

*à mon cher collègue Jean Stenflo,
en très cordial hommage,
Philip Grierson*

THE DEBASEMENT OF THE BEZANT IN THE ELEVENTH CENTURY¹

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I

Professor R. S. Lopez, in an article published in 1950 in the *Mélanges Henri Grégoire*, wrote of "la crise du besant au Xe siècle".² In a paper read before the International Congress of Byzantine Studies at Salonica in April 1953, I endeavoured to show that this "crisis" was imaginary, and that the tetarteron or light-weight nomisma struck by Nicephorus II was not a consequence of the financial difficulties of this emperor, but was a laudable effort to meet the local needs of the provinces reconquered from the Arabs by providing the inhabitants with a coin equivalent in value to the dinar to which they were accustomed and in which all their accounts were reckoned.³

There must, however, have been a "crisis of the bezant" at some date before the accession of Alexius I Comnenus (1081), for the nomismata of the third quarter of the eleventh century are much debased. Since this is first clearly apparent in the coins of Michael VII (1071-78), and is even more evident in those of Nicephorus III (1078-81), the debasement is usually regarded as a consequence of the misfortunes in which the battle of Manzikert (1071) and the occupation of Asia Minor by the Seljuq Turks involved the empire. The eye, however, is not wholly reliable as a guide in such a matter, and it is worth trying to ascertain scientifically exactly when and by what stages the debasement occurred.

The table that accompanies this article is based on the determination of the densities of nearly 90 nomismata and tetartera dating from the middle of the tenth to the last quarter of the eleventh century. No useful purpose would have been served by starting the investigation at an earlier date, since recently published figures show that with few exceptions the fineness of early Byzantine gold coinage left little to be desired.⁴ Nor could it profitably have been carried on into the reign of Alexius I, since under him the practice began of issuing several denominations of gold and elec-

¹ This paper was read as a communication at the International Congress of Numismatics at Paris in July 1953.

² *La crise du besant au Xe siècle et la date du Livre du Préfet*, in *Mélanges Henri Grégoire*, II (= *Annuaire de l'Institut de Philologie et d'Histoire Orientales et Slaves*, X, 1950) 403-18.

³ This paper will be published in the next number of the *Revue Belge de Numismatique*.

⁴ L. Brunetti, *Nuovi orientamenti statistici nella monetazione antica*, *Rivista italiana di numismatica*, 4th series, VII (1950-51) 6-8. The exceptions are the Italian series, whose debased character in the 8th and 9th centuries has long been recognised.

trum coinage which were marked off from one another by the varying amount of alloy which each contained, and the problem of distinguishing between them is a quite different one from that of exploring the simple debasement of the coinage.

The majority of the coins examined belong either to the Fitzwilliam Museum, Cambridge, or to Mr. P. D. Whitting, who most kindly placed at my disposal the resources of his splendid collection. Sig. Lodovico Brunetti has allowed me to incorporate from a recent article in the *Rivista italiana di numismatica* the relevant figures for 21 coins from his own collection. It would obviously have been desirable to utilize the rich material in the British Museum, but it did not seem to me reasonable to ask the authorities there to undertake the laborious and time-consuming task of ascertaining the densities of so considerable a series. Mlle G. Fabre was kind enough to supply me with one figure of crucial importance for a coin in the Bibliothèque Nationale.

The various elements in the table require some words of explanation.

(i) *References and denominations*

The reference are to the pages and numbers in Warwick Wroth's Catalogue of the Imperial Byzantine coins in the British Museum (1908). The references in Sig. Brunetti's tables, which are either to the Ratto sale catalogue of December 1930 or to Sabatier,¹ have for convenience been converted into Wroth references, any ambiguities in the conversion having been cleared up in correspondence with the author.

From the reign of Constantine VIII onwards it is easy to distinguish between the small thick tetarteron of c. 4.10g. and the large spread nomisma of c. 4.40 g.² For the reigns of Nicephorus II, John I Zimisces and Basil II the distinction is difficult, since the tetarteron was at that time simply a light-weight nomisma not differentiated in type or fabric from the normal coin, and some specimens of what appear from their weights to be tetartera turn out on careful examination to be only cut-down nomismata. Wroth did not know of the difference between the denominations and in his catalogue they are mixed up together indiscriminately. His nos. 2 and 3 of John Zimisces and nos. 1 and 2 of Basil II appear to be tetartera, and I have treated them as such. The British Museum has no tetarteron of Nicephorus II, nor has any specimen been available to me for study.

(ii) *Collections*

LB = Sig. Brunetti's collection, PG = the author's collection, FW = Fitzwilliam Museum, Cambridge, PDW = Mr Whitting's collection.

¹ J. Sabatier, *Description générale des monnaies byzantines*, 2 vols. (Paris 1862).

² It is the great merit of Prof. Lopez's article, just cited, to have shown that the light-weight nomisma is the coin called in our own documentary sources the tetarteron. The attempt to distinguish between the light and heavy coins by calling one a nomisma and the other a solidus (Wroth, Goodacre) has no justification in contemporary usage.

The figures that follow LB references are those in his article referred to above.

(iii) *Weights and densities*

The weights and densities of Sig. Brunetti's coins were determined by himself, and are taken from his article. The weights of the other specimens were determined by me in the Physical Chemistry Laboratory at Cambridge, and I would like to thank my friend and colleague Dr. J. S. Courtney-Pratt for placing the necessary apparatus at my disposal and giving me much advice and assistance in the work.

It should also be pointed out that the margin of error in the determination of fineness from the specific gravity of coins weighing only a little more than 4 g. is quite large, especially when the specific gravity is high and the coins are of almost pure gold. Although the disturbing factor of air-bubbles can be eliminated with a little care, small quantities of grease or dirt adhering to the surface of a coin, especially in indentations of the type and lettering, can appreciably affect the result, and will tend to make the densities, and consequently the fineness of the coins, work out at a slightly lower figure than they should. Large thin coins are apparently more likely to give incorrect results than small thick ones, owing to the disturbing effect of surface tension. The fineness of individual coins may also vary appreciably from that of the whole "melting" which provided the metal from which they were made, and consequently from the fineness prescribed in mint ordinances, for the alloy will be unevenly distributed in the cooling ingot. This applies particularly to alloys where the amount of base metal involved is considerable. The particular metal employed as the alloy also affects the result much more in cases where the gold is very base. Where the specific gravity is 18.00, the fineness would be 91.0 where the alloy was gold and silver, 93.5 where it was gold and copper. The difference between these two figures is relatively slight. Where the specific gravity was 12.5, however, the finenesses would be 35.0 and 53.0 respectively, and the difference between them is considerable. It is therefore of great importance to know the exact nature of the alloy used.

On this matter no precise information is available, but the assumption that the alloy was gold and silver, without admixture of copper or other metals, does not seem likely to be far wrong. Copper can be eliminated in almost every case; it was usually avoided as an alloy during the Middle Ages because it hardened the gold and so wore out the dies; in any case, the presence of even small quantities is apparent at once in the colour. As for tin or zinc, I frankly have had to hope for the best, but some analyses which I have had made of other early medieval coins show that the percentage of these metals was usually too small to have a serious effect on the result.

The figures which I give should therefore be accepted with the provisors that they are likely to err on the low side, that the margin of error

may be appreciable, and that within any issue there is bound to be a certain amount of variation owing to irregular cooling in the ingots used. Wide variations can I think be neglected, and it will be seen that the figures do give fairly reasonable results, at least to the nearest carat.¹

II

A study of the table shows that the blame for the great debasement of the nomisma rests fairly and squarely on the shoulders of Constantine IX (1042-55), who in a series of reductions brought its fineness down from 23 carats – probably a theoretical 24 carats – to 18 carats, and who threw the coinage into such confusion that his successors were unable to undo the mischief and revive the traditional purity of the gold coinage. But there are earlier and slighter fluctuations that deserve to be chronicled.

The coins of the mid-tenth century are of remarkable purity, and stand comparison with those of the best period of the Roman empire. Those of the joint reign of Constantine VII and his son Romanus II (945-59), which were struck in great quantity and are still extremely common, may be considered as being of as nearly pure gold as the metallurgical science of the time permitted. The figures available give them a fineness of 23 carats or over, and, as has been explained above, the method of determining the specific gravity of the coins is more likely to err on the low than on the high side. The coins were undoubtedly intended to be of pure gold.

The coins of Nicephorus II Phocas (963-69), so far as we can judge from the small amount of evidence available,² involved no falling off from earlier standards; the nomismata were still intended to be of pure gold. We have no information as to the fineness of his tetarteron. I have argued elsewhere that the striking of this coin cannot be taken as evidence that the empire found itself at that time in financial difficulties.

For the reign of John I Zimisces (969-76) we have insufficient evidence to allow us to generalize. The density of a tetarteron suggests that this coin was being struck to a slightly lower standard (22 carats?) than the traditional nomisma, but little reliance can be placed on the figure for a single coin, especially in view of the margin of error involved.

When we reach the joint reign of Basil II and his nominal colleague Constantine VIII (976-1025) we are on firmer ground.


During this long reign three types of nomismata were issued, showing the two emperors holding between them a patriarchal cross, a patriarchal cross crosslet, or a plain cross. Over the period of fifty years, the flan of the

¹ On the utility of specific gravity measurements, one can consult an important article by E. R. Caley, *Estimation of composition of ancient metal objects*, *Analytical Chemistry*, XXIV (1952) 676-81.

² Besides the evidence I quote, F. Dworschak examined the specimens in the Vienna collection with a touchstone, and also found no falling off in fineness (*Numismatische Zeitschrift*, LXIX [1936] 79).

nomismata changed very markedly, evolving away from the small thick coins characteristic of the tenth century to the large thin ones characteristic of the eleventh. Since these three types differ perceptibly from each other in module, we are justified in placing them in the chronological order suggested above. Light-weight tetartera, of smaller flan than normal, have been recorded for two of the types.

The first type was still of the traditional fineness, but the second shows a clear reduction to 22 carats, followed in the third by a reversion to the old standard. Presumably the debasement was a result of the financial strain imposed by the great wars of the reign. It was, however, very slight, and the reversion to the old standard shows that the crisis was a passing one. It is not alluded to in any of our literary sources, nor are these nomismata distinguished by any special name in the south Italian charters of the period, so it is possible that it went unnoticed by the populace. The tetartera were apparently of the same standard as in the previous reign. Basil was able to leave behind him an enormous treasure which was not squandered till two decades after his death.

Three types of gold coin are normally ascribed to the short reign of Constantine VIII (1025-28) after his brother's death. One (tetartera) shows the emperor holding an orb and a mappa, another (tetartera and nomismata) shows him holding a labarum and a mappa, and the third (nomismata) shows him holding a cross and an orb. The fineness of the coins of the third type, however, has fallen off so much that it suggests for them a decidedly later date, and the broad bearded face is in fact not that of Constantine VIII but of Constantine IX, to whose reign they must certainly be transferred.¹ The fineness of the coins that in fact belong to the reign of Constantine VIII, both nomismata and tetartera, continues that of the final issue of Basil II. They were no doubt intended to be pure gold, which in the case of the tetartera perhaps  indicates a change from previous reigns.

The nomismata of Romanus III (1028-34) and Michael IV (1034-41) are likewise of fine gold. The same is true of the rare tetarteron of Romanus III.² This coin is ascribed by Wroth (following Sabatier) to Romanus IV, but its general style and appearance suggest an earlier date, and the purity of its gold shows that it in fact belongs to the period before 1042. For the rare coins of Michael V (1041-42) no information is available, but since the earliest issues of Constantine IX were of fine gold, it is only reasonable to suppose that his were also.

¹ Constantine VIII's beard, according to the portraits on his coins, must have resembled that of his brother Basil as described by Psellus (*Chronographia*, Basil II, c. 36; ed. E. Renauld, Paris, 1926, I 23). In his old age, Basil had no hair on his chin, but the growth on his cheeks was so long and thick that it could be combed forward to give the impression of a full beard. The difference between the bifurcate beard of Constantine VIII and the full beard of Constantine IX is quite evident on the coins.

² Wroth, p. 525, Type 3 (pl. LXII, 1). The coin in the Bibliothèque Nationale described by Wroth is not unique; I have seen two further specimens in American collections.

It was in the thirteen years of the reign of Constantine IX Monomachus (1042-55) that disaster came. Instead of contenting himself with one or two types of nomismata, as his predecessors had done, he issued no less than five types of nomismata and two of tetartera. Each type was of a different fineness, and their progressive debasement allows one to fix the chronological order of their issue in an order whose exactness is confirmed by the evolution of their types. The issues of nomismata are as follows:¹

- (1) Wroth, Type 4 (p. 501, nos. 8-11; pl. lviii. 11-12).
- (2) Wroth, Type 5 (pp. 501-02, nos. 12-15; pl. lix. 1-2).
- (3) Wroth, Constantine VIII, Type 3 (p. 492, nos. 6-9; pl. lvii. 9-10).
- (4) Wroth, Type 3 (p. 500, nos. 6-7; pl. lviii. 9-10).²
- (5) Sabatier, no. 4; pl. xlix. 7; not in Wroth.

The first two have as reverse types the seated figure of Christ, the remainder have the more usual facing bust. The tetartera, in order of striking, are as follows:

- (1) Wroth, Type 1 (p. 499, nos. 1-3; pl. lviii. 6-7).
- (2) Wroth, Type 2 (p. 500, nos. 4-5; pl. lviii. 8).

The first group of coins have apparently the same fineness as those of preceding reigns, or are only very little below it; that is, about 22 carats in practice, but aiming at 24. The second are 21½ carats or below. The third are fairly definitely 20½ carats and the fourth are 19 carats, probably descending to 18. No information is available regarding the fifth type. Of the two types of tetartera, the first are apparently 21 carats and the second 18 or less.

Constantine's four successors³ maintained unaltered the standard of about 18 carats for nomismata and probably that of 17 for tetartera, though it is possible that some reduction took place in the case of the latter.⁴ None of them attempted to revert to the traditional fineness of 24 carats. This is at first sight surprising. Isaac I was a vigorous reformer, especially in the field of finance, where he pursued a policy of rigid eco-

¹ There is possibly a sixth issue, a specimen of which in the Photiadès Sale (no. 483) is ascribed to Constantine IX. But Wroth (II. 502, n. 1) is doubtful about the attribution, and the coin is now in the Hermitage and not available for examination.

² This is the series known as *stellati* in Italian sources of the period, from the large star on either side of the emperor's head on the obverse. The debasement of the coinage explains the frequent "naming" of different issues in documents of the time, since the gold content and value of the nomisma could no longer be assumed to be uniform.

³ Actually no figures are available for the short reign of Michael VI (1056-57), but since his immediate predecessor's and successor's coins are of 18 carats, it is reasonable to conclude that his were also.

⁴ The only figure available for a tetarteron of Theodora is the same as that for those of Constantine IX. There is certainly copper present in the single tetarteron of Constantine X which I have been able to study, and this makes it impossible to estimate its fineness with certainty from its specific gravity. The gold content would be 62.5 if silver alone were the alloy, 73 if copper alone were present.

mony,¹ and Constantine X was careful, even parsimonious in his expenditure and did much to restore the finances of the state.² The task was probably beyond their powers. It would have been useless to have put into circulation coins of the traditional fineness without at the same time calling in and reminting the vast issues of Constantine IX.³ An operation of such dimensions was beyond the resources of the depleted exchequer, and would in any case have injured the interests of too many classes to be lightly undertaken. It was at least an advantage that further debasement was for the moment checked.

Under Romanus IV (1067-71) the process recommenced, but in a more serious manner than before. If Constantine IX had debased the coinage, he had at least done so in an ascertainable fashion, each reduction in fineness being signalized by a change in type. The nomismata of Romanus IV were of a single type, so that the fineness of particular coins could not easily be discovered. On the other hand, the renewed debasement was small, his coins fluctuating between about 16 and 18 carats. It is possible that some of the more debased specimens were struck during the short period between the battle of Manzikert (19 August 1071) and his final seizure and blinding in the interests if not at the order of his successor Michael VII.⁴

This worthless monarch (1071-78) is eulogised by his friend and former tutor, Michael Psellus, who refers particularly to his specialized knowledge of the coinage. "He had an understanding of the whole system of government expenses and revenue, both of payments from the public funds to individuals and of contributions by the public to the treasury. He knew all about the making of the coins, the equilibrium of the balance and how much they should weigh, what was their permissible remedy, how the alloy was manufactured and what proportion of gold the coins should contain."⁵ This knowledge was put to most sinister use. He inherited, it

¹ Psellus, *Chron.*, Isaac Comnenus, c. 60 (ed. Renauld, II, 120), notes that many of his economies were practised at the expense of the church.

² Psellus, *Chron.*, Constantine X, c. 3 (ed. Renauld, II, 139-40), who says that as a result of his prudence in financial matters he left the coffers of the state, if not overflowing, at least half-full. His economies, however, were by no means well directed, as he starved the army and was largely responsible for Byzantine military weakness in the next decade.

³ Isaac Comnenus was at least alive to the symbolic function of coin types and their value as propaganda, for the standing figure of himself, sword in hand, on his gold coinage reflected very clearly the method of his rise to power. It was interpreted by contemporaries as an arrogant affirmation that he owed the throne to his own courage rather than to divine favour (Scylitzes, *Breviarium*, Bonn edn., p. 641; Zonaras, *Epitome*, xviii, 4 (Bonn edn., III, 665-66).

⁴ This is of course merely conjectural; I am not in a position to say whether any group of his nomismata differ markedly from the others. It would be quite normal for a few moneyers and the necessary equipment to accompany an emperor on a military expedition, so their work would not necessarily differ from that of the mint of Constantinople.

⁵ Psellus, *Chron.*, Michael VII, c. 2 (ed. Renauld, II, 173). The admission that the gold coins were alloyed is in itself interesting.

would appear, a nomisma of 16 carats, and what is presumably his earliest type is of this fineness. His next type, however, fluctuates between 14 and 12 carats, while his tetarteron fell to 10 and 9. The misfortunes of his reign – military revolts, the appalling devastation of Asia Minor by the Seljuq Turks and the consequent curtailment of the imperial revenues, the victories of the Normans in the west – at least provide him with a better excuse for debasement than had Constantine IX.

Finally, in the short and unhappy reign of Nicephorus III Botaniates (1078–81) the fortunes of the coinage, as of the empire, reached their lowest ebb. The nomisma was struck fairly consistently at a fineness of 8 carats, and the tetarteron practically ceased to be issued at all.¹ It was left for Alexius I Comnenus to restore a 'hyper-pure' gold nomisma and to build up out of the debased nomismata a system of fractional coinage whose intricacies we still only very imperfectly understand.

III

The downfall of the nomisma, therefore, can be dated very closely to the four decades 1040–80. There were two periods of rapid decline, 1042–55 and 1070–80, with an intervening fifteen years of relative stability when the fineness of the nomisma was fixed at about 18 carats. It remains to enquire into the causes of this striking revolution which in so short a time overthrew a tradition that had endured for seven centuries.

It would be easy to draw a parallel between the debasement of the nomisma in mid-eleventh century Byzantium and the debasement of the silver coinage that was taking place in almost every country in western Europe at the same time, and to ascribe both phenomena to the same or at least to similar causes. But it would probably be wrong to do so. The causes of debasement are as likely to be particular as to be general. The debasement of the English coinage in the last years of the reign of Henry VIII and in that of Edward VI was in no respect a consequence of the influx of precious metals into Europe from America and the price revolution of the sixteenth century; it was a consequence of the French wars and the general extravagance of Henry VIII. In the same way, the debasement of the nomisma was due to the extravagance and lack of public feeling of the Empress Zoe and of Constantine IX.

Basil II, despite the great wars of his reign, was able to leave to his successor one of the largest fortunes accumulated by a single sovereign in the whole course of Byzantine history. Taxation was heavy, bearing

¹ Tetartera of Nicephorus III are extremely rare, and are not mentioned in Wroth's catalogue. To judge by the colour of such specimens as I have seen, their gold content is negligible. The denomination just survived into the reign of Alexius I; a unique specimen, not previously published, was included in the Foreign Prince Sale (Glendining's, London, 8 December 1922), lot 227. The name was subsequently transferred to a series of copper coins which resembled the old tetartera in fabric.

especially upon the rich, and the emperor's personal expenses were kept as low as possible. Revenue greatly exceeded expenditure. Psellus describes the underground strong-rooms the emperor had specially built to house his treasure. The bullion content was estimated at 200,000 lbs. of gold, the equivalent of nearly 15 million nomismata, and in addition to this there were great quantities of precious stones and other valuable objects.¹

We are too badly informed regarding the size of the Byzantine budget² for us to attempt to express such a sum as a multiple of the annual revenue of the crown, but a few figures are available for comparison. The emperor Anastasius (ob. 518) had left behind him 320,000 lbs. of gold,³ but Anastasius had been a professional financier and his reign of 27 years had been almost entirely free from wars. The empress Theodora, when handing over the regency to Michael III in 856, had an accumulation of 109,000 lbs., put together partly by her husband Theophilus and partly by herself during the minority of her son.⁴ These, with the treasure of Basil II, represent perhaps the highest figures that were ever attained. Amongst private individuals in the eleventh century, Archbishop Theophanes of Thessalonica, a man notorious for his avarice, was found in 1038 to have accumulated no less than 3,300 lbs of gold in actual specie,⁵ and when the Patriarch Alexius of Constantinople died in 1043, 2,500 lbs. of gold were found in his treasury.⁶ Certainly the sum left by Basil II appeared to contemporaries as something gigantic.⁷ It is a theme to which Psellus returns again and again in the course of his history.

This great treasure was probably somewhat depleted, but was very far from being exhausted, during the four reigns that followed.

¹ Psellus, *Chron.*, Basil II, c. 31 (ed. Renauld I, 19-20). Psellus' close association with the imperial government in later years justifies one in accepting the figure as likely to be reasonably accurate. The amount is actually given by Psellus as 200,000 *talents*, which could mean 200,000 *centenaria*, but such a figure (20 million lbs.) is impossible.

² See A. Andréadès, *Le montant du budget de l'empire byzantin*, *Revue des études grecques*, xxxiv (1921) 20-56, criticising the views and arguments of Paparrhigopoulos and Stein. From what we know of the great treasures in history, that of Basil might well have represented something like ten years' revenue of the state.

³ Procopius, *Historia Arcana*, xix. 7, on the authority of the imperial treasurers.

⁴ *Contin. Theoph.*, iv. 20 (Bonn edn., p. 172). There was also a small quantity of silver. The figures were given by the empress in a speech to the Senate.

⁵ Cedrenus, A. M. 6546 (Bonn edn., II, 518). The emperor had asked him for a loan of 100 lbs. of gold, and the archbishop swore that he had only 30 lbs. in the palace. This figure, rather over 2000 nomismata, presumably represents the amount of ready cash a man in his position might be expected to have available in his house.

⁶ *Ibid.*, II, 550.

⁷ Another possible basis for comparison is the size of the ransoms demanded for distinguished prisoners. The figures of a million or a million and a half nomismata for the ransom of Romanus IV after Manzikert are not very well attested, but when Isaac Comnenus, duke of Antioch and brother of the future emperor Alexius, was captured by the Seljuqs during the reign of Michael VII, a sum of 20,000 nomismata was paid to secure his release (Nicephorus Bryennius, *Commentarii*, ii, 29; Bonn edn., p. 99).

Constantine VIII (1025-28) had been too long excluded from power to have any inclinations beyond those of furthering his private pleasures. In the words of Psellus,¹ "since he found the imperial treasury filled with money, he let his inclinations have free reign and gave himself entirely up to pleasure". But he was at the same time a harsh tax-gatherer. Basil, severe as he had been on the rich, had refrained from pressing too heavily on the poor, and some of the taxes were two years in arrears when he died. Constantine insisted on the arrears being paid, so that in the three years of his reign he managed, as the chronicler put it, both to collect and to expend the revenues of five.² But his reign was too short for his extravagance to have any permanent consequences.

Romanus III (1028-34) was sixty when he became emperor, and his unexpected elevation made him anxious to conciliate by financial concessions as many classes as possible. An annual payment of 80 lbs. of gold was promised from the treasury to the clergy of St. Sophia. The *allelengyon*, the tax introduced by Basil II by which the wealthier classes in the countryside were made responsible for deficiencies in the levies on their poorer neighbours, was abolished. Debtors were released from prison; their debts, if due to the state, were written off; if due to private creditors, they were paid by the emperor. Captives taken during the recent invasion of the Pechenegs were ransomed.³ Some of these measures were no doubt justified, and could easily be afforded by the emperor, but the abolition of the *allelengyon* was unfortunate in its financial consequences to the treasury and in its social consequences to the state.

This generous policy, moreover, did not last for long. During the Syrian campaign of 1030 the emperor's military incompetence resulted in a severe defeat; the Byzantine camp was overrun by the Saracens, and the imperial tent and the treasures it contained fell into the enemy's hands.⁴ The loss alarmed the emperor far more than it need have done, and from undue generosity in matters of taxation he went to the other extreme, becoming "tax-gatherer rather than emperor" and refusing even the most reasonable petitions from private individuals if they were likely to involve him in expenditure.⁵ It was only towards the church that he still remained openhanded, founding and endowing on a vast scale a church and monastery dedicated to the Virgin Peribleptos, and lavishing gifts on

¹ Chron., Constantine VIII, c. 1 (ed. Renauld I, 25).

² Cedrenus, II, 484.

³ These concessions are listed by Cedrenus, II, 486. Cf. Psellus, Chron., Romanus III, c. 6 (ed. Renauld I, 35). Constantine VIII is said to have been considering abolishing the *allelengyon* at the time of his death. The sum of 80 lbs. of gold promised to St. Sophia may be compared with the 50 lbs. due to the imperial exchequer from a city of the importance of Edessa (Cedrenus, II, 502).

⁴ Psellus, Chron., Romanus III, c. 10 (pp. 38-39). He says that the contents of the imperial tent captured by the Saracens were "quite equal in value to that of the palace of today".

⁵ Ibid., cc. 12, 24 (pp. 40, 50).

other churches.¹ Much of this was no doubt done out of income, and there is no reason to suppose that Romanus found himself at any time in financial straits, but Basil's treasure is scarcely likely to have remained intact.

Michael IV (1034-41) had been a money-changer in early life, and was reputed to have dabbled in false coining.² We have seen already that there is no reason to attribute such activities to him as emperor. His generosity to the church exceeded even that of his predecessor. He gave lavishly towards the founding and decorating of churches and monasteries,³ and during an illness he is said to have presented two nomismata to every priest and one nomisma to every monk in the empire in return for their prayers, and one nomisma and four milliaresia to every newly baptized child to whom he became godparent.⁴ The money for these extravagances was largely provided by the grinding taxation levied by his brother John the Orphanotrophos, which resulted in repeated revolts, each followed by widespread confiscations of property, in many provinces.⁵

The brief reign of Michael V left the situation unchanged, though it probably would not have remained so if he had managed to retain the throne, for his uncle and chief minister Constantine was subsequently compelled to disgorge the sum of 5,300 lbs. of gold which he had managed to abstract from the treasury and had hidden in a cistern beside his house,⁶ and there is no reason to suppose that Constantine was alone in his peculations. Psellus, however, repeatedly states that the bulk of Basil's treasure still survived, to be dissipated by Zoe and Constantine, and this view seems to be that which is correct.

The deposition of Michael V was followed by the short joint reign of Basil's daughters, Zoe and Theodora (21 April - 11 June 1042). They were very different in character, and in particular in their attitude towards money. Zoe was totally lacking in any financial sense. Her popularity, which had already been exploited by John the Orphanotrophos to secure the accession of Michael V, was largely a consequence of her lavish generosity,⁷ and she was, in the expressive words of Psellus, "capable of draining a sea of gold dust in a single day".⁸ Theodora, on the other hand, was

¹ Ibid., cc. 14-16 (pp. 41-44); Zonaras, *Epitome*, xvii, 12 (Bonn edn., III, 578-79); Cedrenus, II, 497, 14.

² Cedrenus, II, 504.

³ Psellus, Michael IV, cc. 31, 36 (pp. 72, 74-75).

⁴ Cedrenus, II, 521.

⁵ It is interesting to note that the Bulgarian revolt was produced by John's attempt to substitute payments in money for payments in kind, always a difficult operation in a primitive community (Cedrenus, II, 530). The Serbian revolt, on the other hand, was made possible by the happy accident of an imperial galley containing 1000 lbs. of gold being wrecked on the Illyrian coast (Ibid., II, 526-27).

⁶ Cedrenus, II, 541.

⁷ Psellus, *Chron.*, Michael IV, c. 22 (p. 67).

⁸ Ibid., Zoe and Theodora, c. 4 (p. 119). She was the same in her later years (Ibid.,

parsimonious, and "counted her staters whenever she gave away money."¹ But it was Zoe, the senior of the two daughters, who got her way, and Psellus says bluntly that it was her extravagance, her recklessness in dissipating the imperial treasure, that "was the turning point in the prosperity of the state and beginning of its decline". Sums which ought to have been spent on the army were lavished on courtiers and sycophants, "as if it was for such purposes that the Emperor Basil had filled the imperial treasury with wealth".²

Constantine IX Monomachus (1042-55), whom Zoe raised to power in 1042, was not the man to reverse such a policy. Personally humane and kindly, he lacked the capacity to be serious, and his attitude to the imperial office was essentially that of Leo X towards the Papacy: "Since God has given us the Empire, let us enjoy it". The sudden reversal of his fortunes - he had lived as an exile at Mitylene during the two preceding reigns - almost turned his head; his view of money was that it existed to be spent. "The safe harbour of the palace" in which he now at last found himself existed only to provide for his pleasures.³ Zoe and Theodora were pushed into the background, but allowed to exercise their tastes in their respective ways, the miserly Theodora gloating over her chestfuls of shining "darics", Zoe spending her days in her perfumery and giving generously to all and sundry.⁴ Constantine's mistress Sclerena followed in Zoe's footsteps, and Sclerena's successor, an Alan princess, lavished money on her barbarian kinsfolk.⁵ "Thus what the emperor Basil had stored away in the imperial treasury, with so much sweat and labour, now lay open to these women, to be expended on their amusements".⁶ Constantine for his part was grossly extravagant in his expenditure on gardens, palaces and churches, building, altering, replanning and rebuilding without regard to the cost.⁷ The needs of the army were systematically neglected in face of the endless outlay of money on shows in the hippodrome and similar entertainments, and on pensions for courtiers and members of the bureaucracy. Psellus regards the reign of Constantine as the decisive point in the decline of the Empire. After passing in review the inroads which Constantine's predecessors over two decades had made on the wealth left behind by Basil, he compares the Byzantine state to an overloaded merchantman which, as a result of Constantine's extravagance,

Constantine IX, cc. 158, 160; vol. II, pp. 49, 50).

¹ Ibid., Zoe and Theodora, loc. cit.

² Ibid., c. 7, 8 (p. 121).

³ Ibid., Constantine IX, c. 29, 34, 47-48 (pp. 132, 134, 140-41).

⁴ Ibid., c. 62 (p. 147).

⁵ Ibid., c. 153 (vol. II, p. 46).

⁶ Ibid., c. 63 (p. 147).

⁷ Ibid., cc. 173-74, 185-87 (vol. II, pp. 56-57, 61-63). Psellus indeed praises him for the cleverness shown in many of his projects, and the skilful improvements he made in methods of farming, but these can only have saved a fraction of what he spent (c. 175; vol. II, p. 57).

finally went to the bottom.¹ The evidence of the coins shows that in addition to wasting Basil's treasure, Constantine shook the very foundations of the prosperity of the state by starting the debasement of the nomisma.

The short reigns of Theodora (1055-56) and of the aged Michael VI (1056-57) saw no attempt to remedy the situation. Isaac Comnenus (1057-59) was anxious to reverse the policy of his predecessors, who had neglected the army and "exhausted the imperial treasures on their personal pleasures",² but his measures of economy were abrupt and ill-timed and earned him much unpopularity, particularly from the side of the Church. Constantine X (1059-67) was, as we have seen, a frugal ruler, who was able to leave behind him a small treasure, though not one that could be compared with that of Basil II. But in the reign of Romanus IV (1067-71) debasement started again, and under his two successors the gold content of the already debased nomisma was virtually halved. Michael VII (1071-78) earned his nickname of Parapinakes from the fact that as a result of the rise in prices in his reign a nomisma would buy only three-quarters of a medimnus of bread (a medimnus *παρὰ πῖνακίου*) instead of a full one.³ Contemporaries like Michael Attaliates⁴ attributed this rise in the cost of food, which as Attaliates notes was followed by a general rise in the cost of living and demands for wage increases, to the monopoly on grain which the logothete Nicephorus was allowed to establish (1073 or 1074) at the port of Rodosto, on the Sea of Marmora, but there can be no doubt that the debasement of the coinage,⁵ and uncertainty as to how far this debasement would go, were in large measure responsible.

The debasement of the 1070's, however, can be understood and even in part condoned, for it was primarily due to the difficulties in which the empire at that time found itself. The earlier debasement, that of Zoe and Constantine IX, was completely without justification, and here as so often it was the first step that was decisive. It is on the shoulders of these two monarchs that the blame must be laid for one of the most disastrous events in the history of the Byzantine Empire.

¹ Ibid., Isaac Comnenus, cc. 52-55 (vol. II, pp. 115-17).

² Ibid., c. 59 (vol. II, p. 119).

³ Attaliates, *Historia*, Bonn edn., pp. 200-04 (cf. pp. 248-49). The best discussion is that of G. I. Bratianu, *Etudes byzantines d'histoire économique et sociale* (Paris 1938), pp. 141-57, developing points already made by Ostrogorsky and Andréadès.

⁴ For the explanation of the nickname, see F. Dölger's review of the second edition of G. Ostrogorsky's *Geschichte d. byz. Staates*, in *Dtsche Lit.-Ztg.* 74 (1953) 598.

⁵ This is wrongly denied by Bratianu, p. 147, who did not know that at this date the fineness of the nomisma was already in full decline. The *micelati* of fine gold to which he refers were the nomismata of Michael IV, not those of Michael VII, Michael IV having been the last sovereign to reign for any length of time before debasement began under Constantine IX.

TABLE OF FINENESSES

Serial No.	Ruler and Denomination	Collection	Wt. in air.	Wt. in water.	Density	Fineness	
						% gold	carats (approx.)
<i>Constantine VII & Romanus II (945-59)</i>							
1	Nomisma (W. 465, nos. 60-66)	PDW	4.3607	4.1303	18.93	97.5	23½
2		PDW	4.4222	4.1874	18.82	96.5	23
3		PG	4.4973	4.2589	18.86	97	23½
4		FW	4.1677	3.9475	18.93	97.5	23½
5		FW	4.3516	4.1185	18.67	95.5	23
6		FW	4.3404	4.1087	18.73	96	23
7		LB. 116	4.3502	4.1191	18.82	96.5	23
8		LB. 117	4.3941	4.1532	18.20	92	22
<i>Nicephorus II Phocas (963-69)</i>							
9	Nomisma (W. 471, nos. 1-2)	PDW	4.3418	4.1029	18.18	92	22
10	Nomisma (W. 472, nos. 3-5)	PDW	4.4165	4.1805	18.71	96	23
<i>John I Zimisces (969-76)</i>							
11	Tetarteron (W. 474, type of nos. 1-3)	PDW	4.0024	3.7788	17.90	90	22
<i>Basil II & Constantine VIII (976-1025)</i>							
12	Nomisma (W. 484-85, nos. 1-6)	LB. 120	4.3670	4.1308	18.49	94	22½
13	Nomisma (W. 484-85, nos. 1-6)	FW	3.3893	3.2069	18.58	95	23
14	Nomisma (W. 485-86, nos. 7-11)	PDW	4.3970	4.1523	17.97	91	22
15		FW	3.9987	3.7773	18.06	91.5	22
16		FW	4.0688	3.8411	17.87	90	21½
17		LB. 119	4.3853	4.1416	17.99	90.5	22
18	Nomisma (W. 486, nos. 12-13)	PDW	4.3843	4.1490	18.63	95.5	23
19		PDW	4.3759	4.1407	18.61	95.5	23
20		FW	4.3895	4.1494	18.28	93	22½
21	Tetarteron (W. 485, type of no. 1)	LB. 118	4.0913	3.8595	17.65	88	21
22	Tetarteron (W. 485, type of no. 5)	PDW	4.2333	3.9969	17.91	90	22
<i>Constantine VIII (1025-28)</i>							
23	Nomisma (W. 492, nos. 3-5)	PDW	4.4155	4.1820	18.95	97.5	23
24		PDW	4.4056	4.1659	18.38	93.5	22½
25		LB. 121	4.3185	4.0822	18.27	93	22½
26	Tetarteron (W. 491, no. 1)	PDW	4.0813	3.8607	18.50	94.5	22½
<i>Romanus III (1028-34)</i>							
27	Nomisma (W. 494, nos. 1-3)	PDW	4.3805	4.1457	18.66	95.5	23
28		PDW	4.4055	4.1686	18.60	95	23
29		FW	4.3999	4.1596	18.31	93	22½
30		FW	4.3787	4.1367	18.09	91.5	22
31		FW	4.2466	4.0165	18.46	94	22½
32		LB. 124	3.8923	3.6753	17.94	90.5	21½
33	Tetarteron (W. 525, Type 3; pl. LXII, 1)	B.N.	—	—	18.2	92	22
<i>Michael IV (1034-41)</i>							
34	Nomisma (W. 496, nos. 1-5)	PDW	4.2897	4.0591	18.60	95	23
<i>Constantine IX (1042-55)</i>							
35	Nomisma (W. 501, nos. 8-11)	PDW	4.3631	4.1190	17.87	90	21½
36		PDW	4.3839	4.1398	17.96	90.5	21½
37		LB. 126	4.3492	4.1142	18.51	94.5	22½
38	Nomisma (W. 501-2, nos. 12-15)	FW	4.3382	4.0819	16.92	83	20
39	Nomisma (W. 501-2, nos. 12-15)	LB. 127	4.3153	4.0734	17.84	90	21½
40	Nomisma (W. 492, nos. 6-9)	PDW	4.3206	4.0711	17.32	86	20½
41		LB. 122	4.3517	4.1002	17.30	85.5	20½
42		LB. 123	4.3366	4.0871	17.38	86.5	20½

TABLE OF FINENESSES ^{Continued}
 (Constitution)

Serial No.	Ruler and Denomination	Collection	Wt. in air.	Wt. in water.	Density	Fineness	
						% gold	carats (approx.)
43	Nomisma (W. 500, nos. 6-7)	LB. 128	4.4336	4.1704	16.84	82	19½
44		FW	4.3763	4.1150	16.75	81.5	19½
45		LB. 129	4.4121	4.1403	16.23	76.5	18½
46	Tetarteron (W. 499, nos. 1-3)	PDW	4.0526	3.8183	17.30	86.5	21
47	Tetarteron (W. 500, nos. 4-5)	PDW	4.0018	3.7479	15.76	72.5	17½
48	Tetarteron (W. 500, nos. 4-5)	LB. 130	3.9982	3.7437	15.71	72	17½
	<i>Theodora (1055-56)</i>						
49	Nomisma (W. 506, nos. 4-5)	PDW	4.4577	4.1804	16.07	76	18½
50	Tetarteron (W. 505, nos. 1-3)	PDW	4.0332	3.7667	15.73	72.5	17½
	<i>Isaac I (1057-59)</i>						
51	Nomisma (W. 512, nos. 2-3)	PDW	4.4174	4.1421	16.05	76	18½
	<i>Constantine X (1059-67)</i>						
52	Nomisma (W. 514, nos. 1-3)	LB. 131	4.3793	4.1011	15.74	72.5	17½
53		LB. 132	3.6290	3.4025	16.02	75.5	18
54		PG	4.3607	4.0890	16.05	76	18½
55		FW	4.4369	4.1567	15.83	74	18
56		FW	4.2233	3.9047	16.33	78	18½
57		PDW	4.4068	4.1297	15.90	74.5	18
58		PDW	4.3147	4.0425	15.85	74	18
59	Nomisma (W. 515, nos. 4-7)	PDW	4.3981	4.1196	15.79	73.5	18
60	Tetarteron (W. 515, no. 8)	PDW	3.9712	3.7003	14.66	?	?
	<i>Romanus IV (1067-71)</i>						
61	Nomisma (W. 524, nos. 1-4)	FW	4.2095	3.9368	15.44	70.5	17
62		FW	4.3552	4.0808	15.87	74	18
63		FW	4.3704	4.0839	15.25	67.5	16½
64		FW	4.3316	4.0532	15.56	71	17
65		FW	4.3841	4.1075	15.85	74	18
66		PDW	4.2826	4.0097	15.69	72.5	17½
67		PDW	4.1349	3.8521	14.62	?	?
68	Nomisma (W. 524, nos. 5-6)	LB. 133	4.3852	4.1074	15.78	73.5	17½
69		LB. 134	4.2164	3.9373	15.11	67	16
70		LB. 135	2.6528	2.4798	15.35	69	17
71	Tetarteron (W. 524, nos. 5-6)	LB. 136	4.1888	3.9145	15.27	67.5	16½
	<i>Michael VII (1071-78)</i>						
72	Nomisma (W. 529, no. 1)	FW	3.3067	3.0854	14.94	65.5	16
73	Nomisma (W. 529, no. 1)	FW	3.8606	3.5465	11.56	?	?
74	Nomisma (W. 529-30, nos. 2-10)	PG	4.3784	4.0587	13.70	51.5	12½
75		PG	4.3944	4.0776	13.87	53.5	13
76		LB. 130	4.2525	3.9516	14.13	56	13½
77	Tetarteron (W. 530-1, nos. 11-14)	LB. 137	4.3923	4.0863	14.35	59	14
78		LB. 138	4.0272	3.7134	12.83	38	9
79	Tetarteron (W. 530-1, nos. 11-14)	FW	3.9495	3.6425	12.86	40	9½
	<i>Nicephorus III (1078-81)</i>						
80	Nomisma (W. 535, nos. 1-4)	LB. 139	4.1861	3.8455	12.28	31.5	7½
81	Nomisma (W. 535, nos. 1-4)	FW	4.4034	4.0485	12.41	33	8
82	Nomisma (W. 536, nos. 5-6)	FW	4.2926	3.9482	12.46	34	8
83	Nomisma (W. 536-7, nos. 7-11)	LB. 140	3.4851	3.2082	12.58	36	8½
84		FW	4.3321	3.9826	12.40	33	8
85		FW	4.3067	3.9622	12.50	34.5	8
86		PG	4.3405	3.9879	12.31	32	7½
87		PG	4.2208	3.8765	12.26	31	7½
88		PG	4.1915	3.8522	12.35	32.5	8

NOTES

The numbers are those of the coins in the above list.

- (4) Worn, and small piece cut from the edge, accounting for the low weight.
- (11) Almost *fleur de coin*, but tiny piece cut from the edge.
- (13) Cracked, and of unusual thin, spread fabric. Possibly a forgery of the time, despite the good quality of the gold.
- (15) Pierced and broken, with piece cut from the edge.
- (16) Clipped.
- (19) Plugged.
- (21) A little clipped.
- (22) Small flan, almost *fleur de coin*.
- (29) Pierced.
- (31) Worn.
- (32) There appears to be no explanation of the low weight of the coin, since it is neither worn nor clipped. Anomalous weights of this kind occur from time to time in the output of every mint.
- (33) Wrongly ascribed by Wroth, on the authority of Sabatier, to Romanus IV. Its size and general appearance show that it cannot be so late, and the quality of its gold shows that it belongs here.
- (34) Slightly scyphate. Pierced.
- (40-42) Wrongly assigned by Wroth to Constantine VIII. Their portraiture, as well as the quality of their gold, show that they were struck by Constantine IX.
- (44) Pierced, and of unusual fabric, as if it had been cast.
- (45) Identified in Sig. Brunetti's article as Sabatier, no. 4 (pl. XLIX. 7). Sig. Brunetti kindly informs me that this is an error, and that the identity of the coin is as indicated above.
- (48) An error in identifying this coin has been corrected for me by Sig. Brunetti.
- (49) This has a brownish appearance, as if from a copper content, but it may be no more than surface discoloration.
- (50) Traces of mount attached.
- (53) Clipped.
- (60) Worn, and the alloy clearly includes copper.
- (61) Worn.
- (67) Alloy includes copper.
- (70) Worn, pierced and clipped.
- (72) Flattened and clipped, but can never have been of full weight.
- (73) Pierced, and heavily alloyed with copper. It can never have been of full weight.
- (76) Incorrectly assigned in Sig. Brunetti's list to Michael IV.
- (79) Pierced.
- (81) Pierced.
- (83) Unusually thin, which seems to be the explanation of the low weight.