## Pestman, Pieter Willem

## Loans bearing no interest?

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## LOANS BEARING NO INTEREST?

1. In recent years various monographs and articles have appeared, all dealing with loans in Egypt, ${ }^{1}$ so that this subject seems to have been almost exhaustively studied as far as that is possible from data which are at present available to us. However, it is not entirely purposeless to devote another article to this subject since, in the studies mentioned, only Greek sources have been used and not the Demotic. There are, therefore, a few aspects which have escaped the attention of the authors. In particular, the word $\ddot{\alpha}$ roxos "not bearing interest" and the question as to the way this should be interpreted require further investigation. ${ }^{2}$ Before going into this further, however, we shall deal with some of the problems with regard to the interest on loans which have arisen in view of the results of those recent investigations referred to.

## LOANS BEARING INTEREST

2. In considering the customary interest on loans one has to differentiate between loans of money and loans of consumer goods such as grain, wine, salt, and such like.

The wording in Demotic loans of money does not usually indicate how much interest the borrower has to pay. This is because Demotic loans were often drawn up in the form of an acknowledgement of debt (see par. $3 c$ ) in which the debtor, as a rule, only states how much he owes in total without specifying the principal and interest separately. ${ }^{3}$

[^0]On the other hand, Greek loans of money mostly do state how much interest the debtor has to pay. Originally the current interest on loans of money must have been very high, but later one of the first Ptolemies (it is generally assumed that it was Ptolemy II issued a $\delta t \alpha ́ \gamma \rho \alpha \mu \mu \alpha$ in which, amongst other things, he introduced a maximum interest rate of $24 \%$ per annum. ${ }^{4}$ Finally, in Roman times, the maximum interest was reduced to $12 \%$.

The $\delta t \dot{\alpha} \gamma \rho \alpha \mu \mu \alpha$, however, which reduced the maximum interest rate to $24 \%$, was first reported in a text from the year $246 / 245$ B.C. (P. Col. Zen. II 83) and must had been introduced shortly before this, witness the following Greek and Demotic texts ${ }^{5}$ from which appears that up to the year $250 / 249$ B.C. a higher rate of interest than $24 \%$ could openly be charged. ${ }^{6}$

| 286/285 | P. dem. Mosc. 113 |
| :--- | :--- |
| 271/270 | P. gr. Hib. I 110, 44-50 |
| 251/250 | P. gr. Cairo Zen. III $59.327,10$ |

the debtor has only borrowed 10 kite and he pays interest of $\frac{1}{4}$ kite per month for 12 months or in total 3 kite $=30 \%$. b) P. dem. Louvre 2443 ( $250 / 249$ B.C.) : the debtor has received 30 kite and after 3 years (i.e.after $36 \frac{1}{2}$ months, see note 4) will pay back 57 kite. The interest is, therefore, 27 kite in all or 9 kite $=30 \%$ per annum. c) P. dem. Hausw. 18a (212/211 B.C.) contains in line 2 a clause about interest which, unfortunately, is not entirely legible (cf. SethePartsch, Bürgsch. Url. 12a with note).
${ }^{4}$ The Greek texts show the interest as calculated not per annum but per month - the nterest per month is 2 drachmas per 100 , or $2 \%$. How much the annual interest amounts to depends on the number of months in the year. Herrmann, op.cit., p. 24, Rupprecht, op. cit., p. 74-77 and Finckh, op. cit., p. 20 calculate with a Macedonian year of $12-13$ months and fix the interest, therefore, at $25 \%$ per annum. Kühnert, op.cit., p. 39 and foll. apparently calculates with a year of 12 months and arrives at a rate of interest of $24 \%$. After the Egyptian calendar was introduced by the Greeks in Egypt (towards the end of the 3rd cent. B.C., Pestman, Chronologie p. 8) the calendar year consisted of 12 months and 5 additional days. If one counts in the 5 extra days, an interest of $24.33 \%$ per annum is obtained and if they are ignored, $24 \%$ per annum. Although further investigation is essential, it is probable that the 5 additional days were ignored in calculating interest and that the annual interest was $24 \%$. See for the Greek texts e.g. note 65 ; for the Demotic texts see the first text mentioned in note 3 (where the 5 additional days do not count; the interest here is $2.5 \%$ per month) and the second (where the 5 additional days do count but probably not in calculating the interest since this here is also apparently $2.5 \%$ per month).
${ }^{5}$ See Finckh, op. cit., p. $57-58$ for the Greek texts and note 3 above for the Demotic.
${ }^{6}$ After $246 / 245$ B.C. the Greek texts do not mention any more (openly) a higher rate of interest than the approved $24 \%$ : Finckh op, cit., p. 58 ; the same applies to the Demotic texts. There is no reason for assuming that the $\delta t \dot{\alpha} \gamma \rho \alpha \mu \mu \alpha$ applied only to the Greek part of the population and not to the native part. See, however, Revillout (e.g. Revue Egyptologique 2 [1881] 135) who assumes a $30 \%$ annual rate of interest for all Demotic loans of money, and Struve (Three Demotic Papyri in the Pushkin Museum, papers presented by the Soviet Delegation at the XXIII International Congress of Orientalists, Egyptology, p. 59).
P. gr. Cairo Zen. III 59.327,33 and passim.

It seems, therefore, quite probable that this $\delta$ tá $\gamma \rho \alpha \mu \mu \alpha$ was issued by Ptolemy II between 250/245 B.C.

With regard to Demotic and Greek loans in kind, the debtor used, particularly in the time of the Ptolemies, to pay a compensation of $50 \%$ of the goods borrowed, as interest. This is a fixed amount regardless of the duration of the loan. ${ }^{7}$ In Greek texts this fixed sum is often designated by the words $\tau 0$ xot njucóncot whereas in Demotic loans in kind the debtor often hands over an acknowledgement of debt in which he, for example, states (P. dem. Turin Botti 13; 114/113 B.C.):
"You have with me (i.e. I owe you) 7 artabas of wheat, whichmakes $10 \frac{1}{2}$ (artabas of wheat) ——— whilst their addition (i.e. the interest) ${ }^{8}$ is included in them ——— I shall give (back) the above $10 \frac{1}{2}$ artabas of wheat to you".

In this text a loan of 7 artabas of wheat is mentioned to which an addition of $50 \%\left(=3 \frac{1}{2}\right.$ artabas of wheat) is added so that the debtor has to pay $10 \frac{1}{2}$ artabas of wheat in total to the creditor.

There is a clear difference with regard to the sacrifice the debtor has to make for a loan of money and a loan of goods: for a loan of money he pays $2 \%$ interest per month, but for a loan of goods he has to pay, in one go, a sum to half of the amount of goods borrowed. This difference must have been of great importance economically, for considered in itself, a loan of money only brings in a total of $50 \%$ interest after 25 months, but a loan of goods brings it in immediately. ${ }^{9}$

[^1]3．The amount of interest which the debtor has to pay is not in all cases so clearly stated．Often the parties make use of certain Greek or Demotic circumlocutions．We shall briefly review these expressions in so far as they are important in fixing the rate of interest and try and find out each time how much the debtor has received in loan，how much interest he has to pay and，in this way，how much he eventually has to pay to the creditor．
a）One sometimes finds in Greek loans the words $\sigma \dot{v} v_{n} \dot{\eta} \mu \circ \lambda i \alpha_{\text {＂＂with the }}$ half＂．A loan of wine of the 2nd cent．B．C．（P．L．Bat．XVII 4）reads for example：

This loan deals，therefore，with 3 metretes of wine and an interest of $50 \%$ ． But，what meaning is to be attached to these words－has the debtor re－ ceived the 3 metretes and does he have to give back，with the interest， $4 \frac{1}{2}$ ？Or，does he have to give back 3 metretes，having， therefore，received only 2 ？

In 1945 an exhaustive study ${ }^{10}$ by the papyrologist Lewis appeared in which，amongst other things，he studied the expression $\sigma \dot{v} v \dot{\eta}_{\mu}$ words do refer to the interest，he argues，then they mean＂including the interest of $50 \%$ ．This means that，in the passage quoted above，the 3 metretes of wine already include the interest；the debtor has received 2 and promises to repay 3 metretes．${ }^{11}$
b）A second Greek expression which is important in this connection is especially met with in the first three centuries of our era ${ }^{12}$ with regard to loans of money．This is the word 当veoxos＂bearing interest＂which is a further definition either of the sum lent ${ }^{13}$ or of the words $\delta \alpha^{2} v \varepsilon \iota \circ v^{14}$ or $\chi_{\rho} \tilde{r}_{\mathrm{f}}^{\mathrm{f}} \sigma \mathrm{c}^{15}$ which

[^2]indicate the nature of the loan. ${ }^{16}$ We borrow an example of the latter from P. Sarap. 13 (101/102 A.D.):


It is a question here, therefore, of a $\chi \rho \tilde{\eta} \sigma \iota \varsigma$ loan of 100 drachmas and the loan is évroxos: does this mean that the interest is already included in the stated sum of 100 drachmas or that the interest has still to be added to it?

Opinions on this differ - some regard e̊vroxoc in the sense of "including the interest". ${ }^{17}$ This would mean, in our case, that the debtor would have to pay back 100 drachmas, and no more, on the expiry date. Others, conversely, regard Évroxos as "bearing the conventional interest", ${ }^{18}$ so that, on the expiry date, our debtor not only has to pay the 100 drachmas but the normal interest over and above that.

The last view is clearly the correct one considering the large number of texts from which it appears that the debtor has indeed to pay interest over and above the amount stated in the loan. ${ }^{19}$ A text from 123/124 A.D. (P. Tebt. II 312) illustrates this; in line 19 and foll. the debtor states in his subscription to the loan of money:

The loan is of 120 drachmas and is $\varepsilon_{v \tau o x o s, ~ a n d ~ t h a t ~ t h i s ~ m e a n s ~ t h a t ~ t h e ~ d e b t o r ~}^{\text {a }}$ has to pay the usual interest over and above these 120 drachmas is apparent in this case from the agreement itself where it is expressly stated; for the debtor promises, in line 13 and foll. of the same text, to pay back:

The expression Évroxo૬, therefore, indicates that the customary interest has to be paid over and above the sum stated in the loan. This interpretation is based on a large number of texts from the whole period in which the word in question appears. There are, however, two later loans of money in which a different wording is found, but, in my opinion, these do not affect the inter-


[^3]tórou "an interest bearing loan relating to a principal to which the interest has already been added": ${ }^{20}$ in these cases not only the fact that the principal bears interest but also that this interest has already been added to the principal is stated.
c) In Demotic loans, too, one often comes across certain expressions with reference to interest. In Upper Egypt in particular one often finds the words iw $p 3 j=w h w h n=w$ "whilst their addition (hw) is included in them". These words appear in the acknowledgement of a debt by the debtor as further particulars about the moneys or goods which he declares he owes. The word $h w$ "addition" ${ }^{21}$ in this connection means the interest. ${ }^{22}$

We take an example from a text dated 110/109 B.C. (P. dem. Adler 4) which refers to a loan of wine. The debtors state:
wn mtw $=k$ irp $30--\cdots i . i r-n=n$ (n) rn (n) n3 irp.w r. $d j=k$
$n=n$ iw $p 3 j=w h w h n=w m t w=n d j$. $t$ st $n=k$
"You have with us (i.e. we owe you) 30 (keramies) of wine in the name of the wine you gave us, whilst their addition is included in them: we shall give them (back) to you."

The debtors here declare to the creditor that they owe him 30 jars of wine which include the interest, and that on the grounds of having received wine (as a loan) from him. What immediately strikes one in Demotic ackowledgements of debt of this nature is the exactness of the wording. What the debtor has to pay and how the debt has come about is stated with great exactitude. ${ }^{23}$
${ }^{20}$ P. L. Bat. II 12, 6-7 (3rd cent. A.D.); comp. CPR p. 59: 19a, 5 (4th cent. A.D.): both texts originate from Hermopolis. Perhaps the words $\sigma \dot{v} \tau \dot{\sigma} \kappa \varphi$ in this connection mean the same: see the texts quoted by Lewis, TAPA 76 [1945] p. 129-130, note.
${ }^{21}$ Erichsen, Dem. Glossar 294: haw, "Zuwachs, Vermehrung, Nutzen, Zins". An interesting variation may be read in two loans of seed of which is said: $i w p 3 j=w \check{s} m \underline{h} n=w$ "whilst their šm is included in them" (P. dem. Adler 11, comp. P. dem. Adler 3). The word šm "harvest" has the special meaning of "rent" (the compensation which the lessee has to pay for land rented) and in both texts mentioned in the meaning of "interest" (the compensation which the debtor has to pay for the seed borrowed).
${ }^{22}$ This is clearly apparent from P. dem. Turin 2136 (127/126 B.C.): it concerns a loan for which an acknowledgement of debt was made for a debt of 1440 deben, including the interest (iw $p 3 j=w h w h n=w$ ). The debtor pays off his debt before the expiry date and the creditor acknowledges then that he has received full payment of "the money and the interest on it" ( $n 3$ hd. $w---$ irm $n 3 j=w$ ms.t-hd.w): since the "interest" cannot mean overtime interest (the debtor was, in fact, too early) $h w$ "addition" must indicate the same as the expression ms.t-hd "interest in money".
${ }^{23}$ These acknowledgements of debt are found in various different situations: P. dem. Rein. 3 (see d) is an acknowledgement of debt for what is owed by another, and, therefore, a kind of security; acknowledgements of debt may also contain a renewal of debts as in P. dem. Heid. Kapl. 24 which is a renewal of a debt originally contracted by the father. P. dem. Louvre 2420 d contains an acknowledgement of a debt for grain in which is related that the debt
d) There is still another expression with reference to the interest which was used in Demotic loans - the words d $3 \underline{d} 3$ ms.t "principal (and) interest" ${ }^{24}$ which are found mainly in Lower Egypt. These words appear, for instance, in P. dem. Cairo 30.610 (66/65 B.C.) where the debtors in a loan of wheat state:

$$
\begin{aligned}
& t w=k n=n r d b(n) s w 4(n) \underline{d} 3 \underline{d} 3 \mathrm{~ms} .(t)---m t w=n d j . t \\
& \text { st } n=k
\end{aligned}
$$

"You have given us 4 artabas of wheat as principal (and) interest; we shall give them (back) to you."

The way in which this text is worded is less informatory than the wording we quoted in (c) but from this acknowledgement of debt it is still clear that the debtors have to repay 4 artabas of wheat and that the interest is already included in them.
P. dem. Rein. 3 ( $108 / 107$ B.C.) is an interesting text, not only because of the wording but also because of what it contains. The debtors state here:
$w n m t w=k r d b(n) s w 50---i . i r-n=n n r^{C}-w \underline{h} 3 n d 3 \underline{d} 3$ ms.t
"You have with us (i.e. we owe you) 50 artabas of wheat on the grounds of a claim (which you have) concerning principal (and) interest'. In this case the acknowledgement of debt is not drawn up on the grounds of a loan which the debtors themselves have contracted but on the grounds of a claim ( $r^{\mathrm{c}}-w h 3$ ) which the creditor has on someone else, and for which the debtors, in a certain sense, stand security by this Demotic statement. By a fortunate chance the $r^{C}-w h 3$ referred to in this Demotic document has been spared to us. It concerns a Greek $\delta \dot{\alpha} v \varepsilon \iota \circ \nu$ (P. gr. Rein. 20). This Greek loan relates to a principal of $33 \frac{1}{3}$ artabas of wheat (the $\underline{d} 3 d 3$ "principal" of the
 "interest" in the Demotic text). The Greek text, therefore, refers in total to 50 artabas; this amount agrees with the amount stated in the Demotic text which was indicated there as "principal (and) interest".
e) Summary . In both Greek and Demotic loans certain expressions are found which refer to the payment of interest.
arose because the debtor had received money: this case could, therefore, be taken as a forward sale of grain which was bought and paid for before the harvest and which had to be delivered after the harvest.
${ }^{24}$ Erichsen, Dem. Glossar 673; Sethe-Partsch, Bürgsch. p. 260 par. 9b. It seems to me grammatically impossible to view this expression as an equivalent of $\begin{gathered}\text { evtoxos and to translate }\end{gathered}$ it as "a principal which bears interest" which would mean that in P. dem. Cairo 30.610 (see text) 4 artabas of wheat were loaned and that in repayment interest would also have to be paid over and above these 4 artabas. It is apparent from various texts that the expression in question does indeed have to be translated "principal (and) interest": in P. dem. Mich. 4526 B1 (JEA 24 [1938] 79) the sum that was borrowed was the same as the sum that was repaid, that is 150 deben +4 kite as "principal (and) interest" ( $d 3 d 3$ ms. $)$; see also P. dem. Rein. 3 (further on in the text).

As a rule the interest already appears to be added to the principal so that the texts only give the total amount owed by the debtor. This is the case with expressions such as $\sigma \dot{v}$ ทंuco $1 i \alpha(a), i w p 3 j=w h w h n=w$ "whilst their addition is included in them" (c), and d $3 d 3$ ms.t "principal (and) interest" (d).

The expression Évtoxos (b) is an exception: loans in which this word is used only state the principal, the (conventional) interest still has to be added to it.

Finally it is interesting to note that in various instances the debtor states that he has received a certain sum of money or a certain amount of goods while in actual fact he has received less because the interest has already been added.

## LOANS NOT BEARING INTEREST

4. Besides those loans where it is more or less clearly stipulated that interest has to be paid there are a great many loans for which, in the accepted view, no interest is owed. ${ }^{25}$ On the one hand it is a question of loans where there is absolutely no mention of interest (see par. 5), and on the other hand loans in which the word $\ddot{\alpha}$ roxos is used (see par. 6 and foll.). Both these types are so often found that Rupprecht states: "die Erzielung eines Zinsgewinns war nach dem Bild, das uns die Urkunden offen bieten, kein dem Darlehen wesensmässig eigener Zweck". He arrives at this opinion as a result of the consideration that interest is only owed if it is expressly laid down in writing. ${ }^{26}$

Not only the fact that loans without interest should have been very frequent argues against this view but also, in particular, the fact that just in the time of the Ptolemies, in which most of the interest free loans are found, a very high rate of interest on the ordinary interest bearing loans was customary which was "moderated" by the earlier mentioned $\delta t \alpha \gamma^{\gamma} \rho \alpha \mu \mu \alpha$ to the still considerable rate of $24 \%$. The conception we have of the economic conditions in Egypt certainly does not justify the assumption that so many people who needed credit could obtain a loan so easily without making compensation in some form or other. For the present, therefore, it seems better to take a rather sceptical view of there being no actual interest on those loans which we shall consider in more detail in the next sections.
5. First of all the group of loans where there is no mention of any interest. In P. Ryl. II 160 c the debtors state in col. II 1.34 and foll. (32/33 A.D.):

[^4]


This subscription by the debtors makes no mention of any interest. At the same time one must not immediately conclude from this that no interest was owed for one reads in the text of the agreement itself (col. II 1. 17 and foll.):

$$
\begin{aligned}
& \mu \tilde{\eta} v \alpha \text { ย̃ } x \alpha \sigma(\tau \circ v) \text {. }
\end{aligned}
$$

Generally speaking, therefore, it seems better to be careful in drawing conclusions from the fact that in certain written records no mention is made of interest: it is quite possible that interest is definitely owed. ${ }^{26 \mathrm{a}}$
6. Secondly there is the group of loans in which
 example:

According to this text a certain Herienouphis loaned out a sum of money and that ${ }^{2}$ токх.

In what way is this expression to be interpreted? As far as I am aware, neither the papyrologists nor the demotists have ever doubted the meaning of this expression. It is, however, remarkable that their views are diametrically opposed and that they apparently are not aware of the other's view. According to the papyrologists ${ }^{27}$ ג̈ roxos means "without interest", and according to the demotists, ${ }^{28}$ "including interest". It may, however, be noted
$26^{2}$ See P. Yale I p. 183(6): "The interest is not mentioned, leaving open the question whether any was to be charged".
${ }^{27}$ Preisigke-Kiessling, Wb I, 233 and 4, 308 "zinslos"; Rupprecht, op. cit., p. 79 "Zinslose Darlehen"; Kühnert, op. cit., p. 42 "Verzicht des Gläubigers auf das Entgelt"; Herrmann, op. cit., p. 30 "zinslose Darlehen"; see further Finckh, ${ }_{2}$ op. cit., p. 10 Reekm a ns, CdE 24 [1949] 328 and others.

28 Revillout, Chrestomathie démotique [1880] LVII; Griffith, P. dem. Ryl. III [1909] p. 150, 2; Sethe-Partsch, Bürgsch. [1920] p. 215; Reich, Mizraim 2 [1936] 46; Malinine, Choix de Textes Juridiques [1953] p. 12; Erichsen, Dem. Glossar [1954] p. 294; Pestman, Pétéharsemtheus, P.L.Bat. XIV [1965] 60 nt. 102.
that some papyrologists leave open the possibility, albeit on weak grounds, that in some way or other interest is actually charged. ${ }^{29}$

Let us now consider the various problems which are linked up with the interpretation of the concept $\dot{\alpha}$ roxoc and afterwards try to arrive at a solution (see par. 14).
7. Data ontheword ${ }^{2}$ roooc. According to the Liddell-ScottJones Greek dictionary the word means (1) "having never yet brought forth, barren"; (2) "not bearing interest, not paying interest". ${ }^{30}$ In Egypt the word is often found in the various types of credit agreements and mainly in $\delta \dot{\alpha} v \varepsilon \alpha^{31}$ from the Ptolemaic epoch. ${ }^{32}$ It is a more detailed definition of the object of the loan and is written either as adjective ${ }^{33}$ or as adverb in the forms ג̈гохоv or $\dot{\alpha}$ тожк. ${ }^{34}$

The expression in question is usually found in that part of the sentence which states what the lender has loaned to the borrower. In par. 6 we had one example of this and here follows another taken from P. Adler 10 (102/101 B.C.): ${ }^{35}$
${ }^{29}$ Herrmann, op. cit., p. 30, Rupprecht, op. cit., p. 85, Schnebel, Aegyptus 13 [1933] p. 40. They assume that pre-eminently in д̈́towo弓 loans a cover for an interest rate which is higher than the permitted one may be meant. One may argue against this view in the first place that any kind of loan might have a hidden meaning (especially the kinds dealt with in par. 3), and, further, in opposition to this view which is firmly supported by Schnebel with ref. to BGU IV 1053 (see par. $11 b$ and note 77 ) that this is such a text from which he himself deduces that the interest was too high so that there can be no question of cover.
${ }^{30}$ This is apparently a question of $\alpha$ privans, so that the word gyroxos must mean the opposite; it is most unlikely that we are faced here with another kind of $\alpha$ used in the sense of "same", "together with" or "ev" (Schwyzer, Griechische Grammatik Ip. 433).
${ }^{31}$ Other kinds of texts are rare: $\chi$ р $\tilde{\sigma} \sigma \iota \varsigma:$ BGU IV 1120, $20-21$ (1st cent. B.C.) $\pi \rho \sigma \delta o \mu \alpha:$ BGU VI 1262, 17 (3rd cent. B.C.); $\pi \alpha \rho \alpha{ }^{2} \dot{\eta} \kappa \eta$ : P. Hamb. I 2, $14=$ CPJ II 417 (1st cent. A.D.; see note 36). In a few other cases a loan is cast in the form of a $\dot{\delta} \mu \mathrm{o} \lambda \mathrm{\gamma} i \alpha$ : P. Adler 19 (1st cent. B.C.) and P. Lond. III p. 9: 1203, 4 (2nd cent. B.C.).
${ }^{32}$ See for the texts Kühnert, op. cit., p. 42-44 and Rupprecht, op. cit., p. 79. Most of these texts date from the three centuries before the beginning of our era, some even from the beginning of the Roman era (1st and 2nd cent. A.D.). In later times, in some texts one comes across the expression $\dot{\alpha}$ tox $\hat{i}$ or $\dot{\alpha} \tau 0 x \varepsilon i$, in fact in two texts from the second cent. A.D. (Stud. Pal. IV p. 117, 17 and 35 ; P. Tebt. II 342, 30) and in eleven from the sixth and seventh cent. A.D.: BGU III 725, 23; P. Cairo Masp. II 67.162, 23 and III 67.309 , 19; P. Edfu I p. 181, 11 and 15 ; P. Lond. I p. 215-216: 113, 6c, 27-28; P. Lond. V 1716, 3 and 1766, 12; P. Mon. 3,2; SB III 7201, 19 and 6 9284, 12; Stud. Pal. III 439. The expression $\dot{\alpha} \tau 0 x$ i has apparently the same meaning as $\ddot{\alpha}$ toxo弓 and similar problems arise in the interpretation of them. Seeing, however, the fact that $\dot{\alpha}$ roxi does not appear frequently enough to deal with it separately, it is only used in the notes for comparison purposes: see notes $34,36,69,79$ and $80 a$.
${ }^{33}$ See for this, besides the texts quoted in the text, the loan in note 36 .
${ }^{34}$ The form $\dot{\alpha}$ rowov is rarely found: P. Hib. I 89, 8 (3rd cent. B.C.); the form $\ddot{\alpha} \tau 0 \% \alpha$ on the other hand is very common, see e.g. the text mentioned in par 6 . For completeness the adverbial $\dot{\alpha}$ toxi ( 2 nd and 6 th- 7 th cent. A.D.) should be mentioned here: see note 32 .
${ }^{35}$ See par. $8 h$ for the background of this loan.
¡ $\delta \varepsilon \delta \alpha v \varepsilon \tau \sigma \mu$ évoc．

In some cases，too，the expression is found in that part of the sentence which states what the borrower has to pay back．P．Ross．Georg．II 6 （114／113 B．C．） gives us an example：${ }^{36}$

$$
\begin{aligned}
& \text { Кє甲 } \dot{\lambda} \tilde{\alpha} \tau \circ \varsigma-\text { - } \pi \cup \rho \circ \tilde{\sim} \sigma \tau \varepsilon \rho \varepsilon о \tilde{~} \dot{\alpha} \rho \tau \dot{\alpha} \beta \alpha \varsigma
\end{aligned}
$$

$$
\begin{aligned}
& \Delta \text { ıovúaıog. }
\end{aligned}
$$

There is，therefore，a clear difference between the twofold use of the word वै $\tau 0$ oos and the expressions considered in par．3，as these latter never appear in that part of the sentence which states what the borrower has to repay．

Let us first of all look at the various theories which attempt to give an explanation for the word $\ddot{\alpha}_{\text {rowos }}$ and for the group of $\dot{\alpha}$ тoxoc loans（par．8－10）．

8．Are $\ddot{\alpha}$ roxoç loansmade withoutinterestas between friends？Whilst all papyrologists，as far as is known，assume that ${ }_{\alpha}$ zoxos loans bear no interest，only a few of them attempt to explain their view．They then point out the＂Gefälligkeit＂or＂ein gewisser Altruismus＂on the part of the creditor．${ }^{37}$

The texts certainly show us some few cases where one might assume that the creditor wished to do some service to a friend：
a）P．Lond．III p．9： 1203 （Pathyris；114／113 B．C．）is an $\ddot{\alpha} \tau 0 \chi 0 \varsigma$ loan between a father and his son．${ }^{38}$

[^5]b) The family archive of Dionysios, son of Kephalas (Akoris), ${ }^{39}$ contains some 20 loans from the years 114/113-104/103 B.C. The earliest of these are <́roxos, whilst from 110/109 B.C. onwards interest on each loan in expressly stipulated. ${ }^{40}$

One could imagine that the creditors ${ }^{41}$ were originally prepared to oblige Dionysios but that later they had second thoughts, when it appeared that Dionysios continually needed new credit. ${ }^{42}$
c) BGU IV 1151 I = CPJ II 143 ( $14 / 13$ B.C.) is a text which does not, it is true, relate to a loan in the real sense of the word, but has been included here to complete the picture. It refers to a legacy of 200 drachmas which the deceased left to a woman. The deceased's brother settles the estate and pays half the legacy to the woman, arranging meanwhile that the woman shall receive the remaining 100 drachmas seventeen months later and that $\dot{\alpha}$ tóxous. It is quite possible that the woman, to oblige the deceased's brother, allows him to pay the remaining 100 drachms later.

The motive of the creditor for allowing the loan may, in the above cases, be a gesture of goodwill towards the debtor.

As regards the form and contents of the agreements made by a creditor who is moved by this motive, we are entirely dependant on what appears in the written records, seeing that we know nothing of $\dot{\alpha}^{\prime}$ roxoc loans made by word or mouth. From the written documents we find the following:
d) In Upper Egypt most of the written \&́roxos loans were drawn up at
 the presence of witnesses and then registered in the public registers and given into the keeping of a $\sigma u \gamma \gamma \rho \alpha \varphi \rho \varphi \cup \cup \lambda \alpha \xi .{ }^{44}$ Most of the ordinary interest bearing loans were drawn up in the same way.
e) Nothing is said in $\ddot{\alpha}$ гохоя loans, apart from the word $\ddot{\alpha}$ тожоร, about the interest which the debtor owes during the period of the loan. In interest bearing loans, as a rule, the usual rate of interest is clearly stated.
from P. dem. Louvre 2443 ( $250 / 249$ B.C.; see note 3) where $30 \%$ interest was charged on a loan between man and wife.
${ }^{39}$ Published in P. Rein. I.
${ }^{40}$ P. Rein. 31 seems to be an exception, an д̈roxo弓 loan from the year $\vartheta=109 / 108$ B.C. According to the editor's commentary, however, this $\vartheta$ is so much damaged that only a small part of the left side of this letter remains. One would have to check with the original to discover whether another letter might have been written here.
${ }^{41}$ The д̈́roxos loans are made by different creditors than the interest bearing loans.
${ }^{42} \mathrm{Or}$ is it perhaps no more than an accidental difference in wording?
${ }^{43}$ Texts from Pathyris, Krokodilopolis and Thebes in the main.
${ }^{44}$ Most of these texts come from the archive of Dionysios (Akoris; see 8b); see further e.g. SB V 7532 (75/74 B.C.; Fayoum).
f) In the case of the debtor failing to pay up on the due date the following was usually laid down:

Loans of money:
a) In $\ddot{\alpha}^{\alpha}$ гокоऽ loans of money the debtor has to pay a fine of $50 \%$; during the remaining time he pays the usual interest. ${ }^{45}$
$\beta$ ) With loans of money bearing interest the debtor also pays a fine of $50 \%$, whilst, during the remaining time, he will pay the usual rate of interest which is the same as the interest he was charged before the expiry date. ${ }^{46}$

Loans in kind:
$\gamma$ ) In ג́ $\tau$ коє loans of goods the debtor only pays the $50 \%$ fine. ${ }^{47}$
§) With interest bearing loans of goods the debtor pays a fine of about 50 or $100 \% .^{48}$
 gives houses or lands as security ${ }^{49}$ or a third party stands as guarantor ${ }^{50}$ or as co-debtor. ${ }^{51}$

There do not appear to be many differences in this respect between ${ }_{\alpha}$ гоко与 loans and interest bearing loans. In the group of loans from the Dionysios archive (see $b$ ), for instance, there is no difference as regards securities to be noticed between the interest bearing loans and the $\ddot{\alpha} \tau 0 \kappa \circ \varsigma$ loans.

It is clear that the creditor is moved by purely businessmotives in drawing up the contract and including in the conditions covering the repayment of the loan. In fact, in this respect, there is no difference between «̈roxо૬ loans and loans bearing interest. It is worthy of note that those cases, too, where we saw above that the loans could have been made out of

[^6]goodwill $(a-c)$ are no exception - in all these cases a written document was made and in many the creditor stipulated for security. ${ }^{52}$

One may again expect that, in executing thecontract, a creditor will show his goodwill towards the debtor and particularly in those cases where it is impossible for the debtor to pay his debts on the due date. There are indeed certain texts from which it appears that the debtor could not pay on time but, unfortunately, there are only a few from which we can know or conjecture that they refer to debts which are made under $\dot{\alpha}$ roxoc loans. ${ }^{53}$
h) P. Adler 10 (Pathyris; 102/101 B.C.; see par. 7) is an $\ddot{\alpha}$ roxoç loan of 12 talents made on 22 nd June 101 B.C. for a period of 30 days. One is tempted, considering the period of the loan, to assume that the debtor needed money in anticipation of the harvest but we know nothing further about it. Whatever it may have been, the debtor was not able to pay his debt at the end of the 30 days and not even in the following months. He is given respite until 12th July of the following year (until the next harvest?), but then finds himself obliged to sell 4 lots of land to his creditors in satisfaction of this debt (P. Adler $13 ; 12$ th July 100 B.C.). It is remarkable that the creditors not only permitted such a long extension of payment but that they also probably were only able to recover a part of their claim - after all the 4 lots of land were given to them as compensation for the 12 talents owed, ${ }^{54}$ but a year later 3 of these lots only brought in 4 talents (P. Adler 16; 22nd May 99 B.C.). ${ }^{54^{a}}$
i) In the year 33 of Ptolemy VI (149/148 B.C.) of or Ptolemy VIII (138/137 B.C.) ${ }^{55}$ a loan of money was made in Krokodilopolis which was probably an

[^7]ג́tохоц loan. ${ }^{56}$ In 108/107 B.C. (P. Lips. 7) part ${ }^{57}$ of the debt was paid off by the legatees of the original debtor. We do not know the duration of the loan in question but it seems most probable that the payment was made long after the expiry date. We cannot discover from the debtors family archive why repayment was made so long afterwards; they were not, apparently, without means.
j) P. Grenf. II 31 ( $105 / 104$ B.C.) refers to the partial repayment of a debt; possibly the same one as mentioned above in $8 i$. In this case it is certain that repayment was made too late since there is mention of a $50 \%$ fine ( $\dot{\eta} \mu \iota^{\circ} \hat{\partial} \iota \circ$ ) which a debtor has to pay if he is late in paying his money debt (see $8 f, \alpha$ ). The creditor in our text states that he has received what was owed as well as the interest (i.e. the overtime interest for which the debtor was liable over the period after the expiry date: see $8 f, \alpha$ ). It is worth noting, in this case, that the creditor renounces his right to the fine.

The above cases illustrate the fact that the creditor's attitude was certainly flexible with respect to the collection of his dues from ${ }_{\alpha}$ toxos loans. This flexible attitude may, of course, result from a certain degree of goodwill towards his debtor, but he might also have adopted it from purely practical considerations. In the first case $8 h$, for instance, it is very possible that the creditors merely wished to wait until the next harvest in the hope of then still collecting their debt; this is all the more probable because, in the end, they had to be content with 4 lots of land which were obviously of less value than their claim. The creditor, therefore, certainly does not adopt a flexible attitude with regard to the repayment, from goodwill towards the debtor only, and it is then not surprising that many texts illustrate this attitude without it being a question in all these cases of debts from д̈́roxoc loans. ${ }^{58}$

Summary. In some cases which we have discussed above goodwill could have played a part either in making a loan or in the collection of the debt where the debtor could not pay on time. Although we cannot, of course, know whether, in cases other than those quoted, goodwill moved the creditor to make an $\ddot{\alpha}$ toxos loan, the amount of data seems to be too small and too light in weight to give credence to the view that all $\ddot{\alpha}$ roxos loans were always made out of goodwill.

To complete the picture it may be noted here that goodwill on the part of the creditor did not necessarily imply that he enacted no interest at all. A lower rate of interest than usual may well have been allowed out of goodwill,

[^8]whilst one can readily imagine that it is a question of goodwill when the creditor is prepared to lend to a doubtful debtor at the usual rate of interest or when he is prepared to lend at the usual rate of interest in spite of a great scarcity of money or goods.
9. Are $\dot{\alpha}$ гoxoc loans, $\delta \dot{\alpha} \nu \varepsilon \iota \alpha$ bearing no interest? A few papyrologists connect the non-interest factor in $\ddot{\alpha}^{\text {rooxocg }}$ loans with a distinc-
 In making this distinction they refer to a lexicon from the 10th century A.D.
 тoús tuxóvtac. A xp therefore, bears no interest whilst a $\delta \alpha \dot{v} \varepsilon \iota v$ is a loan made from economic motives and for that reason always bears interest. If, for some reason or other,

 exceptionally, "bears interest". On the other hand, if they wish to deviate from the rule that a $\delta \dot{\alpha} v \varepsilon \sigma_{0} \nu$ always bears interest and want to make a noninterest bearing $\delta \dot{\alpha} v \varepsilon \iota_{0 \nu}$ this is indicated by the word $\dot{\alpha} \tau 0 \% 0 \varsigma$, which means that the $\delta \dot{\alpha} \nu \varepsilon \iota o v$, exceptionally, "bears no interest".

This construction is really too good to be true! Quite apart from the question as to how far Suidas may be considered an authority on conditions in Egypt at a time long before his own, and apart from the question as to why the parties, if they wish to deviate from the presumed rules governing interest, do not just make use of the kind of loans customary in these cases (i.e. the $\delta \dot{\alpha} v \varepsilon \iota \circ$ if they wish to charge interest and the $\chi$ prĩous if they do not want to charge interest), our texts in no way warrant this construction. In the centuries

 these very reasons, ${ }^{61}$ therefore, the theory mentioned above cannot be correct and gives us no information about the loans.
10. Do «̈́roxos loans include the interest? The views of papyrologists according to whom $\ddot{\alpha}$ 'гoxos loans were made without interest being charged have been discussed above. The opinions of the demotists are in complete opposition to these for they clearly assume that $\dot{\alpha}$ toxoç loans definitely bear interest and regard the word ${ }_{\alpha}$ cooos in the sense of "including interest". ${ }^{62}$ They are of the opinion that the Demotic expression $i w p 3 j=w$

[^9]62 See par. 6 and note 28.
$h w \underline{h} n=w$, "whilst their addition (i.e. interest) is included in them" ${ }^{63}$ corresponds to the Greek word $\ddot{\alpha}^{2}$ гoxos.

This equivalent meaning is supported by the fact that in Pathyris and Krokodilopolis, where the majority of these $\alpha$ orowos loans are found, all Demotic loans of money contain the formula "whilst their addition is included in them" and all the Greek ones the word ${ }_{\alpha}$ zooos. If one were to assume that in these villages all Greek loans of money were made without interest being charged and at the same time all Demotic loans were made at a rate of interest, then the consequences thereof would be of an extremely fundamental nature and not tally with what we now know about the juridical and economic conditions in Egypt. A more acceptable view is indeed that both types refer to loans of the same nature. Although this theory on the part of the demotists does not give a translation of the word $\ddot{\alpha}^{\alpha} \tau 0 \alpha_{0}$, it is not impossible that the formula "whilst their addition is included in them" is equivalent to it in some way or another.
 to now we have dealt with the current theories which have been developed with respect to the meaning of the word $\ddot{\alpha}^{2}$ roxos and the interpretation of $\ddot{\alpha}^{\prime}$ гожоs loans. Since none of them was entirely satisfactory we shall now endeavour to reach a solution in another way.
a) In some $\ddot{\alpha}$ roxos loans the word $\ddot{\alpha}$ гowos is not found in the statement of what the debtor has received but in that of what he has to pay back (see par. 7).
b) Shortly before the beginning of our era one finds in Alexandria a certain Gaius Julius Filius who was evidently by profession a lender of goods and money. ${ }^{64}$ One comes across him at various times as a creditor in $\dot{\alpha}$ roxoc loans, such as, for instance, in BGU IV $1053 \mathrm{I}=\mathrm{M}$. Chrest. 105 I (14/13 B.C.); in this document the debtors make the statement that they

$$
\begin{aligned}
& \lambda \dot{n}[\nu] \pi \text { ооoú } \mu \varepsilon v o t .
\end{aligned}
$$

This is a matter of an $\dot{\alpha}$ 'roxoc loan of a sum of 300 drachmas lent for a period of 10 months (or 300 days). ${ }^{65}$ What is remarkable in this text is that the amount borrowed does not have to be paid back all at once on the expiry date but in instalments. The debtor will pay back 1 drachma per day until at the end of the 300 days the full debt of 300 drachmas is paid off, or (according to the

[^10] $\Gamma \alpha ́ l o v ~ \Phi i \lambda \lambda[o v]$.

In this group of texts the word ${ }_{\alpha}$ towos is not found in the statement of what has to be paid back but in that of what has been received. From the way in which the repayment is regulated it seems, however, clear that the stated sum has to be paid back and no more than that - no mention of possible interest is made.

It follows, from the above texts, that apparently with $\ddot{\alpha}$ roxoc loans, the sum of moneyor amount of goods statedin the document, is what the debtorhas torepay. Thus this is the same situation as with loans in which the expressions oivv njubil (par. 3a), $i w p 3 j=w h w h n=w$ "whilst their addition is included in them" (par. 3c) and d 3 d 3 ms.t "principal (and) interest" (par. 3d) appear. We have seen (par 3e) that in all these expressions the interest was included in the sum stated in the loan and that the debtor, in many cases, appeared actually to have received less than he stated. Let us consider these two points with regard to the $\dot{\alpha}$ rowos loans:
c) As regards Ancient Greece ${ }^{67}$ one can refer to a passage from the Nomoi (921c) in which Plato lays down that in general no interest is owed for loans. He only makes an exception in the case of someone who is indebted to a craftsman who has done something for him - if, after a year, he has not repaid this debt then he will be charged interest on what he still owes, $\tau \tilde{\omega}$

d) One may, as regards Egypt, refer to the cases quoted in par. $8 a-c$, where it is quite possible that the father owes no interest to his son, neither does Dionysios, the son of Kephalas, to his creditors during the first years when he was in need of credit, nor the brother of the deceased to the woman who had received a legacy.

It may, therefore, happen that the debtor has to pay back the same sum as he borrowed without in any way having to pay interestonit.
e) There are, on the other hand, cases in which there is definite mention of interest. P. Fouad $44^{68}$ deals with a sum of 400 drachmas which the woman Didyme promised to lend to a certain Lucius in 44 A.D. for the period of 13 (?) years. Lucius will repay the money on the expiry date: $\mu \varepsilon \tau \dot{\alpha}$ [ $\delta \dot{\varepsilon}$ ]
 an $\dot{\alpha}$ रoxos loan which also contains the conventional conditions in the event of the debtor not paying his debt at the given time (see par. $8 f$ ). It is noticeable

[^11]here, from the wording of the text, that interestis charged (although this is not paid in money) since the creditor receives $\dot{\alpha} \nu \tau \dot{i} \tau \tilde{\omega} \nu \tau 0 \dot{\nu} \tau \omega \nu$ $\tau \sigma x \omega \vee(1.10)$ the right to live in the debtor's house. ${ }^{69}$

It may, therefore, happen that the debtor has to pay back the same amount as he borrowed but that he still owes interest besides, which, however, is calculated in quite a different way.

From these examples we can see that in some cases of $\dot{\alpha}$ roxoc loans no interest is charged and in some others that it is exacted. The question arises, therefore, as to what was done about interest in all the other cases. There are various considerations of a general nature which argue against a theory of no interest being charged:
f) The number of $\dot{\alpha}$ toxos loans in the centuries before the beginning of our era is remarkably large in proportion to the number of interest bearing loans ${ }^{70}$ and that, too, in a period in which the conventional interest was "moderated" by a $\delta$ с́́үроцuи to $24 \%$.
g) One might expect that interest-free loans were made by word or mouth, ${ }^{71}$ or at the most noted on an ostracon. ${ }^{72}$ Very many д̈́roxoc loans, however, were put down in writing only one of which is on an ostracon, ${ }^{73}$ all the rest being on papyrus. ${ }^{74}$
h) All written $\ddot{\alpha}$ roxos loans must have cost money, especially those documents which were drawn up at the office of the $\dot{\alpha}$ Yopavóups (see par. $8 d$ ).
i) "Aтoкos loans were often made for a shorter period than ordinary interest bearing loans; ${ }^{75}$ a period of 30 days is not unusual. ${ }^{76}$ Why should people incur

[^12]the trouble and expense of drawing up a written document for a short period if it was only a question of loans without interest?

It seems, therefore, obvious to assume that, in most $\ddot{\alpha}_{\text {roxoc }}$ loans, interest was charged in some way or other. It is, of course, possible that this interest was paid in some other way such as was the case in 11e, but presumably those were special cases. Considering that we have already established that during the same period of time in Pathyris and Krokodilopolis both Demotic loans with the formula "whilst their addition is included in them" and Greek loans with the word $\ddot{\alpha}^{\text {rooxoc }}$ are found together (see par. 10), then the natural assumption is that interest is also calculated in with the principal in these Greek loans and that the Greek documents state the whole amount owed.

It may, therefore, also happen that the debtor has in reality received less than he states since the in terest has already been included in the principal.

This view, which finds support in the interpretation which we made in par. 3 of other expressions referring to the calculation of interest, could well explain the majority of $\alpha$ cooxos loans. One could, for instance, imagine with regard to the loans made by the professional moneylender Gaius Julius Filius (11b) that the sum of 300 drachmas owing was compiled fromprincipal and interest. ${ }^{77}$

In how far in such cases the interest deviated from the usual rate of interest, either more or less, cannot, of course, be deduced from the texts, as is equally the case with the other kinds of loans where the interest is already calculated in with the principal and where, therefore, only the total sum owing is given. ${ }^{78}$
12. Summary . When we sum up the data from the previous paragraph we are forced into a comparison between the words $\ddot{\alpha}^{\text {rooxos and }}$ ávtoxos: just as the word évroxog indicates that the customary interest still has to be paid on the sum stated in the agreement, so the word ${ }_{\alpha}$ (rowos indicates that no in-
${ }^{77}$ This is also the opinion of Schnebel, Aegyptus 13 [1933] p. 37-38, but on other grounds. From col. II of the relevant text it appears that Gaius Julius Filius had already made loans to the same people before, to an amount of 240 drachmas; he states that he has received this back. In Schnebel's view he did not get anything back but altered his old loans of 240 drachmas to a new one of 300 in which the difference of 60 drachmas represents the interest which is owed on the new loan: since the new loan is made for a period of 10 months Schnebel speaks of a usurious rate of interest.

There are various arguments against this view; in the first place there is nowhere evidence that the previous loans and the new one concern the same affair; further the usurious rate of interest would have been very openly arranged; finally it might have been possible that the sum of 60 drachmas was the interest on the previous loans or even a fine for overdue payment etc. Comp. Finckh, op. cit., p. 62 note 200, Rupprecht, op. cit., p. 85 note 56, and Lewis, TAPA 76 [1945] p. 132 note 25.
${ }^{78}$ One can, therefore, see no specific feature of $\ddot{\alpha}$ roxoc loans in this as some papyrologists have done, see note 29 .
terest has to be added to the sum stated. Grammatically, therefore, both words come into the same category and in both cases it is clear to everyone what the debtor has to pay.

The difference between the two expressions lies in the fact that with loans where the word Evvooos is found it is clearly indicated that the debtor has to pay interest and also how much, whilst both these factors are ignored where the word $\ddot{\alpha}^{\prime} \tau 0$ коs appears. According to our theory, when there is an $\ddot{\alpha}^{\circ}$ rowos loan, say, of 100 drachmas the debtor has to repay 100 drachmas and no more:
a) either because the loan bears no interest (this situation is not often found in the texts; the papyrologists' theory on the goodwill of the creditor applies here: par. 8);
b) or because the interest has to be paid in some other way (this situation, too, is not often found in the texts: par. 11e);
c) or because the interest has already been calculated in with the principal and included in the sum of 100 drachmas (this situation probably arises in the majority of cases; the theory of the demotists applies here: par. 10).
In any particular case one has to try to determine which of these three situations arises ${ }^{79}$ on the data and merits of each case individually. ${ }^{80}$

Lastly, it is worth noting that both the theory of the papyrologists on the goodwill of the creditor (par. 8) and that of the demotists according to whom

[^13]the interest on $\ddot{\alpha}$ roxos loans is included in the principal, may be fitted into the theory advanced above, on the understanding, however, that the demotists' theory seems to hold good more often than that of the papyrologists. ${ }^{81}$

## CONCLUSION

13. In dealing with the above subject of the rather technical problems relating to the interpretation of the interest clauses in loans, the human and social aspect has receded into the background. It does not seem fair to end this article without at least touching shortly on these aspects.

The family archive of Peteharsemtheus, the son of Panebkhounis, gives us a picture of a family, not without means, where loans were regularly contracted from business motives. ${ }^{82}$ On the other hand we have the sad case of Dionysios, the son of Kephalas (par. 8b), who in a period of ten years was obliged to contract at least 20 loans to be able to live.

It must have been quite usual to contract loans, witness, amongst other things the great number of loans ( 369 in all) which appear in the registers of Tebtynis in the years $42-47$ A.D. ${ }^{83}$ In many cases these loans will have been contracted by poor fellows like Dionysios since it must have been quite customary to borrow in order to work the land, ${ }^{84}$ to celebrate a marriage or a birthday, anyway the Egyptian sage Ankhsheshonk advises: ${ }^{85}$
"Borrow money at interest and use it for (your) land; borrow money at interest and choose yourself a wife; borrow money at interest and celebrate your birthday: but do not borrow money at interest in order to live in great state with it".
Another Egyptian sage says in this respect: ${ }^{86}$
"Borrow no money at interest in order to increase (your) food with it".

[^14]From such advice one may conclude on the one hand, that contracting loans was regular occurrence and, on the other hand, that people usually did not have enough capital at their disposal for all sorts of essential expenses, whereby one must realize that the position of the debtor himself was far from pleasant considering the high interest rate, the risk of price fluctuations in loans on kind $^{87}$ and the strict conditions in the agreements governing non-fulfilment.

On these circumstances lending out money or goods must also have been a risky business. We did establish, in fact, that the creditor sometimes had to wait a long time for his money (par. $8 h-j$ ). The Egyptian sage Ankhsheshonk ${ }^{88}$ advises therefore: "Lend out no money at interest without having a security in your hand". The creditors in the Adler case (par. $8 h$ ) found to their sorrow that it was also essential to make sure that the value of the security, too, was sufficient.
[Leiden]
P.W. Pestman

87 See note 9.
${ }^{88}$ See note 85: 16, 21.


[^0]:    ${ }^{1}$ H. E. Finckh, Das Zinsrecht der gräko-ägyptischen Papyri (Diss. Erlangen, 1962); J. Herrmann, Zinssätze und Zinsgeschäfte im Recht der gräko-ägyptischen Papyri (JJP 14 [1962] 23-31); H. Kühnert, Zum Kreditgeschäft in den hellenistischen Papyri Ägyptens bis Diokletian (Diss. Freiburg, 1965); H. A. Rupprecht, Untersuchungen zum Darlehen im Recht der gräko-ägyptischen Papyri der Ptolemäerzeit (Münchener Beiträge zur Papyrusforschung 51 [1967]).
    ${ }^{2}$ See par. 12 for our interpretation.
    ${ }^{3}$ There are however a few cases in which the amount of interest is given in Demotic loans of money (for bibliography with respect to the Demotic texts see Pestman, Chronologie): a) P. dem. Mosc. 113 (286/285 B.C.): the debt is for 13 kite but according to a separate note

[^1]:    ${ }^{7}$ For this reason some authors use the word "compensation" instead of "interest".
    ${ }^{8}$ See par $3 c$ for this.
    ${ }^{9}$ This presents a problem since it does not seem plausible that anyone who, for example, needed wine for a period of 3 months would be prepared to borrow this wine against $50 \%$ compensation if he is able to borrow money at $2 \%$ interest per month and with it is able to buy the wine he needs - he would then only pay $6 \%$ interest. The explanation may be sought in two directions - it is either impossible for our wine-lover to borrow money (e.g. because of a money shortage cf. Reekmans, CdE 24 [1949] 332) or the price of the wine at the moment when our wine-lover needs it is much higher than it probably will be when he has to pay it back (e.g. because the harvest has meanwhile been brought in; Kühnert, op. cit., p. 57-58 "die Rückgabemonate der Getreide-Daneia liegen bei 31 von 45 Belegen in den Erntemonaten"). This problem requires further investigation but the last-mentioned solution is supported by the fact the fluctuating market prices were often taken into consideration: in P. Adler 15, for instance, is laid down that the debtor who failed to pay the wheat he owed would be obliged to pay a fine of $50 \%$ or the market price at that time: $\dot{\alpha} \pi[0] \tau \varepsilon \sigma \alpha \dot{\alpha} \tau \omega$ ——— $\dot{\eta} \mu \omega \dot{\sigma} \lambda \iota o v \quad \dot{\eta} \tau \dot{\eta} \nu$
    

[^2]:    ${ }^{10}$ N．Lewis，The Meaning of $\sigma \dot{\sim} \dot{\nu} \dot{\eta} \mu \nu \lambda i \alpha$ and Kindred Expressions in Loan Contracts， TAPA 76 ［1945］p．126－139．
     I know of no exceptions．Rupprecht，op．cit．，p．78，note 29 refers to P．Hamb．I 58，8－9 where，in his opinion，the words $\sigma \dot{v} \dot{\eta} \mu \omega \circ \lambda i \alpha t$ indicate that $50 \%$ has be to added to the sum to be repaid．There is，however，a lacuna in the passage in question，whilst the order of the words requires a different punctuation，so that his interpretation cannot be correct：［o⿱宀v卜 or $\dot{\varepsilon} \pi i l$ ？］ $\tau \tilde{\eta} \iota \dot{\eta} \mu \iota \nu \lambda \iota \alpha \iota \dot{\alpha} \pi \dot{\prime} \delta \circ \sigma \iota \zeta$ ———．
    ${ }^{12}$ The expression हैvгo\％oc is found several times in the Ptolemaic era and always in $\delta \dot{\alpha} v \varepsilon \iota \alpha$ （comp．note 14）．
    
    （P．Oxy．III 508，17－18；101／102 A．D．）；ג́prúpıov हैvtoxov（P．Oxy．I 56，7－8；211／212 A．D．）．
    ${ }^{14}$ See e．g．P．Strassb．II 92， 8 （3rd cent．B．C．）；P．Oxy．XIV 1644， 14 （1st cent．B．C．）； P．Gen． 9 I 4 3rd cent．A．D．）：these texts date from the 3rd cent．B．C．to the 3rd cent．A．D．
    ${ }^{15}$ Only in the Roman era．

[^3]:    ${ }^{16}$ This is not the right place to go further into the difference between the two types of loans ( $\delta \dot{\alpha} v \varepsilon \iota \circ v$ and $\chi \rho \tilde{\eta} \sigma \iota \zeta$ ); in par. 9 we shall only come back to this in so far as the difference may be of importance in the interpretation of the words żvrowos and $\dot{\alpha}$ токоц.
    ${ }^{17}$ Schwartz, P. Sarap. p. 51; Préaux, CdE 37 [1962] 393; Lewis, TAPA 76 [1945] p. 137 (from the text which he quotes on p. 136 just the opposite appears).
    ${ }^{18}$ P. Oslo III p. 198 (21); comp. Kühnert, op. cit., p. 99, and Finckh, op. cit., p. 36.
    ${ }^{19}$ See e.g. P. Strassb. II 92 (3rd cent. B.C.); BGU IV 1144 (1st cent. B.C.); CPR 16 (2nd cent. A.D.); P. Lips 11 (3rd cent. A.D.).

[^4]:    ${ }^{25}$ Rupprecht, op. cit., p. 81 note 42 gives a list of these cases in the Ptolemaic era; on p. 84 he writes "Das Verhältnis zwischen verzinslichen und unverzinslichen Darlehen ist bei Gelddarlehen 13:16 und bei Naturaldarlehen 15:26".
    ${ }^{26}$ Rupprecht, op. cit., p. 84; Finckh, op. cit., p. 10 in the same sense.

[^5]:    36 The expression $\dot{\alpha}$ towos used in the same part of the sentence is also found in two other loans from the archive of Dionysios（the end of the 2nd cent．B．C．；see par．8b）：P．Rein． 8 and 10 ；see further P．Fouad 44 （1st cent．A．D．：par．11e）．

    The same order is also found in some other cases：with reference to a legacy（CPJJII 143， 12；1st cent．B．C．；see note 52），a dowry（P．Mich．III 191－192，23；1st cent．A．D．；see note
    
    

    The expression $\dot{\alpha}$ roxí（2nd and 6th－7th cent．A．D．；see note 32），lastly，is found only in that part of the sentence referring to the payment of what is owed．
    ${ }^{37}$ Kühnert，op．cit．，p． 38 and Rupprecht，op．cit．，p．12．For completeness we give here the view of Adler（P．Adler p．5－6）according to whom loans might be without interest as a result of Jewish influence．This view is，with justice，generally refuted；see e．g．Tcheri－ kover CPJ I p．35－36 and Rupprecht，op．cit．，p．79－81．
    ${ }^{38}$ Comp．Pestman，Pétéharsemtheus，P．L．Bat．XIV［1965］ 63 nr ．16．Other loans between members of a family are：P．Lond．III p．15： 1205 （ $100 / 99$ B．C．）between two brothers（it is not known if this was an «̈toxos loan）；UPZ II 190 （ $99 / 98$ B．C．）between two brothers（the relationship is not definite）：the loan is renewed by their children as $\ddot{\alpha}$ rowo弓．

    A family relationship did not necessarily mean that no interest was charged，as appears

[^6]:    
    
    
    
    

    47 P. Grenf. II 24 (106/105 B.C.): ——— $\alpha \pi o \tau \varepsilon \iota \sigma \dot{\alpha} \tau \omega-$ —— $\pi \alpha \rho \alpha \chi \rho \tilde{\eta} \mu \alpha$, $\alpha \nu \tau i \quad \tau \tilde{\omega} \nu$
    

    48 Usually this fine has to be paid in money. Between 130 and 30 B.C., for instance, the market price of wheat amounts to ca. $1200-1500$ drachmas per artaba, the normal penalty price to 2000 (i.e. a fine of about $50 \%$ ), and the increased penalty price to 3000 (i.e. a fine of about $100 \%$ ); see Reekmans, Copper Inflation, Studia Hellenistica 71951111 and 113.
    ${ }^{49}$ P. Tebt. III $817,12=$ CPJ I 23 (182/181 B.C.); see also $8 h$.
    ${ }^{50}$ P. Grenf. II 27, 17 (103/102 B.C.).
    ${ }^{51}$ This is, in the Dionysios archive (see $8 b$ ), often the wife of the debtor (comp. the text quoted at the end of par. $3 d$ : his wife and mother).

[^7]:    ${ }^{52}$ It concerns some of the texts mentioned in $8 b$ as well as CPJ II 143, the text mentioned n $8 c$; lines $11-12$, it is true, are not entirely legible but it is clear that woman promises to renounce her securities as soon as she has received ( $\dot{\alpha}$ (0\%\%5) what is being owed.
    ${ }^{53}$ P. Ryl. IV 588 concerns the paying back in $78 / 77$ B.C. of a debt contracted in $85 / 84$ repayment was apparently made too late): it is, however, unlikely that this was an $\alpha$ го夫о弓 loan. Kühnert, op. cit., p. 57 and foll and P. Yale I p. 196-197 mention more of such cases. In P. Ent. $45(223 / 222$ B.C ) the cre litor complains: "Ils m'ont emprunté cent cinquante drachmes ... et, malgré mes réclamation з renouvelées, ils ne m'ont pas remboarsé, prétendant n’être pas en situation de le faire et moi, comme il s'agissait de parents, je me suis plié jusqu'ici a la sitution",
    ${ }^{54}$ This is the purchase money (P. Adler $13 \mathrm{col} . \mathrm{I}, 5$ ) and the sum on which sales tax has to be paid (col. III, 13).
    $54^{a}$ Or did the buyer pay more than 4 talents in reality? A fragmentary and obscure Demotic document seems to mention a payment of 7 talents, P. Adler dem. $28=\mathrm{U}$. K a -plony-Heckel, Dem. Tempeleide nr 30.
    ${ }^{55}$ The compilers of the Prosopographia Ptolemaica (III 7679), opt for the year 149/148, I, myself, the year 138/137, Pétéharsemtheus, P. L. Bat. XIV [1965] 59. Repayment, therefore, occurs 41 or 30 years after the loan was made (Kühnert, op. cit., p. 58: after six years; this is obviously a mistake).

[^8]:    ${ }^{56}$ This assumption rests on the fact that all the known Greek loans of money from this place are д̈́тожо弓 loans: see par. 10 .
    ${ }^{57}$ Presumably the repayment quoted under $8 j$ relates to a part of the same debt; comp. Pestman, Pétéharsemtheus, P. L. Bat. XIV [1965] 59 and foll. doc. 2,25 and 36.
    ${ }^{58}$ See note 53.

[^9]:    ${ }^{59}$ Kühnert, op. cit., p. 43-44; comp. Pringsheim, Greek Law of Sale, p. 63.
    60 So e.g. BGU IV 1144 (14/13 B.C.); see further the texts mentioned in note 14. On the other hand the word $\dot{\alpha} \tau 0 \kappa \circ \varsigma$ is found in a $\chi$ р $\tilde{\sigma} \sigma \iota \zeta ~(n o t e ~ 31) . ~$
    ${ }^{61}$ See further Finckh, op. cit., p. 9-10 and Rupprecht, op. cit., p. 4 and foll., and 81 and foll.

[^10]:    ${ }^{63}$ Comp. for this expression par. 3c.
     of his loans have been preserved.
    ${ }^{65}$ It is, in fact, a matter of 305 days, but the 5 additional days are neglected: see note 4.

[^11]:    ${ }^{66}$ BGU IV 1156,15.
    ${ }^{67}$ Pringsheim, Greek Law of Sale 64 mentions some other instances from Greece.
    ${ }^{68}$ Kühnert, op. cit., p. 26 note 3 gives some important additions to this text.

[^12]:    ${ }^{69}$ In those texts where the expression $\dot{\alpha}$ roxï is found (note 32), one finds a similar case: P. Cairo Masp. III 67.309 ( 6 th cent. A.D.): part of the loan bears ordinary interest, whilst the remainder is $\alpha$ coxi ( 1.19 ) on the understanding, however, that the creditor has the enjoyment of one of the debtor's houses ( 1.30 ). There are three other texts, too, where $\dot{\alpha}$ tox $i$ appears and where, apparently, the debtor has to produce some quid pro quo: Stud. Pal. 4 p. 117 (2nd cent. A.D.); BGU III 725 (7th cent. A.D.), and P. Mon. 3 (6th cent. A.D.: see note 80).

    Comp. note 80 for $\dot{\alpha}$ roxo弓 agreements where a quid pro quo is owed by the man to his wife.
    ${ }^{70}$ Finckh, op. cit., p. 16 and Rupprecht, op. cit., p. 84.
    ${ }^{71}$ Comp. Finckh, op. cit., p. 10 note $28 a$ : "Mündlich abgeschlossene Darlehensverträge...sind regelmässig zinsfrei".
    ${ }^{72}$ See for the use made of ostraca in Egypt for making notations etc. Seidl, Einführung in die ägyptische Rechtsgeschichte bis zum Ende des Neuen Reiches p. 22.
    ${ }^{73}$ SB VI 9366 (Pathyris: $125 / 124$ B.C.): this ostracon is moreover far more than just a notation since the agreement was drawn up at the office of an $\dot{\alpha}$ Yopovópos.
    ${ }^{74}$ One might imagine that a written document was drawn up in $\dot{\alpha}$. $\tau 0 \%$ о loans in connection with the clauses with regard to fines and interest in cases of non-fulfilment as well as possible securities (par. $8 f-\mathrm{g}$ ).
    ${ }^{75}$ Rupprecht, op. cit., p. 84-85: in $\ddot{\alpha}$ тowos loans of money the duration of the loan is, as a rule, less than 5 months.
    ${ }^{76}$ See the two texts quoted in par. 6 and par. $8 h$.

[^13]:    ${ }^{79}$ In $\dot{\alpha}$ toxi loans (note 32) there are no proven cases of freedom from interest (group a) but certainly of interest which is paid in another form (group $b$ : see note 69), whilst in the majority of cases interest was presumably added to the principal (group $c$ ).
    ${ }^{80}$ The same problem arises in two other cases where the word $\dot{\alpha}$ toxoc is used:
    a) The sum in question has to be repaid within a certain number of days after the creditor has demanded it: P. Hib. I 89 (3rd cent. B.C.: $\delta \dot{\alpha} v \varepsilon \imath v$; the expression $\alpha \dot{\alpha} \tau \circ \alpha 0 \varsigma$ is found here by the sum loaned); P. Mich. III 191-192, 23 (1st cent. A.D.; the word $\dot{\alpha}$ rowoc is found here by the amount to be paid back); comp. P. Mon. 3,2 ( 6 th cent. A.D.; the word $\dot{\alpha}$ roxi is used here and is found by the sum to be paid back). In both the last-mentioned cases (and possibly even in the first one) it is a question of agreement between man and wife. One assumes, generally, that reclaiming can only be done after the marriage has been dissolved; before that the man does not, it is true, owe his wife interest but he is obliged to support his wife which might be considered as a quid pro quo for the "loan" (see in the text: group b). No doubt P. dem. Louvre 2429 = Lüddeckens, Eheverträge no. 15 (3rd cent. B.C.) is a similar case, a $\delta$ ócıц from a wife to her husband for a sum of money which has to be repaid within 30 days after the wife has asked for it; a delay of 60 days is stipulated in the case of P. Yale I 64 (1st cent. A.D.),
     $\pi \rho \circ \sigma \tilde{\eta} x \tau \alpha L$. Not all loans between man and wife can be explained in this way, witness. P. dem. Louvre 2443 (see note 3) where an interest rate of $30 \%$ is calculated and the husband finally forfeits the goods given in security.
    b) P. Hamb. I $2=$ CPJ II 417 (1st cent. A.D.) is a $\pi \alpha \rho \alpha 9 \dot{\eta} \times \eta$ : the money owed has to be repaid on a day previously fixed, and $\ddot{\alpha}$ roxo弓 (see for this passage note 36 ); this is obviously a matter of a loan where the interest has already been added to the principal.

[^14]:    ${ }^{81}$ One may, of course, only speak of goodwill in the cases belonging to the group $a$ and possibly in those cases in groups $b$ and $c$ where a lower rate of interest than the conventional is charged. If, on the other hand, the usual rate of interest is charged in group $c$, one may even speak of a certain "lack of goodwill", seeing that in the event of non-fulfilment on the part of the debtor he has to pay the usual interest and fine which are, however, calculated on the sum of the loan and this amount is higher in $\dot{\alpha}$ toкоऽ loans in category $c$ (including interest) than in ordinary interest bearing loans (excluding interest). Lewis, TAPA 76 [1945] 139 comes o a similar conclusion about loans $\sigma \dot{v} v \dot{\gamma} \mu \iota \lambda i \hat{\alpha} \alpha$ (see par. $3 a$ ).

    82 Pestman, Pétéharsemtheus, P. L. Bat. XIV [1965] 47 and foll.
    ${ }^{83}$ Kühnert, op. cit., p. 12.
    See also UPZ I 110, 108 (164/163 B.C.).
    ${ }^{85}$ Glanville (Catalogue British Museum II) 'Onchsheshonqy 16, 9-12 = Stricker, OMRO 39 [1958] 69.
    ${ }^{86} \mathrm{P}$. Insinger 26, 16.

