o l'anno d'no amj	La x ^o a j ^o l'anno	La x ^o a j ^o l'anno
1 y 101	1 y 101 . 10	1 y 102
2 y 102 . 0 . 2	2 y 102 . 6	2 y 102 . 8 . 10
3 y 103 . 7	3 y 103 . 11 . 7	2 y 103 . 8 . 10
4 y 104 . 1 . 2	4 y 104 . 11 . 7	2 y 104 . 2 . 5
5 y 105 . 2 . 0	5 y 105 . 2 . 9	4 y 105 . 4 . 9
6 y 106 . 3 . 1	6 y 106 . 14 . 7	5 y 106 . 8 . 1
7 y 107 . 4 . 3	6 y 107 . 5 . 10	6 y 107 . 12 . 3
8 y 108 . 5 . 8	7 y 108 . 19 . 8	7 y 108 . 17 . 3
9 y 109 . 7 . 4	8 y 109 . 13 . 1	8 y 109 . 3 . 3
10 y 110 . 9 . 3	8 y 110 . 6 . 9	9 y 110 . 10 . 1
11 y 111 . 11 . 4	10 y 111 . 1 . 1	10 y 111 . 17 . 11
12 y 112 . 13 . 8	11 y 112 . 16 . 8	11 y 112 . 6 . 8
13 y 113 . 16 . 2	12 y 113 . 12 . 5	12 y 113 . 16 . 4
14 y 114 . 18 . 11	13 y 114 . 7 . 3	13 y 114 . 7 . 1
15 y 115 . 1 . 11	14 y 115 . 7 . 8	14 y 115 . 18 . 10
16 y 116 . 5 . 2	15 y 116 . 7 . 1	15 y 116 . 11 . 7
17 y 117 . 8 . 7	16 y 117 . 13 . 1	16 y 117 . 4 . 3
18 y 118 . 11 . 3	16 y 118 . 16 . 2	17 y 118 . 2 . 2
19 y 119 . 14 . 3	18 y 119 . 14 . 11	18 y 119 . 16 . 2
20 y 120 . 16 . 3	19 y 120 . 13 . 1	19 y 120 . 13 . 3
21 y 121 . 18 . 5	20 y 121 . 13 . 1	20 y 121 . 11 . 6

FRANCESCO BALDUCCI PEGOLOTTI
LA PRATICA DELLA MERCATURA

edited by
ALLAN EVANS
Instructor in History
Harvard University



THE MEDIAEVAL ACADEMY OF AMERICA
CAMBRIDGE, MASSACHUSETTS
1936

LIRE CENTO A DIVERSI PREGI

301

QUELLO CHE VEGNONO GUIDARDONATE LE LIRE CENTO

*in uno anno o più a diversi pregi, e a fare capo d'anno, e prima
cominceremo a uno per cento l'anno, e dirà cosie:*

Le lire 100 a uno per cento l'anno in 20 anni:

1 lire 101. — —	11 lire 111. 11. 4
2 lire 102. 0. 2	12 lire 112. 13. 8
3 lire 103. — 7	13 lire 113. 16. 2
4 lire 104. 1. 2	14 lire 114. 18. 11
5 lire 105. 2. 0	15 lire 116. 1. 11
6 lire 106. 3. —	16 lire 117. 5. 2
7 lire 107. 4. 3	17 lire 118. 8. 7
8 lire 108. 5. 8	18 lire 119. 12. 3
9 lire 109. 7. 4	19 lire 120. 16. 3
10 lire 110. 9. 3	20 lire 122. 0. 5

Le 100 lire a 1½ per cento l'anno:

1 lire 101. 10. —	11 lire 117. 16. 8
2 lire 103. — 6	12 lire 119. 12. 5
3 lire 104. 11. 4	13 lire 121. 7. 3
4 lire 106. 2. 9	14 lire 123. 3. 8
5 lire 107. 14. 7	15 lire 125. 7. —
6 lire 109. 5. 10	16 lire 126. 18. —
7 lire 110. 19. 8	17 lire 128. 16. 2
8 lire 112. 13. —	18 lire 130. 14. 11
9 lire 114. 6. 9	19 lire 132. 13. 1
10 lire 116. 1. 1	20 lire 134. 13. 1

Le 100 lire a 2 per cento l'anno:

1 lire 102. — —	11 lire 124. 6. 8
2 lire 104. — 10	12 lire 126. 16. 4
3 lire 106. 2. 5	13 lire 129. 7. 1
4 lire 108. 4. 9	14 lire 131. 18. 10
5 lire 110. 8. 1	15 lire 134. 11. 7
6 lire 112. 12. 3	16 lire 137. 5. 3
7 lire 114. 17. 3	17 lire 140. — 2
8 lire 117. 3. 3	18 lire 142. 16. 2
9 lire 119. 10. 1	19 lire 145. 13. 3
10 lire 121. 17. 11	20 lire 148. 11. 6

Le lire 100 a 2½ per cento l'anno:

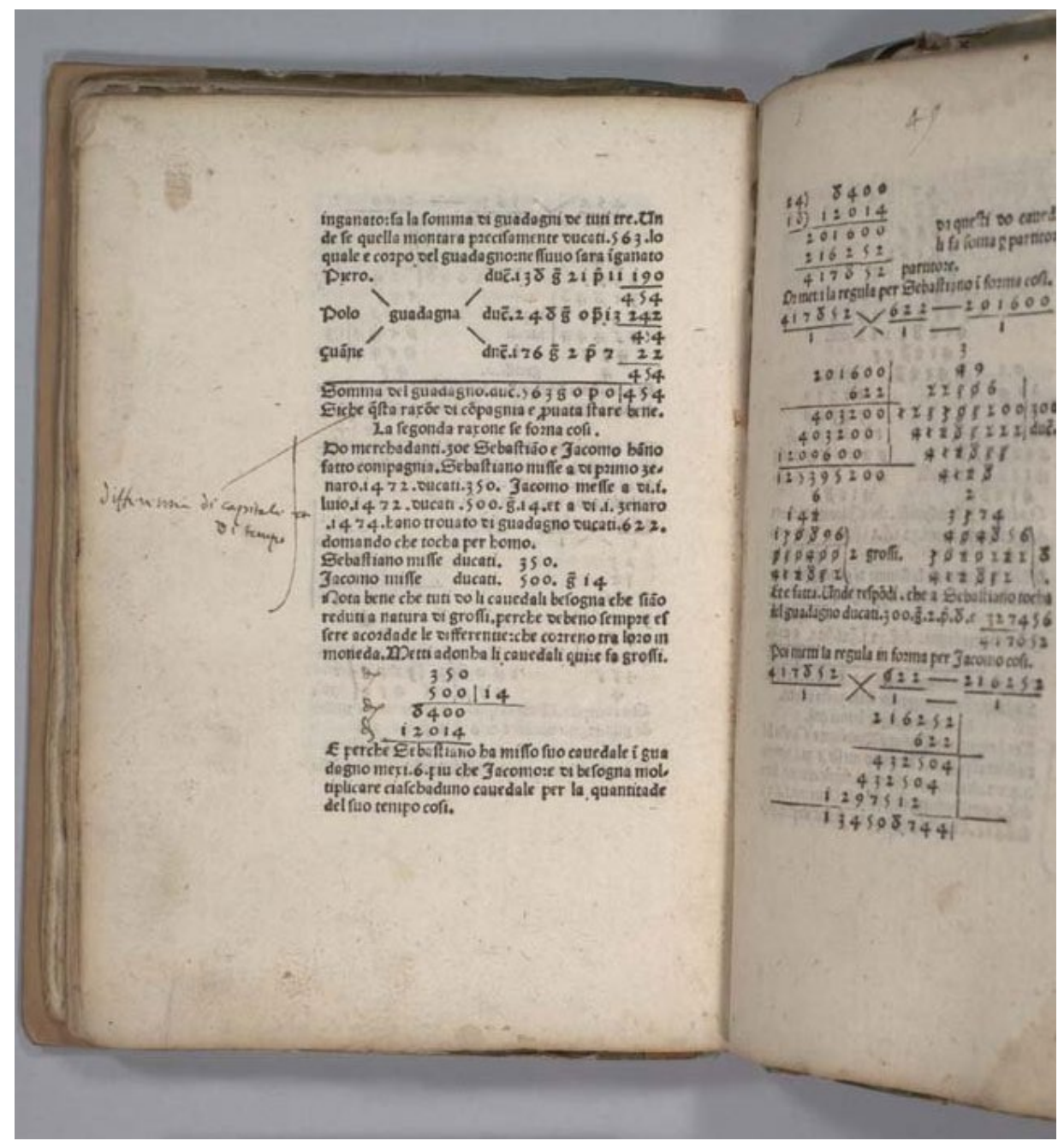
1 lire 102. 10. — ³	11 lire 131. 4. 2
2 lire 105. 1. 3	12 lire 134. 9. 4
3 lire 108. 13. 9	13 lire 137. 17. —
4 lire 110. 7. 7	14 lire 141. 5. 1
5 lire 113. 2. 10	15 lire 144. 16. 7
6 lire 115. 19. 5	16 lire 148. 9. —
7 lire 118. 17. 4	17 lire 152. 3. 3
8 lire 121. 16. 10	18 lire 155. 19. 4
9 lire 124. 17. 9	19 lire 159. 17. 3
10 lire 128. — 10	20 lire 163. 17. 2

https://cdn.ymaws.com/sites/www.medievalacademy.org/resource/resmgr/maa_books_online/evans_0024_bkmrkdpdf.pdf

This is a page from the **Treviso Arithmetic (1478)**, the earliest known example of a printed book on arithmetic. The work has no title, and no author's name is found anywhere in the book. It was printed in Treviso, a town about 26 km northwest of Venice. In many book catalogues, it is called the *Arte del Abbaco* (Art of Calculation), because it demonstrates not only how to use the Hindu-Arabic decimal place-value system, but how to solve numerous practical problems, mostly using the rule of three. The problem that begins in the middle of the left-hand page of this illustration is the following:

Two merchants, Sebastiano and Giacomo, enter into partnership. Sebastiano put in 350 ducats on the first day of January 1472; Giacomo put in 500 ducats, 14 grossi on the first day of July 1472. On the first day of January 1474, they find that they have gained 622 ducats. Required is the share of each. The first calculation for this problem, toward the bottom of the page, converts both amounts of money into grossi, given that there are 24 grossi in a ducat. The next instruction is to multiply each partner's amount by the length of time it was invested; so, on the next page, Sebastiano's amount is multiplied by 24 and Giacomo's by 18.

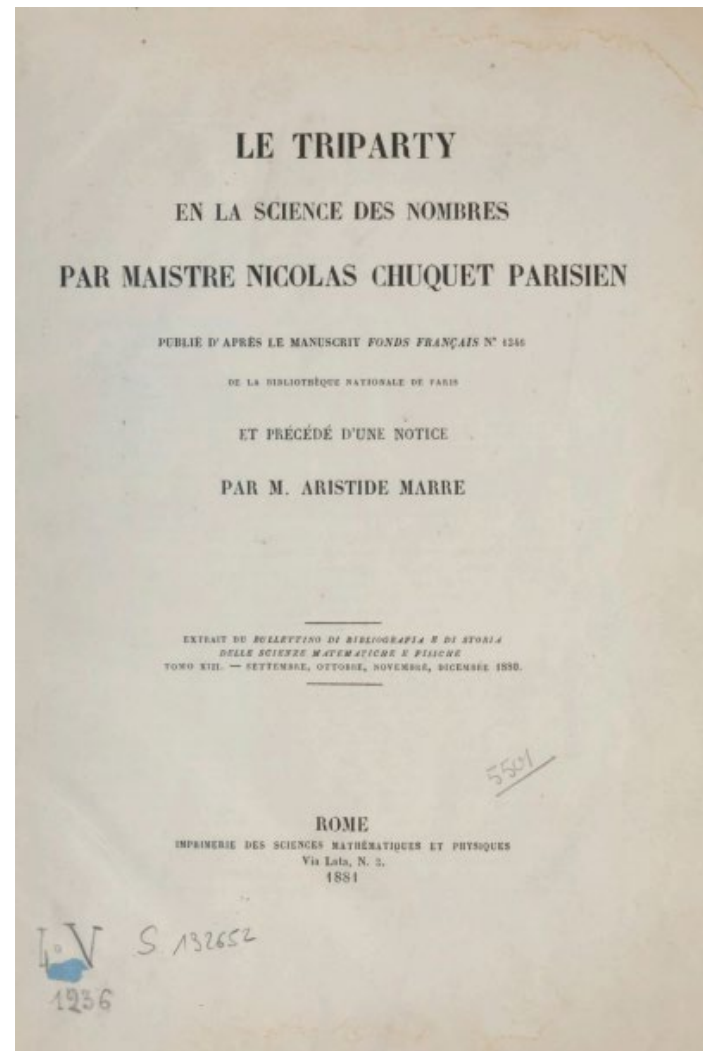
A complete translation and analysis of the Treviso Arithmetic can be found in Frank Swetz, *Capitalism and Arithmetic: The New Math of the 15th Century* (La Salle, IL: Open Court, 1987).





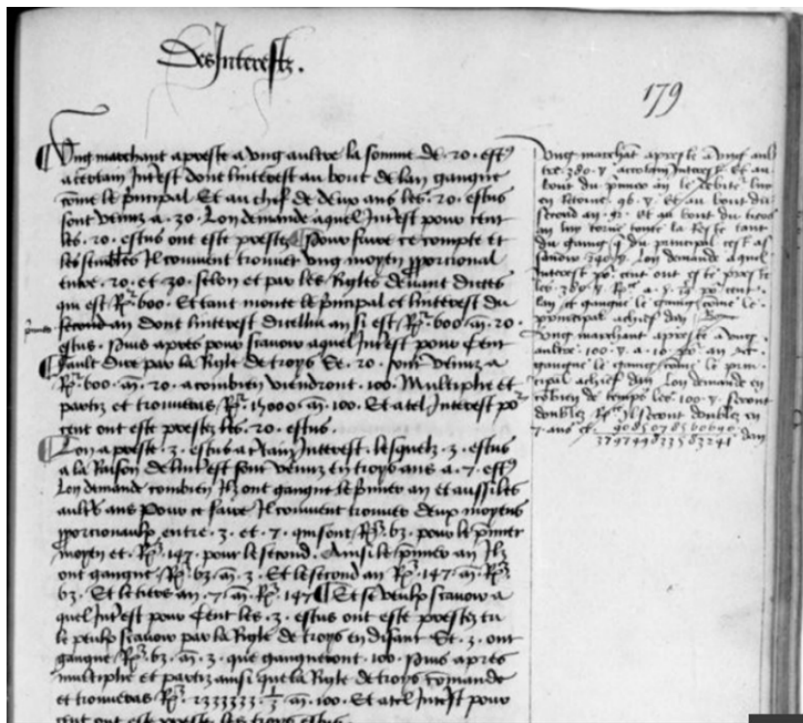
Nicolas Chuquet
(1445 – 1488)

The science of numbers in three parts,
MS 1484



Le Triparty en la science des nombres : publié d'après le manuscrit fonds français n°1346 de la Bibliothèque nationale de Paris / par maistre Nicolas Chuquet Parisien. et précédé d'une Notice / par M. Aristide Marre. 1881.

<https://gallica.bnf.fr/ark:/12148/bpt6k62599266>



Chuquet's examples of interest calculations. Bibliothèque nationale de France, MS 1346, f. 179r.

12. Chuquet's Manuscript, 1484

We come now to a mathematical manuscript³⁶ completed by Nicolas Chuquet of Lyon, France in 1484 (Figure 2). Some straight-forward compound interest problems appear in the printed version.³⁷ The first problem requires finding the annual interest rate per cent when 20 ecus have become 30 after 2 years, and it is correctly stated that this should be solved by taking the square root of 15,000 and subtracting 100. (This is effectively the same as Jacopo's problem of 1307, see above). Another problem states that one merchant has lent another a sum of money at 10% p.a. interest and at the end of 3 years the debt amounts to 100 livres – what was the sum originally lent? The next question is a little more complicated and in effect involves an annuity. A man lends someone 200 ecus for 3 years at 10% p.a. and receives in return the rent-free lease of a house for the same period. If the lease is worth exactly the same as the principal and interest which would otherwise have had to be returned at the end of the 3 years, what would the annual rent have been if it had been charged? The answer is given as $80^{140/331}$ ecus, which is correct if rent is payable annually in arrears. There are also two compound interest problems involving settlement of a debt part way through a year. One or two additional problems can be found in the original manuscript. From all these very practical examples, we can deduce that compound interest must have been employed at Lyon at this time, alongside simple interest. Support for compounding comes from Chuquet's comment³⁸ on the method commonly used for dividing the trading profit from a merchant enterprise between three partners whose capital had been employed in the business for different numbers of years, which was based on a simple interest concept. Chuquet criticises this approach: "And in order for such reckoning to be of value, it is necessary to presuppose that the principal or the capital alone has made a profit, and not the profit (itself). And inasmuch as it is not thus, for the profit and the profit on the profit made in merchandise can earn profit and profit on profit in proportion to the principal, from day to day, from month to month, and from year to year, whereby a larger profit may ensue. Thus such calculations are null, and I believe that among merchants no such companies are formed." Presumably, therefore, Chuquet preferred

C. G. Lewin (2019). "The emergence of compound interest", *British Actuarial Journal*, Vol. 24, e34, pp. 1–27

doi:10.1017/S1357321719000254

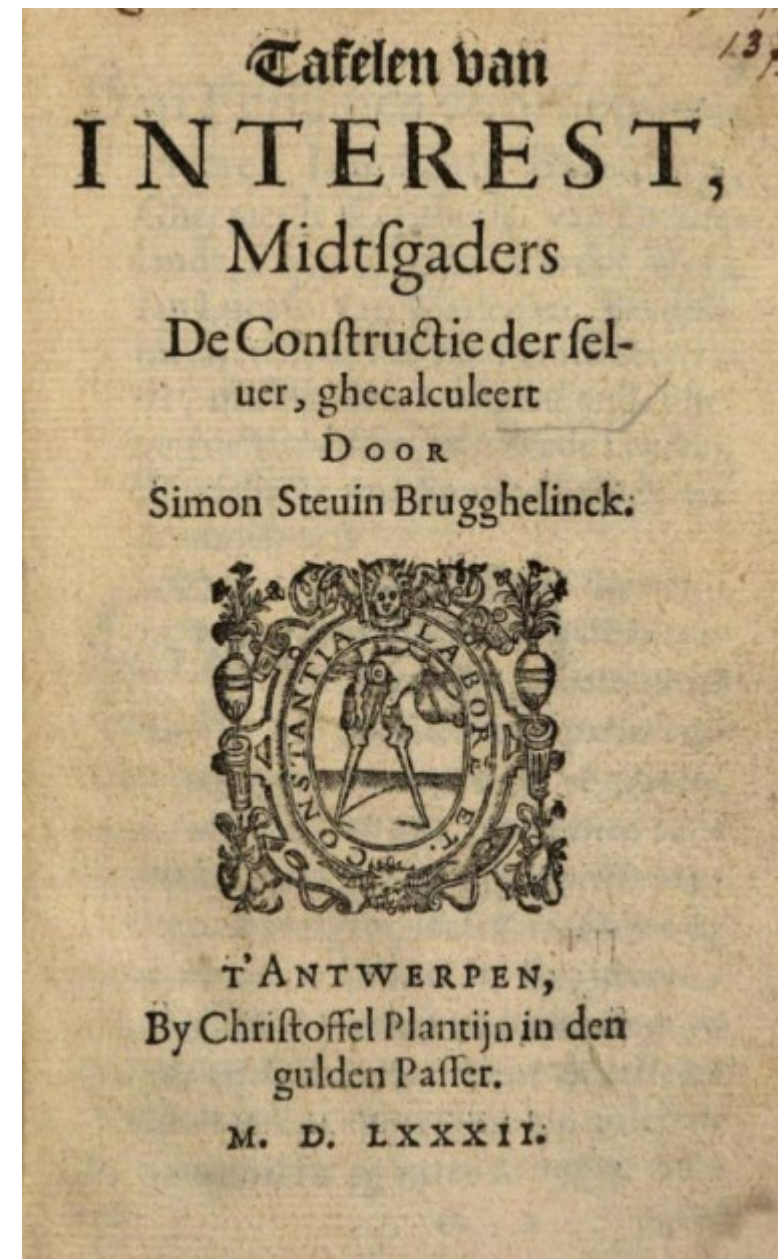
<https://www.cambridge.org/core/journals/british-actuarial-journal/article/emergence-of-compound-interest/799CB1D40CDD46F3010767BFC60F24DB>



Simon Stevin
(1548–1620)

His first book was *Tafelen van Interest* (Tables of Interest) which he published in 1582. Prior to this, unpublished manuscript interest tables were in common use with bankers throughout Europe but had been treated as secret information not to be divulged. Before presenting the numerical tables, Stevin gave rules for simple and compound interest and also gave many examples of their use.

<https://mathshistory.st-andrews.ac.uk/Biographies/Stevin/>



<https://books.google.gr/books?id=YMxbAAAQAAJ&dq=simon%20stevin%20tafelen&pg=PA1#v=onepage&q&f=false>

Part of Stevin's table of present values at 10% per annum. The middle column is for a single payment and the third column for an annuity.

44

Tafel van Interest van 10. ten 100.

1.	9090909.	9090909.
2.	8264463.	17355372.
3.	7513148.	24868520.
4.	6830155.	31698655.
5.	6209214.	37907869.
6.	5644740.	43552609.
7.	5131582.	48684191.
8.	4665075.	53349266.
9.	4240977.	57590243.
10.	3855434.	61445677.
11.	3504940.	64950617.
12.	3186309.	68136926.
13.	2896645.	71033571.
14.	2633314.	73666885.
15.	2393922.	76060807.
16.	2176293.	78237100.
17.	1978448.	80215548.
18.	1798589.	82014137.
19.	1635081.	83649218.
20.	1486437.	85135655.
21.	1351306.	86486961.
22.	1228460.	87715421.
23.	1116782.	88832203.
24.	1015256.	89847459.
25.	922960.	90770419.
26.	839055.	91609474.
27.	762777.	92372251.
28.	693434.	93065685.
29.	630395.	93696080.

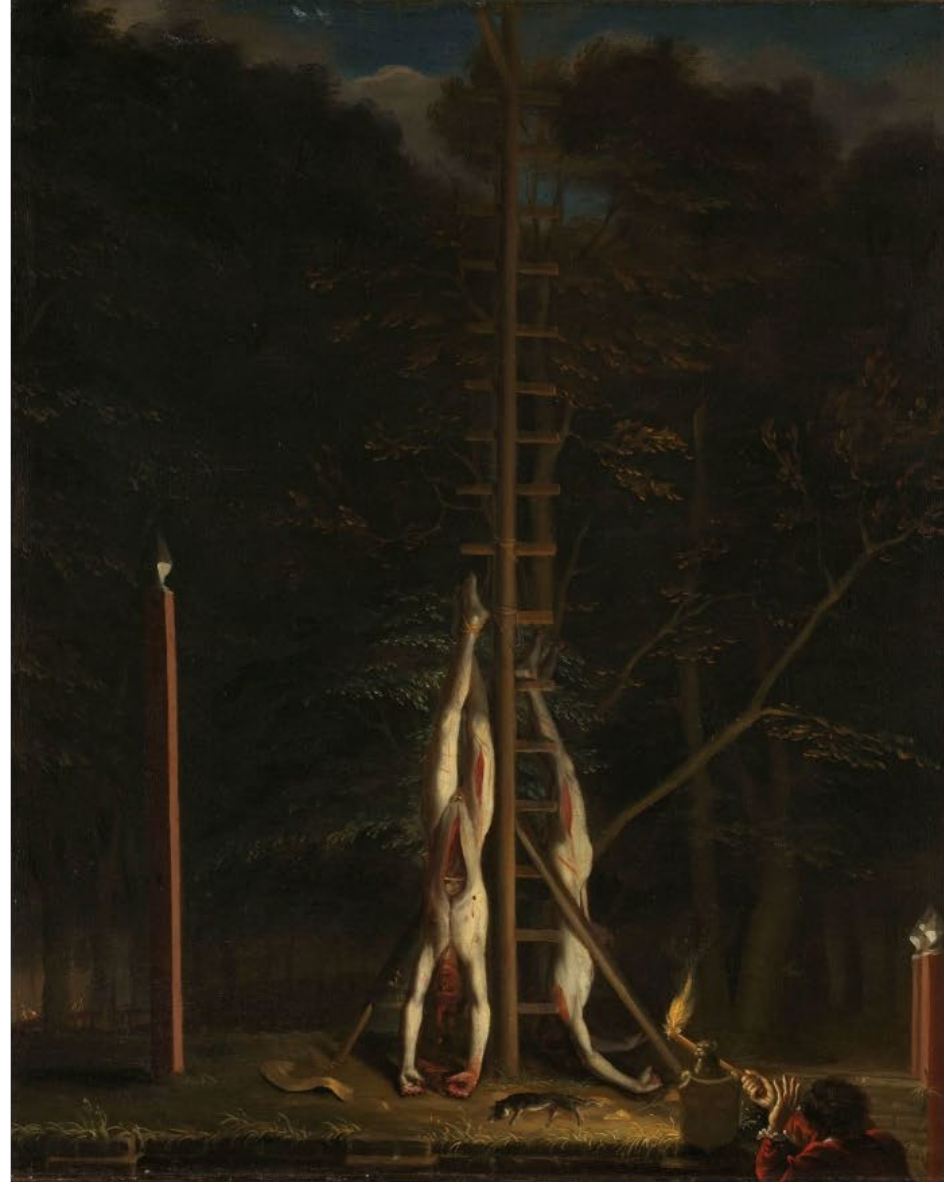
*The Worth of Life Annuities
Compared to Redemption Bonds*



Johan de Witt
(1625–1672)

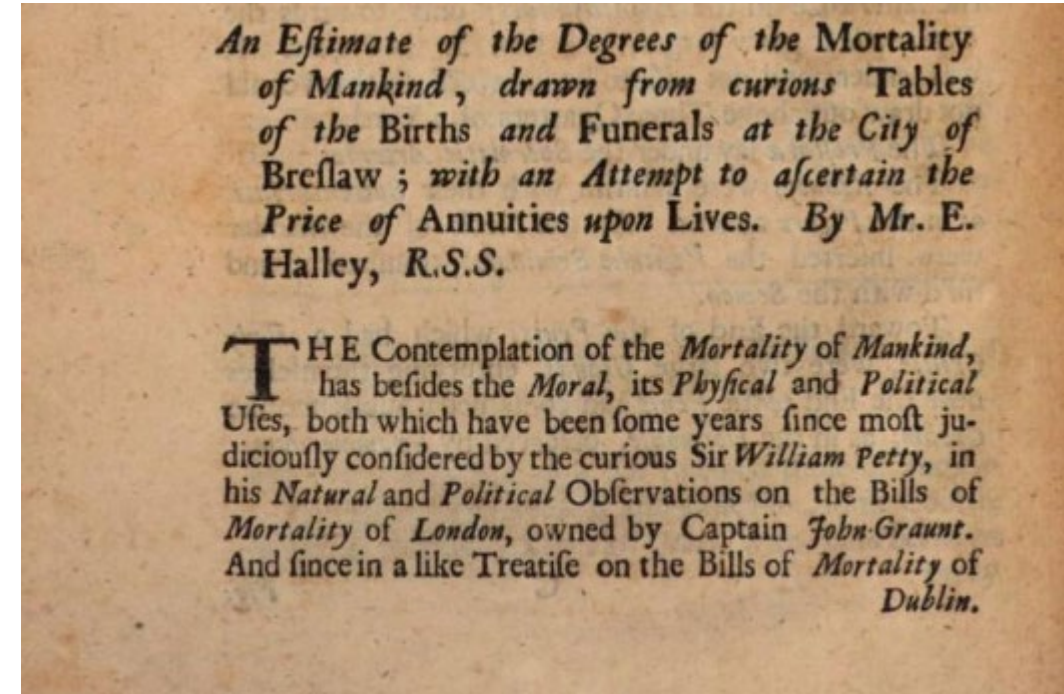
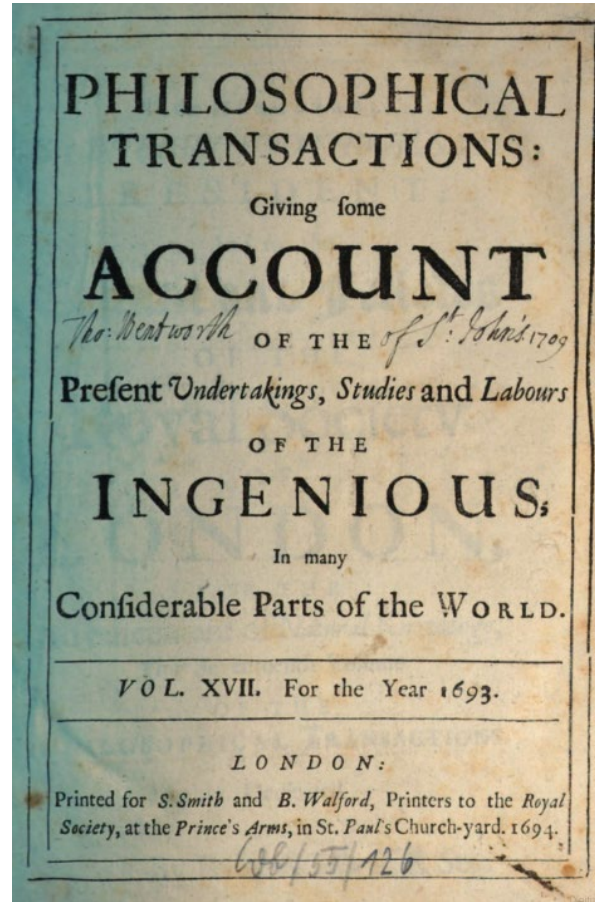


*The Corpses of the De Witt
Brothers, Jan de Baen*
(attributed to), c. 1672 - c.
1675 Rijksmuseum,
Amsterdam





Edmond Halley, FRS
(1656-1742)



The Philosophical Transactions of the Royal Society of London, vol. 17, 1693, pp. 596-610
<https://archive.org/details/s3id13654280/page/483/mode/1up>

OBSERVATIONS

ON

REVERSIONARY PAYMENTS;

ON

SCHEMES for providing ANNUITIES
for WIDOWS, and for Persons in OLD AGE;

ON

The METHOD of Calculating the VALUES
of ASSURANCES ON LIVES;

AND ON

THE NATIONAL DEBT.

To which are added,

FOUR ESSAYS

On different Subjects in the Doctrine of LIFE-
ANNUITIES and POLITICAL ARITHMETICK.

ALSO,

AN APPENDIX,

Containing a complete Set of TABLES; particularly,
Four New Tables, shewing the Probabilities of Life in
LONDON, NORWICH, and NORTHAMPTON; and the
Values of joint Lives.

The SECOND EDITION, with a SUPPLEMENT,
Containing Additional OBSERVATIONS and TABLES.

BY RICHARD PRICE, D. D. F. R. S.

LONDON:

Printed for T. CADELL, in the Strand.
M. DCC. LXXII.

ARITHMETICALL
QUESTIONS,

TOYCHING

The Buying or Exchange of Annuities;
Taking of Leases for Fines, or yearly Rent;
Purchase of Fee-Simples; Dealing for present or future Possessions; and other Bargaines and Accounts, wherein allowance for disbursing or forbearance of money is intended;

Briefly resolved, by means of certain Breuiats,

Calculated by R. W. of London, practitioner in
the Arte of NUMBERS.

Examined also and corrected at the Presse, by
the Author himselfe.



J. Bridgewater

LONDON,

Printed by H. L. for Richard Redmer; and are to be sold
at his Shoppe at the West-dore of S. Pauls, at the
Signe of the Starre. 1613.

£. 6.
3.

K. W.

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h | b h

A

ΠΙΝΑΚΙΔΙΟΝ

ΑΡΙΘΜΗΤΙΚΟΝ

ἐν ᾧ περιέχονται διάφοροι πίνακες, διὰ τῶν ὁποίων δύνάται πᾶς τις με εὐκολίαν νὰ εὕρῃ Φλωρία, Ταλήρια κτλ. ἀπὸ τὸ ἕνα ἕως τὰ 1000. πόσα κάμνεν ὁμοίως Δεκαεπτάμια ἢ Εἰπτάμια ἀπὸ τὸ ἕνα ἕως τὰ χίλια χέλια, πόσα κάμνεν. Καὶ πίνακες Διαφόρων, διὰ τὰ ἡξέυρη πόσον Διάφορον ἀνήκῃ τὸν χρόνον, μῆνα, εβδομάδα, ἢ ἡμέραν πρὸς 6. 8. 10. 12. τὰ ἑκατόν.

Εἴτι Δε

καὶ διάφορα φλωρία ἢ ἀσημένια ἄσπρα τῆς Εὐρώπης πόσα Φιορίνια κάμνεν.



ΕΝ ΒΙΕΝΗ, ΤΗΣ ΑΟΥΣΤΡΙΑΣ,
ΕΚ ΤΗΣ ΤΥΠΟΓΡΑΦΙΑΣ ΓΕΩΡΓ. ΒΕΝΤΟ ΤΗ
ΕΝ ΕΤΕΙ 1791.

ΠΙΝΑΞ

Εν ᾧ περιέχεται πόσον διάφορον ἔχει νὰ πληρῶνῃ τινὰς ὅς ἕνα χρόνον, εἰς ἕνα μῆνα, εἰς μίαν ἐβδομάδα, εἰς μίαν ἡμέραν πρὸς 6. 8. 10. ἢ 12. τὰ ἑκατόν. ἀρχιλιῶντας ἀπὸ τὰ 1000. ἕως 1. Σημειωτέον ὅτι τὸ Φ. δηλοῖ φιορίνια, τὸ Κ. κραϊτζάρια ἀπὸ τὰ ὁποῖα 60. κάμνεν ἕνα φιορίνι, ἢ τὸ φ. φένιχ, ἀπὸ τὰ ὁποῖα 4. κάμνεν ἕνα κραϊτζάρι.

Διάφορον πρὸς 6. τὰ ἑκατόν.

Κεφάλαιον.	Διὰ ἕνα χρόνον.			Διὰ ἕνα μῆνα.			Διὰ μίαν ἐβδομάδα.			Διὰ μίαν ἡμέραν.		
	Φιορίν.	Φ.	Κ. φ.	Φ.	Κ.	φ.	Φ.	Κ.	φ.	Φ.	Κ.	φ.
1000	60	—	—	5	—	—	1	15	—	—	10	—
900	54	—	—	4	30	—	1	7	2	—	9	1
800	48	—	—	4	—	—	1	—	—	—	8	—
700	42	—	—	3	30	—	—	52	—	—	7	1
600	36	—	—	3	—	—	—	45	—	—	6	—
500	30	—	—	2	30	—	—	37	2	—	5	—
400	24	—	—	2	—	—	—	30	—	—	4	1
300	18	—	—	1	30	—	—	22	2	—	3	—
200	12	—	—	1	—	—	—	15	—	—	2	1
100	6	—	—	—	30	—	—	7	2	—	1	—
90	5	24	—	—	27	—	—	6	3	—	—	3
80	4	48	—	—	24	—	—	6	—	—	—	3
70	4	12	—	—	21	—	—	5	1	—	—	3
60	3	36	—	—	18	—	—	4	2	—	—	2
50	3	—	—	—	15	—	—	3	3	—	—	2

ΑΡΙΘΜΗΤΙΚΗ ΕΜΠΟΡΙΚΗ

Ἡτοι Βιβλίον περιέχον πολλές, κ; διαφόρες
λογαριασμούς, Μοιέδας, κ; Α'νταλλαγὰς τῶν Κυριω-
τέρων πόλεων τῆς Ευρώπης. νῦν πρῶτον σχεδιασθὲν
πρὸς ὠφέλειαν τῶν νέων ἀπὸ μέλλουσι νὰ μεταχει-
ρισθῶν τὰ ἔμπορικὰ, παρὰ

ΠΑΝΑΓΙΩΤΟΥ ΣΠΑΝΟΠΟΥΛΟΥ

τῆ Πελοποννήσου. Τύποις δὲ ἐκδοθὲν δαπάνῃ
τῆ ἰδίας.



Ἐν Τεργεσίῳ 1803.

Παρὰ τῆ Τυπογραφίᾳ Κοτζίτη.



Περὶ Κλασμάτων, ἤτοι τζακισμάτων.

Κλάσμα εἶναι μέρος ἀκεραίου, ὅτι ἂν τὸ ἀκεραῖον διαιρηθῆ εἰς μέρη, καὶ θὰ
μέρος λέγεται κλάσμα. Γράφονται δὲ τὰ κλάσματα μὲ δύο ἀριθμοὺς χωρισμέ-
νες ἀπὸ μίαν πλάγιον γραμμὴν. καθὼς $\frac{1}{2}$. $\frac{1}{3}$. $\frac{1}{4}$. $\frac{1}{5}$. $\frac{1}{6}$. . . ὁ ἑπάνω
μὲν τῆς γραμμῆς ἀριθμὸς ὀνομάζεται ἀριθμητὴς, καὶ φανερώνει τὴν ποσότητα τῆ
κάτω ἀριθμοῦ. ὁ κάτω δὲ τῆς γραμμῆς λέγεται παρονομαστὴς, ἐπειδὴ φανερώνει
τὴν ποιότητα τῆ ἑπάνω γραμμῆς, ἥταν εἰς πόσα ἑμορίσθη τὸ ἀκεραῖον.

Μέρη ἀκεραίων.

Βιορίαι.	Γροσίαι.	Λίται.
$\frac{1}{2}$ — 30 Κραυτάνια.	$\frac{1}{2}$ — 20 παράδες.	$\frac{1}{2}$ — 10 σολδαί.
$\frac{1}{3}$ — 20 —	$\frac{1}{3}$ — 13 $\frac{1}{3}$ —	$\frac{1}{4}$ — 5 —
$\frac{1}{4}$ — 15 —	$\frac{1}{4}$ — 10 —	$\frac{1}{5}$ — 4 —
$\frac{1}{5}$ — 12 —	$\frac{1}{5}$ — 8 —	
$\frac{1}{6}$ — 10 —	$\frac{1}{6}$ — 6 $\frac{2}{3}$ —	
$\frac{1}{8}$ — 7 $\frac{1}{2}$ —	$\frac{1}{8}$ — 5 —	

ΠΡΟΧΕΙΡΟΣ
ΑΡΙΘΜΗΤΙΚΗ

διδάσκουσα ακριβῶς ὅλα τὰ εἶδη τῆ λογα-
ριασμῆ ἐν τε Ἀκροαίοις καὶ Κλασματικοῖς

Ἀριθμοῖς μετὰ τῶν διαφορῶν

Μεθόδων·

ἢ

προσετέθη

ΠΑΡΑΡΤΗΜΑ

Περὶ τῶν εἰς τὴν ἐμπορίαν ἀνηκόντων
λογαριασμῶν·

ἐρανοσθεῖσα

ὑπὸ

Δημητρίου Νικολάου τῆ Δαρβάρως

τῆ ἐκ Κλεισθρας τῆς Μακεδονίας

εἰς κοινὴν χρῆσιν

τῶν περὶ τὴν σπυρὴν καὶ ἐμπορίαν καταγινομένων,

τύποις δέκδοθεῖσα

δαπάνη

τῶν Κυρίων Αὐταδέλφων Δαρβάρων.

Ἐν Βιέννῃ τῆς Αἰτίας

ἐν τῇ Ἑλληνικῇ Τυπογραφίᾳ Γ. Βενδωίτη.

1803.

Περὶ λογαριασμῶν τῆς Ὑφαιρέσεως
εἴτεν τῆ κοινῶς λεγομένη Κατεβα-
σμῆ, Ἰταλισί δὲ Ρ' αμπάττ.

§. 8. Κατεβασμὸς δηλοῖ ἐκεῖνο, ὅπῃ ἐκόπτεται
ἀπὸ μίαν ὁποιαδήποτε ποσότητα χρημάτων διὰ τὴν
ταχύτεραν πληρωμὴν. Ὁ τοιοῦτος κατεβασμὸς εἶναι
δικαιότατος· ἐπειδὴ κυρίως εἶναι ἀναπλήρωσις τῆ
διαφορῆ, τὸ ὅποιον ἤθελε τὸ χάσει τινὰς διὰ τὴν τα-
χύτεραν πληρωμὴν. Παρ. χάριν ἂν ἦτον νὰ πλη-
ρῶσω ἐγὼ τῶρα εὐθὺς ἐν κεφάλαιον, ὅπῃ ἔμελλε
μετὰ καιρὸν νὰ πληρωθῆ, ἔπρεπε γὰρ δῶσω τῆλά-
χισον τόσον ὀλιγώτερα δι' αὐτὸ, ὅσον κάμνει τὸ συν-
ειθισμένον διάφορον τῆ τόκῃ, ὅπῃ ἤθελάν μοι δώ-
σει τὰ ἄσπρα, ὅπῃ τὰ δίδω τῶρα, καὶ τὰ λαμβά-
νω πάλιν μετὰ καιρὸν.

§. 9. Ὁ κατεβασμὸς διορίζεται, καθὼς ἐπὶ τῆ
τόκῃ εἰς τὰ 100, μετὰ ταύτην ὅμως τὴν διαφορὰν,
ὅτι τὰ 100 τῆ κατεβασμῆ πρέπει νὰ λογαριασθῶ-
σιν εἰς τὰ 100 ἐπάνω, ταῦτέσιν ὅταν λόγῃ χάριν
διορίξω 5 τὰ 100 κατεβασμὸν, δὲν θέλει νὰ εἴ-
πῃ 5 ἀπὸ τὰ 100 νὰ κατεβασθῶσι, καὶ 95 νὰ
πληρωθῶσιν, ἀλλ' ἀπὸ τὰ 105 νὰ ἀφαιρεθῶσι 5, καὶ
100 νὰ πληρωθῶσι.

§. 10. Κατὰ τὸν διωρισμένον κατεβασμὸν, τὰ
ἐκατὸν, τὸν χρόνον, τὸν μῆνα, καὶ τὰ λοιπὰ, γί-
νονται οἱ λογαριασμοὶ τῆ κατεβασμῆ ἐκάστης ὁποι-
αδήποτε ποσότητος διὰ κάθε ζητούμενον καιρὸν, ὡς
δύναται ἕκαστος νὰ ἰδῆ εἰς τὰ ἐξῆς παραδείγματα.

Ανάλυση του τόκου και των νομισματικών φαινομένων



Jean Bodin
(c. 1530 – 1596)

Quantity theory of money. Inflation



<https://gallica.bnf.fr/ark:/12148/btv1b531571287>



Thomas Wilson
(1524–1581)

A
DISCOURSE UPON
USURY

BY WAY OF DIALOGUE AND ORATIONS, FOR THE BETTER
VARIETY AND MORE DELIGHT OF ALL THOSE
THAT SHALL READ THIS TREATISE

[1572]

BY

THOMAS WILSON

*Doctor of the Civil Lawes, one of the Masters of
Her Majesty's Honourable Court of Requests*

WITH AN HISTORICAL INTRODUCTION BY

R. H. TAWNEY

Sometime Fellow of Balliol College, Oxford

<https://babel.hathitrust.org/cgi/pt?id=uc1.b5136944&view=1up&seq=8>

A discourse vppon vsurye by vvaye of dialogue and oracions, for the better varietye, and more delite of all those, that shall reade thys treatise. By Thomas Wilson, doctor of the ciuill lawes, one of the masters of her maiesties honorable courte of requestes. Seene & allowed, according to the Queenes Maiesties iniunctions.

Londini: In ædibus Rychardi Tottelli, 1572.

<https://quod.lib.umich.edu/cgi/t/text/text-idx?c=eebo;idno=A15541.0001.001>

CHAP. X.

Of the Laws and Prohibitions against Usury.

Many are the Authors which have written against Usury in all ages, every man according to his Profession, most especially the Divines, who have the word of God for their Warrant, wherein also the Ancient Fathers have been very strict to construe the same accordingly, making any thing taken above the Principal to be Usury, because the very word of Usury in the Hebrew Tongue is called a Biting, of this word Neshech, which is nothing else but a kind of Biting, as a Dog useth to Bite or Gnaw upon a bone, so that he that Biteth not, doth not commit Usury; for Usury is none other thing than a biting, as I said of the very Etymology and proper nature of the word, otherwise it cannot be called Neshech, as the Hebricians say.

Definition of Usury.

According to the definition then of Biting Usury, we are to proceed in this discourse, after that we have briefly declared the Laws and Prohibitions against Usury, wherein we must begin with the Holy Scripture, observing these places.

God saith in the 22 of Exodus If thou lend Money to any of my people that is poor by thee, thou shalt not be an Usurer unto him, neither shalt thou oppress him with Usury. In another place, If thy brother be waxen poor, and fall into decay with thee, receive him as a stranger, or a sojourner, and let him live by thee, and thou shalt take no Usury of him, nor yet advantage, but shalt fear thy God, that thy brother may live with thee. Thou shalt not lend him thy Money upon Usury, or lend him of thy food to have an advantage by it. Add unto this the places noted in the Margin, and so let us come to the Holy Ancient Fathers. St. Jerom saith, there is no difference betwixt Usury, Fraud, and violent Robbing. St. Aug. saith, An Usurer is he (said to be) who doth demand more in Money, or any thing else, than he hath delivered: According to which the said St. Jerom also saith, That some do think Usury to be only in Money; but let them well understand, that Usury is an Overplus in any thing above that which was lent. St. Ambrose likewise saith, If any man take Usury he doth commit Extortion, Rapine, and Pillage, and shall not live the life; as who should say, he should die therefore. To omit many other of the

Holy Scripture.

Levit. 25. Deur. 23.

Psal. 15. Exech. 18. Matth. 5.

Luke 6. Ancient Fathers.

Amb. de bono mortis.

Gerard Malynes 1686

Consuetudo, vel, Lex Mercatoria:

OR, THE Ancient Law-Merchant.

In Three Parts, according to the Essentials of

TRAFFICK.

Necessary for

Statesmen, Judges, Magistrates, Temporal and Civil Lawyers, Mint-men, Merchants, Mariners, and all Others Negotiating in any Parts of the World.

By Gerard Malynes, Merchant.

Whereunto are Annexed the following TRACTS, viz.

- I. The Collection of Sea Laws.
II. Advice concerning Bills of Exchange.
III. The Merchants Mirrour: or, Directions for the Perfect Ordering or Keeping of his Accompts.
IV. An Introduction to Merchants Accompts.
V. The Accountants Closet, being an Abridgment of Merchants Accounts, kept by Debtor and Creditor.

The Third Edition,

Wherein are Inserted the Three TRACTS following, never Before Printed in any former Impression.

- I. The Jurisdiction of the Admiralty of England Asserted.
II. The Ancient Sea Laws of Oleron, Wisby, and the Hanse-Towns, still in force.
III. The Sovereignty of the British Seas, proved by Records, History, and the Municipal Laws of this Kingdom.

LONDON,

Printed for T. Basset, at the George in Fleetstreet; R. Chiswell, at the Rose and Crown in St. Pauls Church-yard; T. Horne, at the South Entrance of the Royal Exchange, and E. Smith, at the Bible under the Piazza. 1686.

https://archive.org/details/consuetudovellex00maly/page/n7/mode/2up



Sir William Petty (1623–1687)

A
TREATISE
OF
Taxes & Contributions.

Shewing the Nature and Measures of

{ Crown-Lands. Assesments. Customs. Poll-Moneys. Lotteries. Benevolence. }	{ Penalties. Monopolies. Offices. Tythes. Raising of Coins. Harth-Money. Excize, &c. }
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With several intersperst Discourses and Digressions concerning

{ Warres. The Church. Universities. Rents & Purchases. Usury & Exchange. Banks & Lombards. Registries for Con- veyances. }	{ Beggars. Ensurance. Exportation of { Money. Wool. Free-Ports. Coins. Housing. Liberty of Con- science, &c. }
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*The same being frequently applied to the pre-
sent State and Affairs of
IRELAND.*

London, Printed for N. Brooke, at the Angel in Cornhill. 1662.

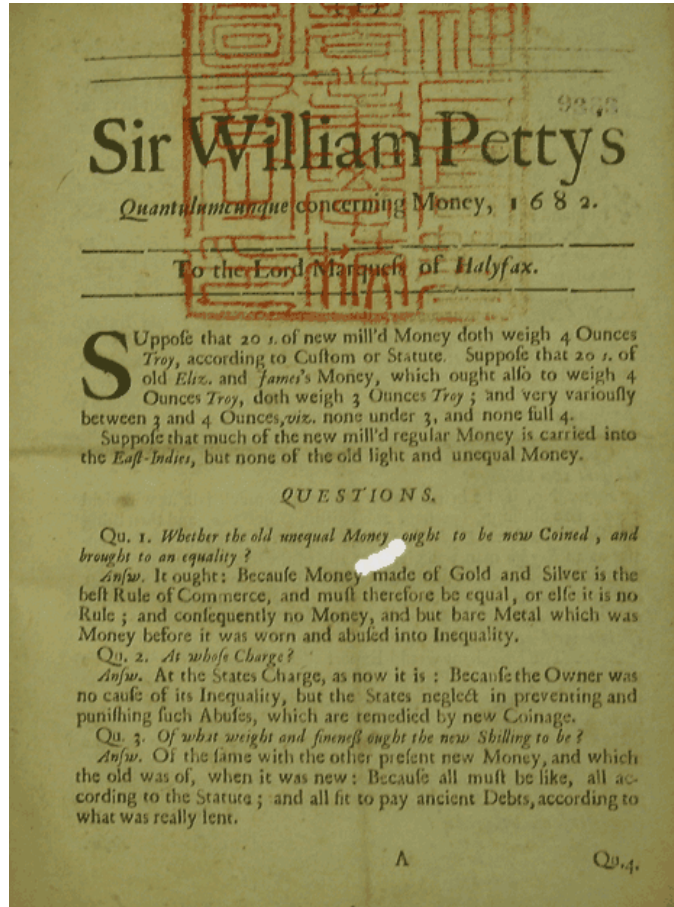
19. Having found the Rent or value of the *usus fructus per annum*, the question is, how many years purchase (as we usually say) is the Fee simple naturally worth? If we say an infinite number, then an Acre of Land would be equal in value to a thousand Acres of the same Land; which is absurd, an infinity of unites being equal to an infinity of thousands. Wherefore we must pitch upon some limited number, and that I apprehend to be the number of years, which I conceive ²⁷ one man of fifty years old, another of twenty eight, and another of seven years old, all being alive together may be thought to live¹; that is to say, of a Grandfather, Father, and Childe; few men having reason to take care of more remote Posterity: for if a man be a great Grandfather, he himself is so much the nearer his end, so as there are but three in a continual line of descent usually co-existing together; and as some are Grandfathers at forty years, yet as many are not till above sixty, and *sic de cæteris*.

Sir William Petty (1623–1687)

QUANTULUMCUNQUE

CONCERNING MONEY.

1682



Qu. 28. *What is Interest or Use-Money?*

Answ. A Reward for forbearing the use of your own Money for a Term of Time agreed upon, whatsoever need your self may have of it in the mean while.

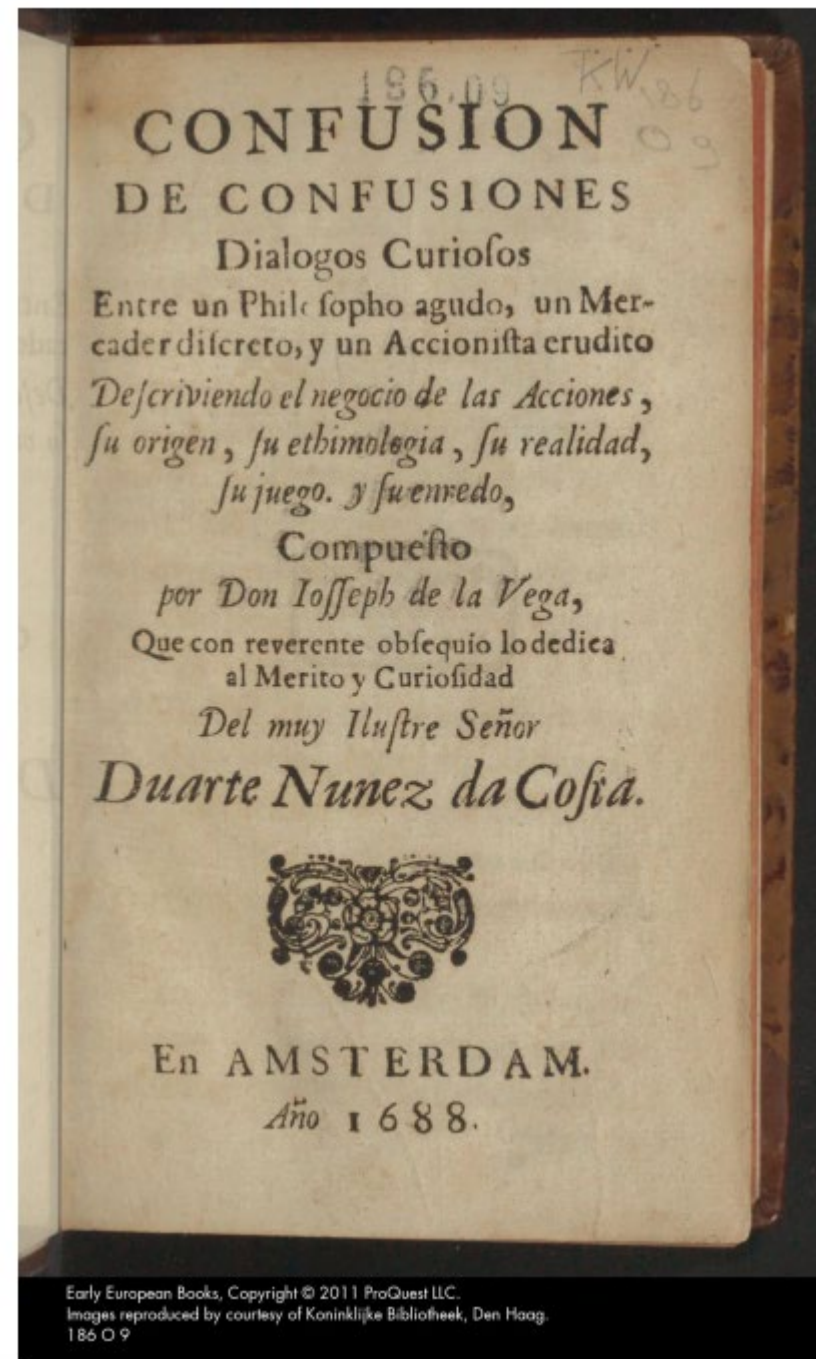
Qu. 32. *What do you think of our Laws for limiting Interest? ||*

Answ. The same as limiting the Exportation of Money; (8) ✓ and there may be as well Laws for limiting Exchange also: For Interest always carrieth with it an Ensurance *praemium*, which is very casual, besides that of Forbearance: For Instance, in *Ireland* there was a time when Land (the highest Security) was sold for 2 Years Purchase: It was then naturally just to take 20, 30, or 40 *per Cent.* Interest; whereas there ✓ the Law allows but 10. And since that time, Land being risen to 12 Years purchase, responsible Men will not give above 8. And insolent¹ Men will offer *Cent. per Cent.* notwithstanding the Law. Again, suppose a Man hath 100*l.* of Land, worth 20 Years Purchase, and another 100*l.* in Houses, worth 12 Years Purchase; and an other 100*l.* in Shipping, worth 2 Years Purchase; and another in Horses, worth 6 Months Purchase; Is it not manifest he must have a greater Yearly *praemium* for lending his House than his Land, his Ship than his House, and his Horse than his Ship? For if his Horse be worth 100*l.* he cannot hire him out for less than 10*s.* *per diem*, whereas the Land will not yield a Groat for the same time; and these Hires are the same with Intrest.



JOSÉ DE LA VEGA
1650 - 1692

<https://archive.org/details/ned-kbn-all-00002508-001/page/n11/mode/1up>





Job Adriaenszoon Berckheyde
Binnenplaats van de Oude Beurs te Amsterdam na 1668
The Old Exchange of Amsterdam, ca. 1670

Tocante à los OPSIES , son unos premios
o cantidades que se dán para assegurar las
partidas, o conquistar los avanços; los qua-
les firven de velas para navegar felices en las
bonanças, y de ancoras para navegar seguros
en las tormentas.

Están las Acciones al presente en precio
de 580. pareceme que por el gran retorno
que se espera de la India, aumento de la Com-
pañia, reputacion de los generos, reparti-
cion que se promete, y paz de la Europa, fu-
birán à mucho mayor numero del que lo-
gran. No me delibero sin embargo, à com-
prar partidas effectivas, porque temo que si

D 4 me

Αναφορά στα Options

As for the **OPSIES**, they are premia or amounts that are given to secure gambles or profits, which serve as sails to sail happily in good times and anchors to sail safely in storms. The shares are now at a price of 580. I believe that because of India's expected strong performance, the [East Indies] Company's growth, the reputation of the managers, the promised dividend and peace in Europe, they will rise to a much higher price. However, I am reluctant to buy in cash because I fear that if my calculations fail, I could suffer a setback, or a misfortune could befall me.

So, I go to those who say they take these **opsies**, ask them how much they want to commit to give me each lot at 600 until a certain time, agree on the price, register it in the bank and know that I can't lose more than I pay. Thus, I earn whatever goes above 600 and whatever goes below 600 does not affect my judgement because of anxiety, I don't worry about my honour, nor does it take away my peace of mind. If, when they reach 600 or so, I change my mind and think that everything is not as good as it seemed, I sell the lots without danger, because everything that goes down is profit. And as he who received the money is obliged to deliver them to me at the agreed price, even if they go up, I can feel no other loss than that of the **opsie**, nor mourn any other punishment than that of the premium.

I can do the same business the other way round, if I think the stock will go down, by giving them the premia instead of giving them out to receive, and trusting upon them my Fortune, or buying upon them during that time. And many times, I make different operations with success, and he who participates wins at the expiration of the time, though he always carries them with his risk and keeps them with his fear.

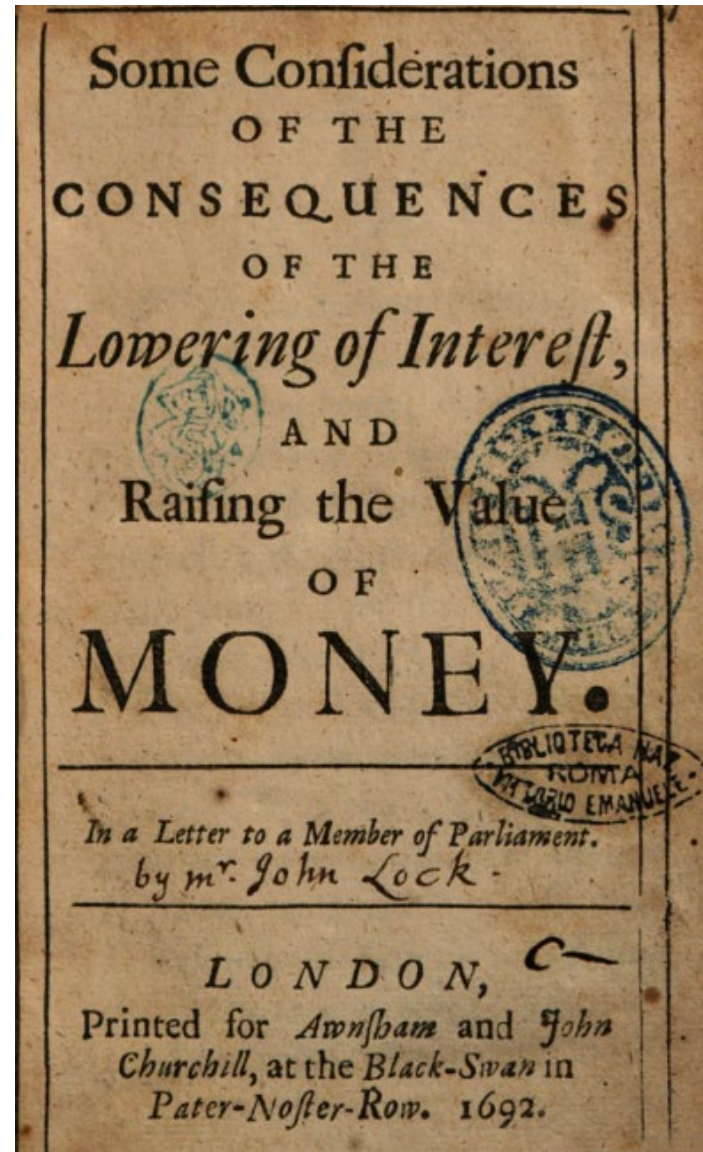
go, y los atrevera con la fama.
Llamaronle los Flamencos OPSIE, derivado del verbo latino *Optio Optionis*, que significa *Eleccion*, por quedar à eleccion del que lo dá, el poder pedir, o entregar la partida, al que lo recibe: y siendo que el famoso Calepino, deduze *Optio elegir*, de *optando dessear*; aqui se ilustra con propiedad la Ethimologia, pues dessea el que desembolsa el premio, elegir lo que mas convenga, y en falta siempre puede dexar de elegir lo que dessea. /

The Flemish called it OPSIE, derived from the Latin word *optio optionis*, meaning choice, because it is up to the giver to choose whether to ask or give the item to the receiver. And as the famous Calepino deduces *optio elegir* from *optando dessear*, the etymology is clearly seen here, because the one who pays the premium wishes to choose what is more convenient and, if he is mistaken, he can always stop choosing what he wished for.



John Locke, FRS
(1632-1704)

1692



AS CHEME for raising Two Millions upon Annuities for Lives, out of a Fund of 120,000*l.* per Ann. appropriated to that Use, with greater Ease to the Government, and more Advantage to the Subject than any other Scheme heretofore.

The Scheme is as followeth, viz,

THAT there be 20000 Tickets given out at 100*l.* per Ticket, which amounts to 2000,000 Principal Money, each Ticket intitling the Purchaser's Widow, after his Decease to 40*l.* per Annum, during her Life, besides which, Considerable Advantage to his Widow after his Decease, may, himself be so Successful as to gain in this Adventure, one, two, three, four, five, or ten thousand Pounds; there being 200,000*l.* divided into Prizes, part of the three six Years Interest for the Benefit of the Purchaser, the appropriated Fund for this purpose to Commence from *Christmas*, 1714. the whole of the Prizes to be paid at *Christmas*, 1717. without Interest. So that the Purchaser, besides the Satisfaction of so compleat a Provision made for his Widow after his Decease, there's a great probability of getting an Estate to be enjoy'd by himself, unless it shall so happen that he Dye before the above said Time of Payment, which is but three Years; and to whomsoever it shall so happen, his Prize to be paid to his next Heir at Law; over and above the Annuity to his Widow.

The above said 200,000*l.* being divided into 5239 Prizes, which is not four to one, which is less odds than hath been in any Preceding Lottery.

The Number and Value of the Prizes are as followeth, viz.

2	-----	10000	-----	20000
2	-----	5000	-----	10000
2	-----	4000	-----	8000
3	-----	3000	-----	9000
4	-----	2000	-----	8000
6	-----	1000	-----	6000

South Sea Bubble



<https://blog.nationalarchives.gov.uk/the-south-sea-bubble-of-1720/>

William Hogarth, 'The South Sea Scheme: speculators ruined by the collapse of the South Sea Company' (1721)



John Law
(1671–1729)

Mississippi Scheme



MEMOIRS
OF
EXTRAORDINARY POPULAR DELUSIONS
AND THE
Madness of Crowds.

By CHARLES MACKAY, LL.D.

AUTHOR OF "DEBIA," "THE SALAMASOBINE," ETC.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS.

VOL. I.

N'en déplaie à ces fous nommés sages de Grèce,
En ce monde il n'est point de parfaite sagesse;
Tous les hommes sont fous, et malgré tous leurs soins
Ne diffèrent entre eux que du plus ou du moins.

BOLLEAU.

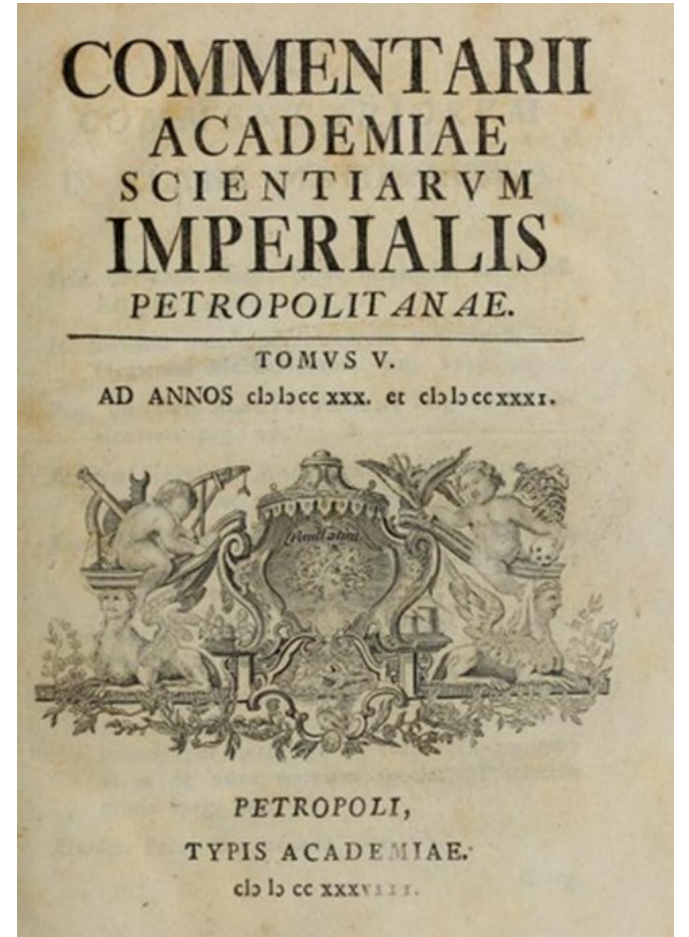
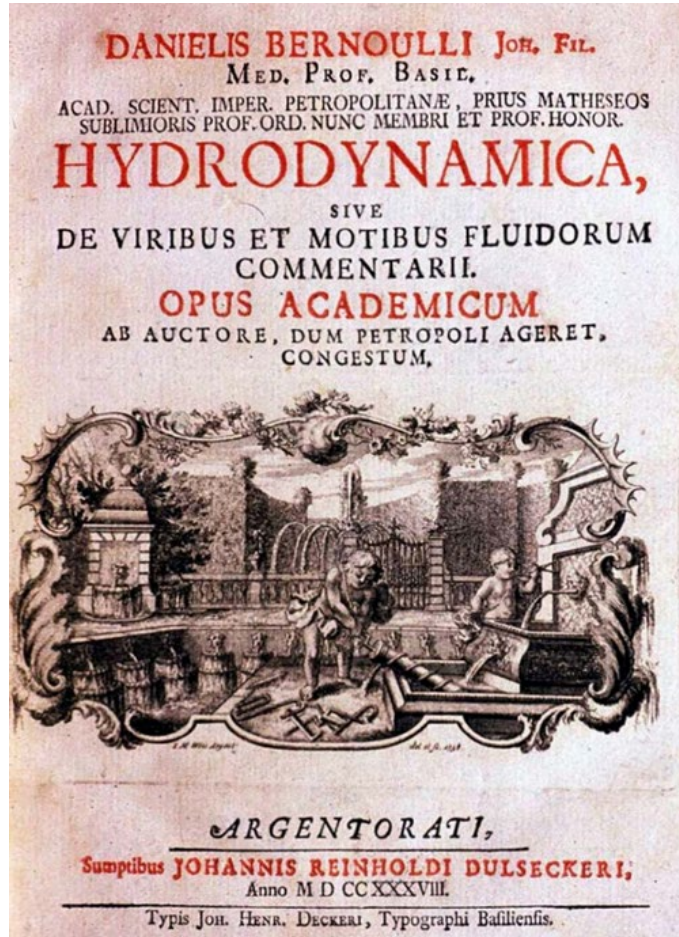
LONDON:
OFFICE OF THE NATIONAL ILLUSTRATED LIBRARY,
227 STRAND.

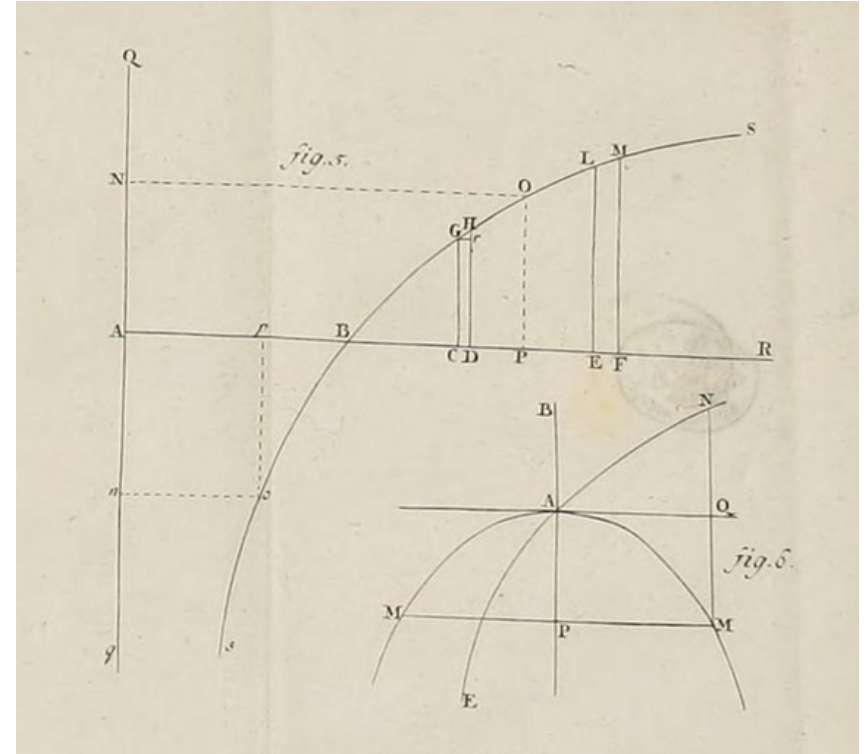
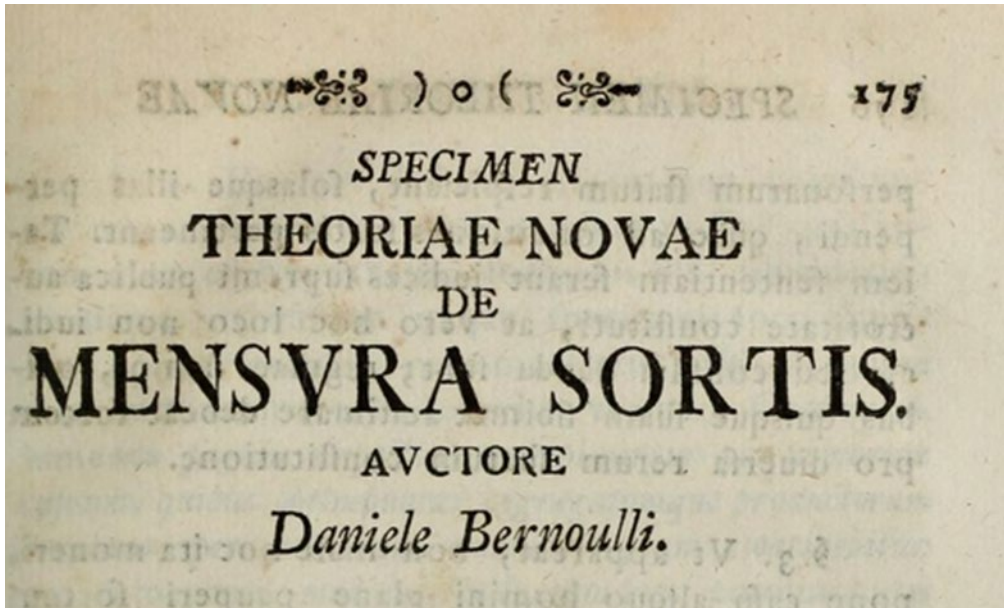
1852.

<https://archive.org/details/memoirsextraord05mackgoog/page/n7/mode/2up>



Daniel Bernoulli
(1700-1782)





Παράδοξο Αγίας Πετρούπολης

$$\sum_{k=1}^{\infty} \frac{2^k}{2^k} = 1 + 1 + \dots + 1 + \dots = \infty$$

$$u(x) = \ln(x)$$

$$\sum_{k=1}^{\infty} \frac{\ln(2^k)}{2^k} < \infty$$



Ferdinando Galiani
(1728-1787)

1750





DELLA MONETA

LIBRO V.

DEL FRUTTO DELLA MONETA.

INTRODUZIONE.



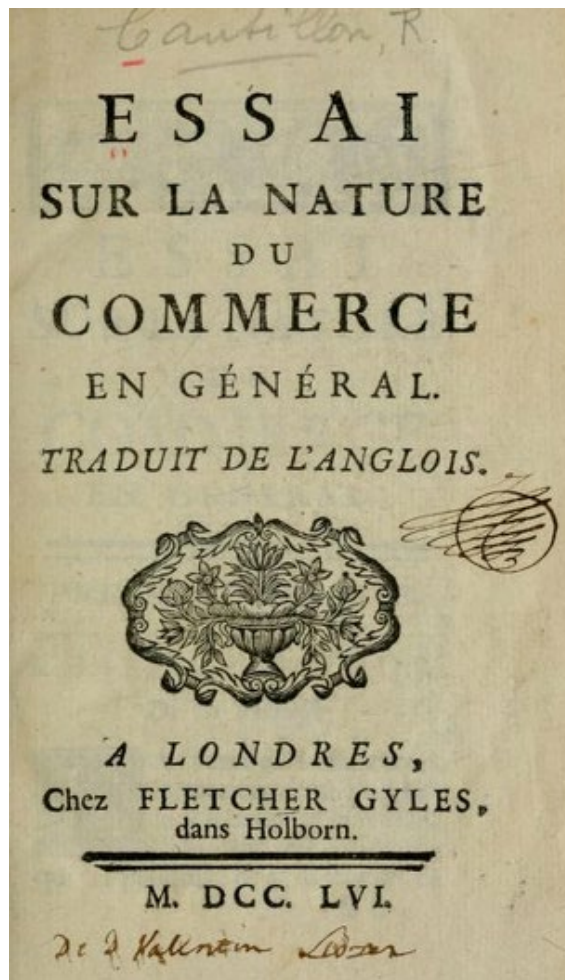
Q Rave, difficile, e pericolosa materia è questa, in cui il mio istituto mi mena; e tale ch'io mi farei ben volentieri astenuto d'entrarvi dentro, se l'avessi potuto decentemente fare. I contratti, ove interviene frutto di danaro, sono tanto disputati, che non si può approvarne, o condannarne alcuno senza pericolo d'esserne ripreso da chi tiene diversa opinione. E perchè coloro, i quali disputando hanno acquistato rispetto e fama, mirano chiunque s'opponesse loro con quel-

vizi), che dalle ivenure.

*Abbaglio
d'alcuni
Teologi in-
torno alla
spiega d'
alcune defi-
nizioni.*

Per contrario molti Teologi avendo benissimo definita l'usura e il mutuo, hanno poi malintesa la definizione loro medesima. Usura è quel lucro, che si riceve oltre la sorte in virtù del contratto del mutuo. Giustissima definizione; e chiunque (come molti recenti non cattolici han fatto) vorrà variarla, e dire che il mutuo non gratuito non è mutuo, e allora il suo frutto non è usura, scherzerà sulle parole non meno empientemente, che senza utilità: perocchè a Dio non v'è arte, nè mezzo da imporre; agli uomini non v'è necessità. Sono state inventate tante formole di-

valore intrinseco del suo metallo, il che è una forte di cambio assai giusto, e ragionevole. In fine è certo, che fra gli uomini non ha prezzo altro che il piacere, nè si comprano se non le comodità: e siccome uno non può sentir piacere senza incomodo e molestia altrui, non si paga altro che il danno, e la privazion del piacere ad altri arrecata. Il tenere alcuno nel batticuore è dolore: dunque conviene pagarlo. Ciò, che si chiama frutto del danaro quando è legittimo, non è altro che il prezzo del batticuore; e



Richard Cantillon
(?1680–1734)

1755

CHAPTER IX

Of the Interest of Money and its Causes

Just as the Prices of things are fixed in the altercations of the Market by the quantity of things offered for sale in proportion to the quantity of money offered for them, or, what comes to the same thing, by the proportionate number of Sellers and Buyers, so in the same way the Interest of Money in a State is settled by the proportionate number of Lenders and Borrowers.

Though money passes for a pledge in exchange it does not multiply itself or beget an interest in simple circulation. The needs of man seem to have introduced the usage of Interest. A man who lends his money on

<https://oll.libertyfund.org/title/higgs-essay-on-the-nature-of-trade-in-general-higgs-ed>

267] ESSAY ON THE NATURE OF TRADE 201

good security or on mortgage runs at least the risk of the illwill of the Borrower, or of expenses, lawsuits and losses. But when he lends without security he runs the risk of losing everything. For this reason needy men must in the beginning have tempted Lenders by the bait of a profit. And this profit must have been proportionate to the needs of the Borrowers and the fear and avarice of the Lenders. This seems to me the origin of Interest. But its constant usage in States seems based upon the Profits which the Undertakers can make out of it.

The Land naturally produces, aided by human Labour, 4, 10, 20, 50, 100, 150 times the amount of corn sown upon it, according to the fertility of the soil and the industry of the inhabitants. It multiplies Fruits and Cattle. The Farmer who conducts the working of it has generally two thirds of the produce, one third pays his expenses and upkeep, the other remains for the profit of his enterprise.

If the Farmer have enough capital to carry on his enterprise, if he have the needful tools and instruments, horses for ploughing, cattle to make the Land pay, etc. he will take for himself after paying all expenses a third of the produce of his Farm. But if a competent Labourer who lives from day to day on his wages and has no capital, can find some one willing to lend him land or money to buy some, he will be able to give the Lender all the third rent, or third part of the produce of a Farm of which he will become the Farmer or Undertaker. However he will think his position improved since he will find his upkeep in the second rent and will become Master instead of Man. If by great oeconomy and pinching himself somewhat of his necessities he can gradually accumulate some little capital, he will have every year less to borrow, and will at last arrive at keeping the whole of his third rent.

If this new Undertaker finds means to buy corn or cattle on credit, to be paid off at a long date when he can

make money by the sale of his farm produce, he will gladly pay more than the market price for ready money. The result will be the same as if he borrowed cash to buy corn for ready money, paying as interest the difference between the cash price and the price payable at a future date. But whether he borrow cash or goods there must be enough left to him for upkeep or he will become bankrupt. The risk of this is the reason why he will be required to pay 20 or 30 per cent. profit or interest on the amount of money or value of the produce or merchandise lent to him.

Again, a master Hatter who has capital to carry on his manufacture of Hats, either to rent a house, buy beaver, wool, dye, etc. or to pay for the subsistence of his workmen every week, ought not only to find his upkeep in this enterprise, but also a profit like that of the Farmer who has his third part for himself. This upkeep and the profit should come from the sale of the Hats whose price ought to cover not only the materials but also the upkeep of the Hatter and his Workmen and also the profit in question.

But a capable Journeyman Hatter with no capital may undertake the same Manufacture by borrowing money and materials and abandoning the profit to anybody who is willing to lend him the money or entrust him with the beaver, wool, etc. for which he will pay only some time later when he has sold his hats. If when his bills are due the Lender requires his capital back, or if the Wool-merchant and other Lenders will not grant him further credit he must give up his business, in which case he may prefer to go bankrupt. But if he is prudent and industrious he may be able to prove to his creditors that he has in cash or in hats about the value of what he has borrowed and they will probably choose to continue to give him credit and be satisfied for the present with their interest or profit. In this way he will carry on and will perhaps

gradually save some capital by retrenching a little upon his necessities. With the aid of this he will have every year less to borrow, and when he has collected a capital sufficient to conduct his Manufacture, which will always be proportionable to his sales, the profit will remain to him entirely and he will grow rich if he does not increase his expenditure.

It is well to observe that the upkeep of such a Manufacturer is small compared with the sums he borrows in his trade or with the materials entrusted to him, and therefore the Lenders run no great risk of losing their capital if he is respectable and hard working: but as it is quite possible that he is not so the Lenders always require from him a profit or interest of 20 to 30 per cent. of the value of their loan. Even then only those who have a good opinion of him will trust him. The same inductions may be made with regard to all the Masters, Artisans, Manufacturers and other Undertakers in the State who carry on enterprises in which the Capital considerably exceeds the value of their annual upkeep.

But if a water-carrier in Paris sets up as the Undertaker of his own work, all the capital he needs will be the price of two buckets which he can buy for an ounce of silver and then all his gains are profit. If by his labour he gains 50 ounces of silver a year, the amount of his capital or borrowing will be to that of his profit as 1 to 50. That is he will gain 5000 per cent. while the Hatter will gain only 50 per cent. and will also have to pay 20 or 30 per cent. to the lender.

Nevertheless a Money Lender will prefer to lend 1000 ounces of silver to a Hatmaker at 20 per cent. interest rather than to lend 1000 ounces to 1000 water-carriers at 500 per cent. interest. The Water-carriers will quickly spend on their maintenance not only the money they gain by their daily labour but all that which is lent to them. These capitals lent to them are small compared

with what they need for their maintenance: whether they be much or little employed they can easily spend all they earn. Therefore it is hardly possible to arrive at the profits of these little undertakers. It might well be that a Water-carrier gains 5000 per cent. of the value of the buckets which serve as his capital, even 10,000 per cent. if by hard work he gains 100 ounces of silver a year. But as he may spend on his living 100 ounces just as well as 50, it is only by knowing what he devotes to his upkeep that we can find how much he has of clear profit.

The subsistence and upkeep of Undertakers must always be deducted before arriving at their profit. We have done this in the example of the Farmer and of the Hatmaker, but it can hardly be determined in the case of the petty Undertakers, who are for the most part insolvent when they are in debt.

It is customary for the London Brewers to lend a few barrels of Beer to the keepers of Ale-houses, and when these pay for the first barrels to continue to lend them more. If these Ale-houses do a brisk business the Brewers sometimes make a profit of 500 per cent. per annum; and I have heard that the big Brewers grow rich when no more than half the Ale-houses go bankrupt upon them in the course of the year.

All the Merchants in a State are in the habit of lending merchandise or produce for a time to Retailers, and proportion the rate of their profit or interest to that of their risk. This risk is always great because of the high proportion of the Borrower's upkeep to the loan. For if the borrower or retailer have not a quick turnover in small business he will quickly go to ruin and will spend all he has borrowed on his own subsistence and will therefore be forced into bankruptcy.

The Fishwives, who buy Fish at Billingsgate in London to sell again in the other quarters of the City, generally

pay under a contract made by an expert scrivener, one shilling per guinea, or twenty-one shillings, interest per week, which amounts to 260 per cent. per annum. The Market-women at Paris, whose business is smaller, pay 5 sols for the week's interest on an écu of 3 livres, which exceeds 430 per cent. per annum. And yet there are few Lenders who make a fortune from such high interest.

These high rates of interest are not only permitted but are in a way useful and necessary in a State. Those who buy Fish in the streets pay these high interest charges in the increased price. It suits them and they do not feel it. In like manner an Artisan who drinks a pot of Beer and pays for it a price which enables the Brewer to get his 500 per cent. profit, is satisfied with this convenience and does not feel the loss in so small a detail.

The Casuists, who seem hardly suitable people to judge the nature of Interest and of matters of Trade, have invented a term, *damnum emergens*, by whose aid they consent to tolerate these high rates of interest; and rather than upset the custom and convenience of Society, they have agreed and allowed to those who lend at great risk to exact in proportion a high rate of interest: and this without limit, for they would be hard put to it to find any certain limit since the business depends in reality on the fears of the Lenders and the needs of the Borrowers.

Maritime Merchants are praised when they can make a profit on their Adventures, even though it be 10,000 per cent.; and whatever Profit wholesale Merchants may make or stipulate for in selling on long credit produce or Merchandise to smaller retail Merchants, I have not heard that the Casuists make it a crime. They are or seem to be a little more scrupulous about loans in hard cash though it is essentially the same thing. Yet they tolerate even these loans by a distinction, *lucrum cessans*, which they have invented. I understand this to mean that a Man who has been in the habit of making his money bring in

500 per cent. in his trade may demand this profit when he lends it to another. Nothing is more amusing than the multitude of Laws and Canons made in every age on the subject of the Interest of Money, always by Wisacres who were hardly acquainted with Trade and always without effect.

From these examples and inductions it seems that there are in a State many classes and channels of Interest or Profit, that in the lowest classes Interest is always highest in proportion to the greater risk, and that it diminishes from class to class up to the highest which is that of Merchants who are rich and reputed solvent. The Interest demanded in this class is called the current rate of Interest in the State and differs little from interest on the Mortgage of Land. The Bill of a solvent and solid Merchant is as much esteemed, at least for a short date, as a lien upon Land, because the possibility of a Lawsuit or a Dispute on this last makes up for the possibility of the Bankruptcy of the Merchant.

If there were in a State no Undertakers who could make a Profit on the Money or Goods which they borrow, the use of Interest would probably be less frequent than it is. Only extravagant and prodigal people would contract Loans. But accustomed as every one is to make use of Undertakers there is a constant source for Loans and therefore for Interest. They are the Undertakers who cultivate the Land and supply Bread, Meat, Clothes, etc. to all the Inhabitants of a City. Those who work on wages for these Undertakers seek also to set themselves up as Undertakers, in emulation of each other. The multitude of Undertakers is much greater among the Chinese, and as they all have lively intelligence, a genius for enterprise, and great perseverance in carrying it out, there are among them many Undertakers who are among us people on fixed wages. They supply Labourers with meals, even in the Fields. It is perhaps this multitude of small Under-

takers and others, from class to class, who finding the means to gain a good deal by ministering to consumption without its being felt by the consumers, keep up the rate of Interest in the highest class at 30 per cent. while it hardly exceeds 5 per cent. in our Europe. At Athens in the time of Solon interest was at 18 per cent. In the Roman Republic it was most commonly 12 per cent., but has been known to be 48, 20, 8, 6, and at the lowest 4 per cent. It was never so low in the free market as towards the end of the Republic and under Augustus after the conquest of Egypt. The Emperor Antoninus and Alexander Severus only reduced Interest to 4 per cent. by lending public money on the mortgage of Land.

CHAPTER X AND LAST

Of the Causes of the Increase and Decrease of the Interest of Money in a State

It is a common idea, received of all those who have written on Trade, that the increased quantity of currency in a State brings down the price of Interest there, because when Money is plentiful it is more easy to find some to borrow. This idea is not always true or accurate. For proof it needs only to be recalled that in 1720, nearly all the money in England was brought to London and over and above this the number of notes put out accelerated the movement of money extraordinarily. Yet this abundance of money and currency instead of lowering the current rate of interest which was before at 5 per cent. and under, served only to increase the rate which was carried up to 50 and 60 per cent. It is easy to account for this increased rate of interest by the principles and the



David Hume
(1711 – 1776)

1752

POLITICAL
DISCOURSES.

Inv. 10981

BY

DAVID HUME ESQ.

THE SECOND EDITION.

EDINBURGH,

Printed by R. FLEMING,
For A. KINCAID and A. DONALDSON.
MDCCLII.

CONTENTS.

DISCOURSE

- I. *Of Commerce.*
- II. *Of Luxury.*
- III. *Of Money.*
- IV. *Of Interest.*
- V. *Of the Balance of Trade.*
- VI. *Of the Balance of Power.*
- VII. *Of Taxes.*
- VIII. *Of Public Credit.*
- IX. *Of some Remarkable Customs.*
- X. *Of the Populousness of Antient Nations.*
- XI. *Of the Protestant Succession.*
- XII. *Idea of a perfect Commonwealth.*

OF INTEREST

NOTHING is esteemed a more certain sign of the flourishing condition of any nation than the lowness of interest: And with reason; though I believe the cause is somewhat different from what is commonly apprehended. Lowness of interest is generally ascribed to plenty of money.¹ But

¹[Mercantilist writers had held that a lowering of interest, or the price paid for the use of resources over time, is one of the benefits of increasing the quantity of money. Hume continues his attack on mercantilism by denying that rates of interest are caused by the quantity of money in circulation. Hume turns to his theory of human nature as well as to historical examples in order to prove that low interest is produced ultimately by the growth of industry and commerce, which reduces the proportion of borrowers and increases the number of lenders with savings available to supply the demand for money. For an assessment of Hume's views on interest, see Rotwein, *David Hume: Writings on Economics*, pp. lxvii–lxxii.]

David Hume (1985). *Essays Moral, Political, and Literary. Edited and with a Foreword, Notes, and Glossary by Eugene E. Miller. With an apparatus of variant readings from the 1889 edition by T.H. Green and T.H. Grose.* Revised Edition. Liberty Fund Indianapolis

<https://oll-resources.s3.us-east-2.amazonaws.com/oll3/store/titles/704/0059/Bk.pdf>

money, however plentiful, has no other effect, *if fixed*, than to raise the price of labour. Silver is more common than gold; and therefore you receive a greater quantity of it for the same commodities. But do you pay less interest for it? Interest in BATAVIA and JAMAICA is at 10 *per cent.* in PORTUGAL at 6; though these places, as we may learn from the prices of every thing, abound more in gold and silver than either LONDON or AMSTERDAM.

Were all the gold in ENGLAND annihilated at once, and one and twenty shillings substituted in the place of every guinea, would money be more plentiful or interest lower? No surely: We should only use silver instead of gold. Were gold rendered as common as silver, and silver as common as copper; would money be more plentiful or interest lower? We may assuredly give the same answer. Our shillings would then be yellow, and our halfpence white; and we should have no guineas. No other difference would ever be observed; no alteration on commerce, manufactures, navigation, or interest; unless we imagine, that the colour of the metal is of any consequence.

Now, what is so visible in these greater variations of scarcity or abundance in the precious metals, must hold in all inferior changes. If the multiplying of gold and silver fifteen times makes no difference, much less can the doubling or tripling them. All augmentation has no other effect than to heighten the price of labour and commodities; and even this variation is little more than that of a name. In the progress towards these changes, the augmentation may have some influence, by exciting industry; but after the prices are settled, suitably to the new abundance of gold and silver, it has no manner of influence.

An effect always holds proportion with its cause. Prices have risen near four times since the discovery of the INDIES; and it is probable gold and silver have multiplied much more: But interest has not fallen much above half. The rate of interest, therefore, is not derived from the quantity of the precious metals.

Money having chiefly a fictitious value,⁴ the greater or less plenty of it is of no consequence, if we consider a nation within itself; and the quantity of specie, when once fixed, though ever so large, has no other effect, than to oblige every one to tell out^o a greater number of those shining bits of metal, for clothes, furniture or equipage, without encreasing any one convenience of life. If a man borrow money to build a house, he then carries home a greater load; because the stone, timber, lead, glass, &c. with the labour of the masons and carpenters, are represented by a greater quantity of gold and silver. But as these metals are considered chiefly as representations, there can no alteration arise, from their bulk or quantity, their weight or colour, either upon their real value or their interest. The same interest, in all cases, bears the same proportion to the sum. And if you lent me so much labour and so many commodities; by receiving five *per cent.* you always receive proportional labour and commodities, however represented, whether by yellow or white coin, whether by a pound or an ounce. It is in vain, therefore, to look for the cause of the fall or rise of interest in the greater or less quantity of gold and silver, which is fixed in any nation.

High interest arises from *three* circumstances: A great demand for borrowing; little riches to supply that demand; and great profits arising from commerce: And these circumstances are a clear proof of the small advance of commerce and industry, not of the scarcity of gold and silver. Low interest, on the other hand, proceeds from the three opposite circumstances: A small demand for borrowing; great riches to supply that demand; and small profits arising from commerce: And these circumstances are all connected together, and proceed from the encrease of industry and commerce, not of gold and silver. We shall endeavour to prove these points; and shall begin with the causes and the effects of a great or small demand for borrowing.

When a people have emerged ever so little from a savage state, and their numbers have encreased beyond the original multitude, there must immediately arise an inequality of

property; and while some possess large tracts of land, others are confined within narrow limits, and some are entirely without any landed property. Those who possess more land than they can labour, employ those who possess none, and agree to receive a determinate part of the product. Thus the *landed* interest is immediately established; nor is there any settled government, however rude, in which affairs are not on this footing. Of these proprietors of land, some must presently discover themselves to be of different tempers from others; and while one would willingly store up the produce of his land for futurity,^a another desires to consume at present what should suffice for many years. But as the spending of a settled revenue is a way of life entirely without occupation;^b men have so much need of somewhat^c to fix and engage them, that pleasures, such as they are, will be the pursuit of the greater part of the landholders, and the prodigals among them will always be more numerous than the misers. In a state, therefore, where there is nothing but a landed interest, as there is little frugality, the borrowers must be very numerous, and the rate of interest must hold proportion to it. The difference depends not on the quantity of money, but on the habits and manners which prevail. By this alone the demand for borrowing is increased or diminished. Were money so plentiful as to make an egg be sold for sixpence; so long as there are only landed gentry and peasants in the state, the borrowers must be numerous, and interest high. The rent for the same farm would be heavier and more bulky: But the same idleness of the landlord, with the higher price of commodities, would dissipate it in the same time, and produce the same necessity and demand for borrowing.^b

Nor is the case different with regard to the *second* circumstance which we proposed to consider, namely, the great or little riches to supply the demand. This effect also depends on the habits and way of living of the people, not on the quantity of gold and silver. In order to have, in any state, a great number of lenders, it is not sufficient nor requisite, that there be great abundance of the precious metals. It is only requisite,

that the property or command of that quantity, which is in the state, whether great or small, should be collected in particular hands, so as to form considerable sums, or compose a great monied interest. This begets a number of lenders, and sinks the rate of usury; and this I shall venture to affirm, depends not on the quantity of specie, but on particular manners and customs, which make the specie gather into separate sums or masses of considerable value.

For suppose, that, by miracle, every man in GREAT BRITAIN should have five pounds slipt into his pocket in one night; this would much more than double the whole money that is at present in the kingdom; yet there would not next day, nor for some time, be any more lenders, nor any variation in the interest. And were there nothing but landlords and peasants in the state, this money, however abundant, could never gather into sums; and would only serve to encrease the prices of every thing, without any farther consequence. The prodigal landlord dissipates it, as fast as he receives it; and the beggarly peasant has no means, nor view, nor ambition of obtaining above a bare livelihood. The overplus of borrowers above that of lenders continuing still the same, there will follow no reduction of interest. That depends upon another principle; and must proceed from an encrease of industry and frugality, of arts and commerce.

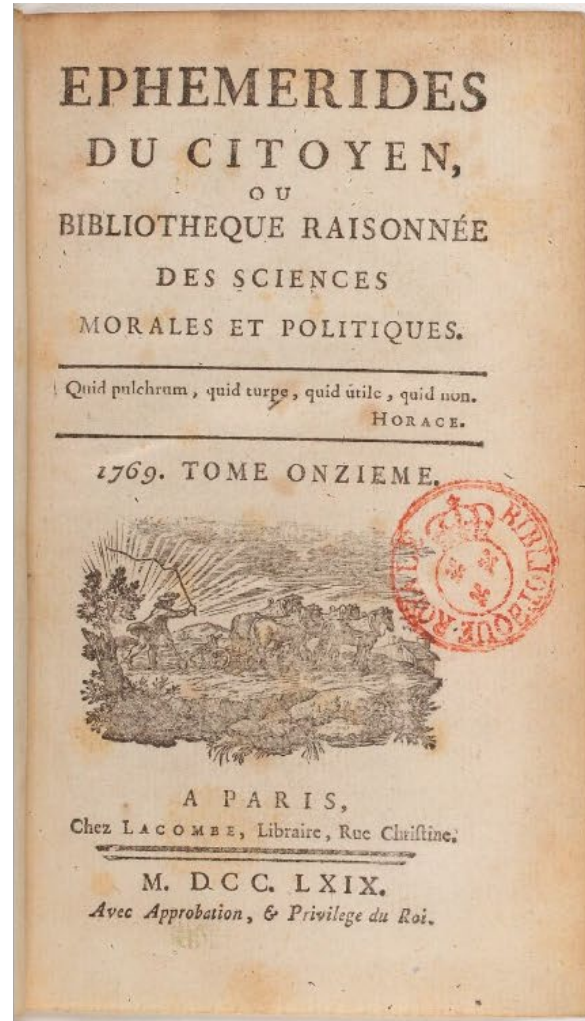
Every thing useful to the life of man arises from the ground; but few things arise in that condition which is requisite to render them useful. There must, therefore, beside the peasants and the proprietors of land, be another rank of men, who receiving from the former the rude materials, work them into their proper form, and retain part for their own use and subsistence. In the infancy of society, these contracts between the artisans and the peasants, and between one species of artisans and another are commonly entered into immediately by the persons themselves, who, being neighbours, are easily acquainted with each other's necessities, and can lend their mutual assistance to supply them. But when men's industry encreases, and their views enlarge, it is found, that the most

remote parts of the state can assist each other as well as the more contiguous, and that this intercourse of good offices may be carried on to the greatest extent and intricacy. Hence the origin of *merchants*, one of the most useful races of men, who serve as agents between those parts of the state, that are wholly unacquainted, and are ignorant of each other's necessities. Here are in a city fifty workmen in silk and linen, and a thousand customers; and these two ranks of men, so necessary to each other, can never rightly meet, till one man erects a shop, to which all the workmen and all the customers repair. In this province, grass rises in abundance: The inhabitants abound in cheese, and butter, and cattle; but want bread and corn, which, in a neighbouring province, are in too great abundance for the use of the inhabitants. One man discovers this. He brings corn from the one province and returns with cattle; and supplying the wants of both, he is, so far, a common benefactor. As the people encrease in numbers and industry, the difficulty of their intercourse encreases: The business of the agency or merchandize becomes more intricate; and divides, subdivides, compounds, and mixes to a greater variety. In all these transactions, it is necessary, and reasonable, that a considerable part of the commodities and labour should belong to the merchant, to whom, in a great measure, they are owing. And these commodities he will sometimes preserve in kind, or more commonly convert into money, which is their common representation. If gold and silver have encreased in the state together with the industry, it will require a great quantity of these metals to represent a great quantity of commodities and labour. If industry alone has encreased, the prices of every thing must sink, and a small quantity of specie will serve as a representation.

There is no craving or demand of the human mind more constant and insatiable than that for exercise and employment; and this desire seems the foundation of most of our passions and pursuits. Deprive a man of all business and serious occupation, he runs restless from one amusement to another; and the weight and oppression, which he feels from



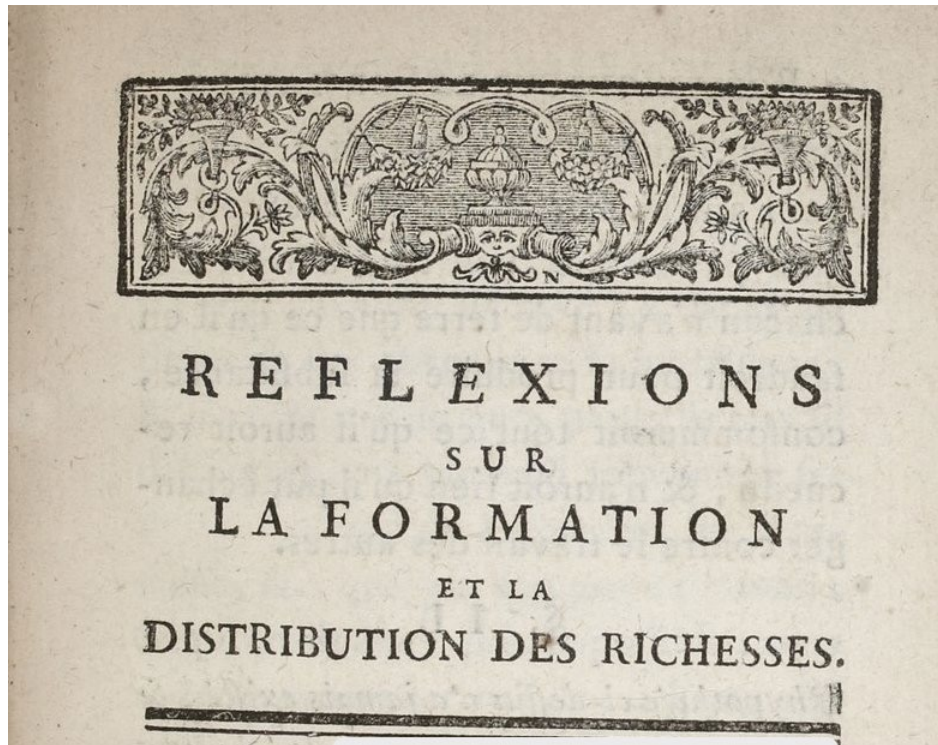
Anne Robert Jacques Turgot,
Baron de l'Aulne
(1727-1781)



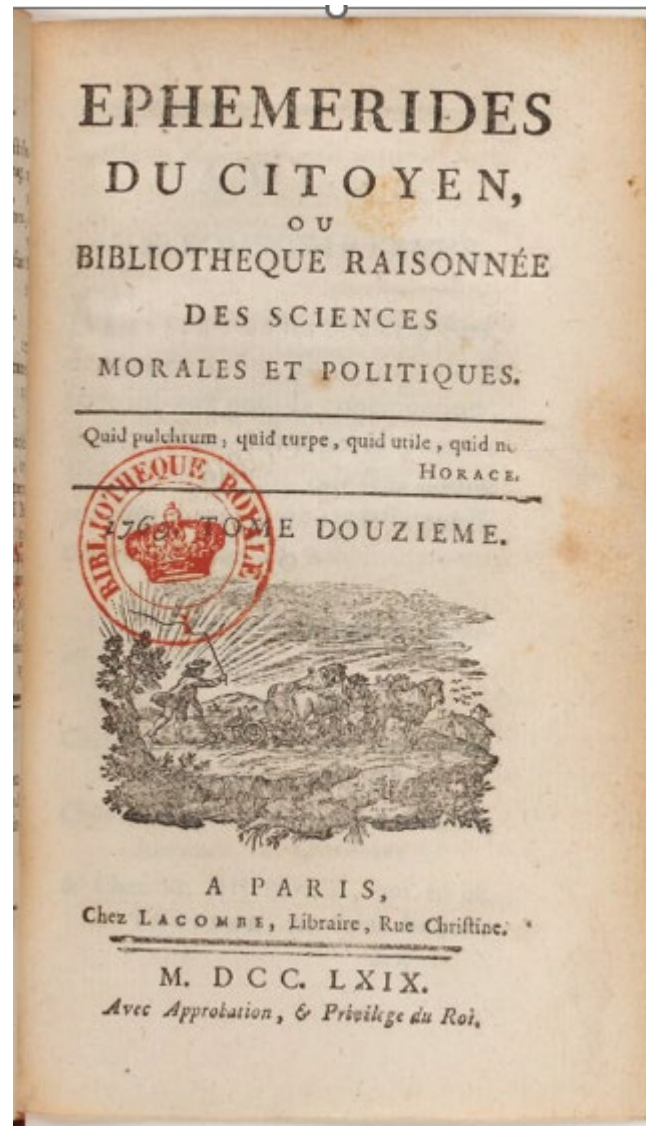
RÉFLEXIONS sur la formation &
la distribution des richesses, par
Mr. X.

§. PREMIER.

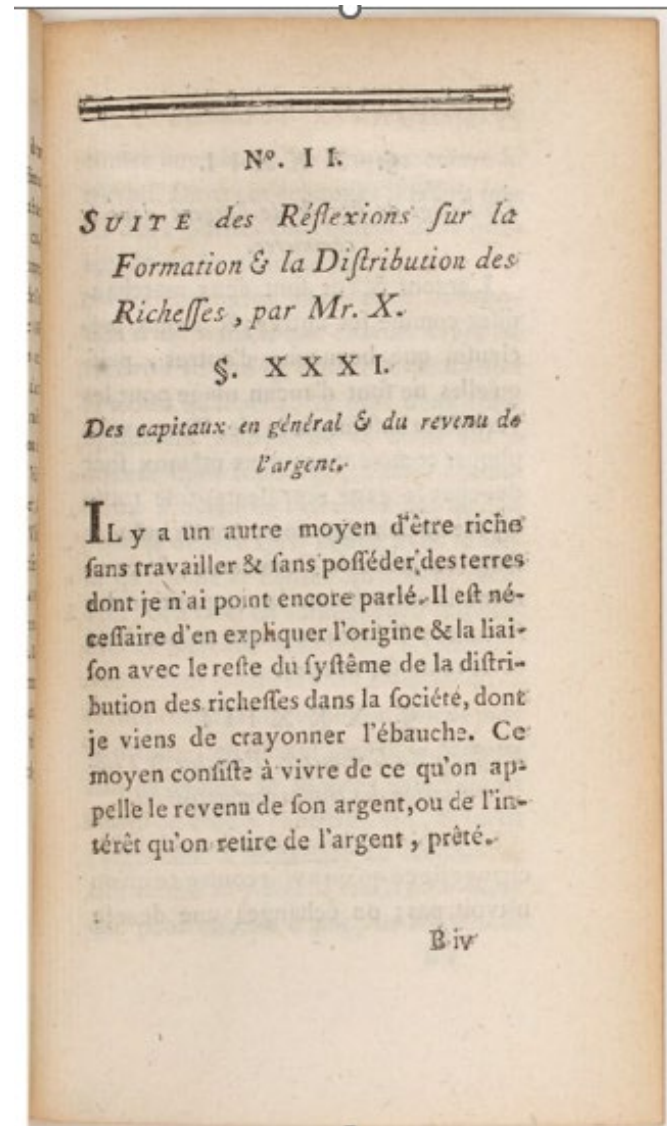
*Impossibilité du Commerce dans la suppo-
sition d'un partage égal des terres ou
chaque homme n'auroit que ce qu'il
lui faudroit pour se nourrir.*



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70. Capitals being as necessary to all enterprises as labor and industry, the industrious man shares voluntarily the profit of his enterprise with the capitalist who furnishes him with the funds he needs.

Since capitals are the indispensable foundation of all lucrative enterprises; since with money we can furnish means for cultivation, establish manufactures, and set up trade, the profits of which accumulated and frugally saved, will become a new capital; since in short, money is the principal means of begetting money, those who, with their industry and love of labor, have no capitals, or do not have sufficient for the enterprise they wish to embark on, have no difficulty in deciding to give up to the owners of such capital or money who are willing to trust it to them, a portion of the profits they expect to receive over and above the return of their advances.

71. Fifth employment of capitals, lending at interest. Nature of the loan.

The owners of money balance the risk their capital may run, if the enterprise does not succeed, with the advantage of enjoying a definite profit without labor, and regulate themselves thereby to require more or less profit or interest for their money, or to consent to lend it for such interest as the borrower offers. Here another opportunity is open to the owner of money; lending at interest, or the trade in money. Let no one mistake me here, lending at interest is nothing but a commercial transaction, in which the Lender is the man who sells the use of his money, and the borrower is a man who buys; precisely as the proprietor of an estate and a farmer sell and buy, respectively the use of a piece of land which is let out. The Latin term for a loan of money at interest expresses it exactly, *usura pecuniae*, a word which, translated into French has become hateful by consequence of false ideas being formed as to the interest of money.

72. False ideas about the lending at interest.

The price of the loan is by no means founded, as might be imagined, on the profit the borrower hopes to make with the capital of which he purchases the use. This price, like the price of every commodity, is determined by the chaffering of seller and buyer; by the balance between the offer and the demand. People borrow for all kinds of purposes, and with all sorts of motives. One borrows

to undertake an enterprise which will make his fortune, another to buy an estate, another to pay a gaming debt, another to make up for the loss of his revenue, of which some accident has deprived him, another to keep himself alive, while waiting for what he can get by his labor; but all these motives which influence the borrower are quite immaterial to the lender. The latter is only concerned with two things: the interest he is to receive, and the safety of his capital. He does not trouble himself about the use the borrower will make of it, any more than the merchant concerns himself with the use the buyer makes of the commodity he sells him.

73. Errors of the schoolmen refuted.

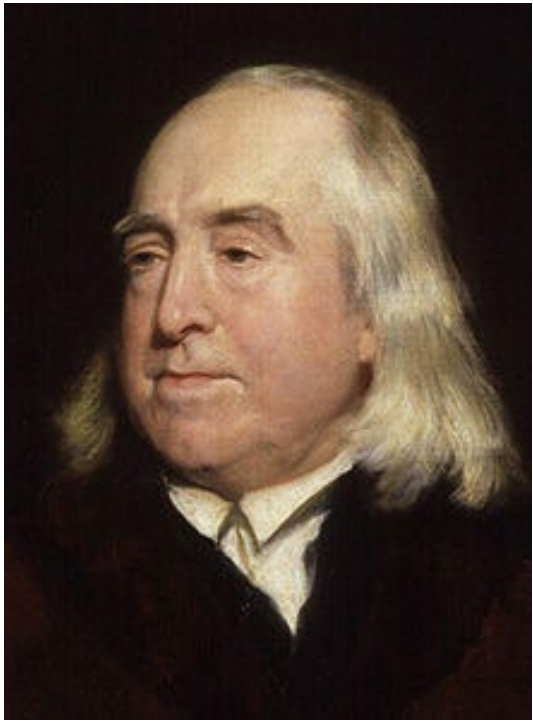
It is for want of having examined the lending at interest in its true light, that moralists, more dogmatic than enlightened, have endeavored to have it looked upon as a crime. The scholastic theologians have concluded from the fact that money does not produce anything by itself that it was unjust to exact interest from money placed on loan. Full of their prejudices, they have believed their doctrine was sanctioned by this passage from the Gospel, *mutuum date nihil inde sperantes*.⁴ Those theologians who have adopted more reasonable principles on the subject of interest, have endured the harshest reproaches from Writers of the opposite party.

Nevertheless, it needs but a little reflection to realise the lack of depth in the pretexts which have been used to condemn the taking of interest. A loan is a reciprocal contract, free between the two parties, which they make only because it is advantageous to them. It is evident that, if the lender finds it to his advantage to receive something as the hire for his money, the borrower is no less interested in finding the money he needs, since he decides to borrow and to pay the hire of this money. Now on what principle can a crime be discovered in a contract advantageous to two parties, with which both parties are satisfied, and which certainly does no injury to anyone else? To say that the lender takes advantage of the borrower's need

⁴ I.e., Luke 6: 35, which in the American Standard Version reads as follows: "and lend, hoping for nothing again."

*The Turgot Collection.
Writings, Speeches, and
Letters of Anne Robert
Jacques Turgot, Baron de
Laune.* Edited by David
Gordon. 2011 by the Ludwig
von Mises Institute.

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Jeremy Bentham
(1748–1832)

1787

<https://oll.libertyfund.org/title/bentham-defence-of-usury>

DEFENCE OF USURY;
Shewing the Impolicy of the
PRESENT LEGAL RESTRAINTS
ON THE TERMS OF
PECUNIARY BARGAINS.

IN A
SERIES OF LETTERS TO A FRIEND

TO WHICH IS ADDED,
A LETTER



TO
ADAM SMITH, Esq; LL. D.

On the Discouragements opposed by the above
Restraints to the Progress of

INVENTIVE INDUSTRY.

BY
JEREMY BENTHAM, of *Lincoln's Inn*, Esq.

LONDON:

PRINTED FOR T. PAYNE, AND SON,
AT THE MEWS GATE.

M.DCC.LXXXVII.

DEFENCE OF USURY.

LETTER I.

Introduction.

Crickeff, in White Russia, January 1787.

AMONG the various species or modifications of liberty, of which on different occasions we have heard so much in England, I do not recollect ever seeing any thing yet offered in behalf of the liberty of making one's own terms in money-bargains. From so general and universal a neglect, it is an old notion of mine, as you well know, that this meek and unassuming species of liberty has been suffering much injustice.

B A fancy

2 LETT. I. *Introduction.*

A fancy has taken me, just now, to trouble you with my reasons: which, if you think them capable of answering any good purpose, you may forward to the press: or in the other case, what will give you less trouble, to the fire.

In a word, the proposition I have been accustomed to lay down to myself on this subject is the following one, viz. that *no man of ripe years and of sound mind, acting freely, and with his eyes open, ought to be hindered, with a view to his advantage, from making such bargain, in the way of obtaining money, as he thinks fit: nor, (what is a necessary consequence) anybody hindered from supplying him, upon any terms he thinks proper to accede to.*

This proposition, were it to be received, would level, you see, at one stroke, all the barriers which law, either
statute

LETT. I. *Introduction.* 3

statute or common, have in their united wisdom set up, either against the crying sin of Usury, or against the hard-named and little-heard-of practice of Champerty; to which we must also add a portion of the multifarious, and as little-heard-of offence, of Maintenance.

On this occasion, were it any individual antagonist I had to deal with, my part would be a smooth and easy one. "You, who fetter contracts; you, who lay restraints on the liberty of man, it is for you" (I should say) "to assign a reason for your doing so." That contracts in general ought to be observed, is a rule, the propriety of which, no man was ever yet found wrong-headed enough to deny: if this case is one of the exceptions (for some doubtless there are) which the safety and welfare of every

B a society

4 LETT. I. *Introduction.*

society require should be taken out of that general rule, in this case, as in all those others, it lies upon him, who alleges the necessity of the exception, to produce a reason for it.

This, I say, would be a short and very easy method with an individual: but, as the world has no mouth of its own to plead by, no certain attorney by which it can “come and defend this force and injury,” I must even find arguments for it at a venture, and ransack my own imagination for such phantoms as I can find to fight with.

In favour of the restraints opposed to the species of liberty I contend for, I can imagine but five arguments.

1. Prevention of usury.
2. Prevention of prodigality.
3. Protection of indigence against extortion.

4. Re-

LETT. I. *Introduction.* 5

4. Repression of the temerity of projectors.

5. Protection of simplicity against imposition.

Of all these in their order.

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