Omeljan Pritsak

The Origins of the Old Rus' Weights and Monetary Systems

Two Studies in Western Eurasian Metrology and Numismatics in the Seventh to Eleventh Centuries

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Цей том видається завдяки щедрій підтримці Олександра та Ірени Михалюків, визначних меценатів програми українознавства в Гарвардському Університеті.

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The Ukrainian Research Institute was established in 1973 as an integral part of Harvard University. It supports research associates and visiting scholars who are engaged in projects concerned with all aspects of Ukrainian studies. The Institute also works in close cooperation with the Committee on Ukrainian Studies, which supervises and coordinates the teaching of Ukrainian history, language, and literature at Harvard University.

It happened that eighty years ago, on June 29, 1918, my parents, Emilija (Emily) Kapko Pritsak (1897–1971) and Josyp (Joseph) Pritsak (1892–1919) were married in Sambir (Galicia, Ukraine).

I would like to dedicate this work to honor this anniversary.

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Preface and Acknowledgments

In 1977 I had to stay in bed for a period of a half of a year (after my first open-heart surgery). I decided to utilize this period for researching the history of weight and monetary systems in Western Eurasia. This I needed to clarify some important questions in connection with my investigation of the origin of Rus'. That meant going through many volumes of catalogs of the coins and special literature. The then librarian of the Ukrainian Institute of Harvard University, Ms. Oksana Procyk, was very helpful and kindly supplied the volumes from my disiderata list to my residence in Wellesley. I express my sincere thanks to her. After my recovery, I visited the Scandinavian countries, studied their museums, and met with several leading scholars, namely Dr. Kolbjorn Skaare (Oslo) and Peter Sawyer (then in Göteborg). I profited much from my discussions with several Harvard guests, with the dean of Byzantine and medieval numismatics, Dr. Philip Grierson (Cambridge), Dr. Michael Handy (Cambridge), and Dr. Thomas Noonan (at the University of Minnesota).

It was only in 1991 that I was afforded the opportunity to visit the Hermitage in St. Petersburg and was hosted by its curator, Dr. Marina Petrovna Sotnikova, with whom I had corresponded since 1977. She not only allowed me to study their treasures, but also arranged photographs of all of the items that I needed. I also was invited by Professor Valentin Lavrent'evič Janin to visit him during his excavations in Velikij Novgorod, where we were able to have many important scholarly discussions.

I would like to express my gratitude to all these colleagues that I have named and to the many others that I cannot name in so limited a space.

My book progressed slowly due to my duties both as a teacher and as the director of the Ukrainian Research Institute, but by the 1989–1990 academic year I was able to produce its final version and handed it over to the Institute's publications office. Due to many difficulties with which the composer had to battle, as well as due to the fact that between 1990 and 1997 I spent the greater part of the year in Kyiv in my capacity as the Director of the Institute of Oriental Studies of the Academy of Sciences of Ukraine, the production of this work was much delayed. Only now, in February 1998, have I received the final proofs of the book and printing is in sight. This means that I have not had a chance to incorporate new scholarship which has appeared after 1990.

I sincerely regret that among these publications is an important volume which became available here only in late 1997. This is the 1996 issue of the series "Drevnejšie gosudarstva Vostočnoj Evropy" for 1994, subtitled "Novoe v numizmatike."

Within it is published a long study by Aleksandr Vasil'evič Nazarenko entitled "Proisxoždenie drevenerusskogo denežno-vesovogo sčeta" (pp. 5–77). The author devoted much attention to the provincial Frankish (Bavarian) system of money of account (especially *sayga* and *scoti*), which is very useful. But it seems to me that he overestimates the *scoti* (= 1 1/2 Carolingian deniers) as the basic source of the development of the Old Rus' monetary system.

While reading the page proofs I also received a monograph by Igor' G. Dobrovol'skij, Igor' V. Dubov and Jurij K. Kuz'menko, *Graffiti na vostočnykh monetax. Drevnjaja Rus' i sopredel'nye strany*, published in St. Petersburg in 1991, containing a collection with an analysis of all known graffiti on Oriental coins. There in part two, division three, are discussed the Scandinavian graffiti analyzed in this book, and also are given some uncertain ones (pp. 35–51). Apart from lettered graffiti there are included in the said publication also several categories of drawings, among them those of the bident of *Kagan* of Rus' Svjatoslav I (d. ca. 972) and the trident of his son Volodimer I (980–1015) on pp. 69–72.

I would like to express my appreciation and thanks to Mr. Robert De Lossa, the director of publications of HURI, for his meticulous editorial work and for his patience with my demands. I would also like to recognize here his able assistants who at various times worked on the project—Marius Cybulski, Benjamin Szporluk, Oksana Yasinovska, Susan Murunga, and John DeStefano. Alexandra Isaievych Mason is to be commended for her fine artwork in the illustrations section.

Finally, I would like to thank Alexander and Irene Mychaluk for their generous support that facilitated the publication of my work. Their gift to the Ukrainian Research Institute at Harvard memorializes Anna Mychaluk-Martyniuk (1903–1943) and her daughter, Tamara Martyniuk (1925–1943), executed by the Gestapo in Rivne, Ukraine for aiding the Ukrainian resistance movement.

Omeljan Pritsak
February 1998

The Origins of the Old Rus′ Weights and Monetary Systems

PART I

Monetary Systems in Early Medieval Western Eurasia

Introduction to Part I

The Rus′ first appeared on the stage of history as both pirates and merchants. Their earliest surviving official documents were trade agreements made with the Byzantine Empire (ca. A.D. 907, 911).[1]

During this early period of the Rus′ history there were only a few denominations in actual use as media of exchange. In Eastern Europe there were first the Byzantine gold *solidi* (weighing 4.55 g) and the Muslim silver *dirham*s of variable weight, but basically 2.73 g, 2.97 g, and 3.41 g (see below). Later, by the year A.D. 1000, the dominant coin became the Western European (Frisian, English, German, Scandinavian) silver pence (*denarius*—1.3 g; 1.6 g; 1.7 g; 1.023 g, see below), which prevailed until the twelfth century, when it was replaced by silver ingots.

Throughout the period under investigation, coins both in the East and West were struck with a hammer. In the majority of cases the coins (especially the silver, or billon coins) were struck *al marco*, for the weight of the extant individual coins varies extensively. But there is reason to assume that gold coins, especially the Byzantine *solidi*, were struck *al pezzo*; the differences in their weight lie within very narrow limits. Large payments usually were made by weight, in sealed purses.

Hence, all transactions of substantial volume had to be reckoned in "monies of account."[2] The systems of weights constituted the essential element here. Because all trade and commerce involved international dealings, this book approaches the problem of the Old Rus′ monetary

1 Contained in the Old Rus′ Primary Chronicle [=*PVL*], *see PVL*, vol. 1 (1950), pp. 24–25 (treaty of 907); pp. 25–29 (treaty of 911). *See* Pritsak, 1987, pp. 151–52.

2 A system based on a gold to silver ratio of exchange. *See* particularly Grierson, 1961a; *id.*, 1975, especially pp. 5–7, 23–29; and Lyon, 1976, especially p. 174.

system from a comparative point of view with special attention to metrological problems.[3]

This first part of the book is based on a paper presented at the Seminar in Ukrainian Studies, Harvard University (12 February 1987), at the joint session of the Istituto Italiano per gli Studi Filosofici and Istituto Universitario Orientale in Naples (5 May 1987), and at the International Symposium on Pre-Ottoman Turkish Culture in Ankara (4 September 1989).

3 On numismatics, *see* von Schrötter, 1930; Engel and Serrure, 1891–1905; Zvaryč, 1973, and Grierson, 1975. On metrology in general, *see* Kisch, 1966. On Rusʹ metrology, *see* Kaufman, 1906; Beljaev, 1927; and Kamenceva and Ustjugov, 1965.

CHAPTER 1

Post-Roman Monetary Systems in Western Europe (Francia, England Seventh to Ninth Centuries)

The Imperial Roman monetary system, as reformed by Diocletian (284–305) and Constantine I (306–337), lasted in the Western Empire barely one hundred years, but survived in the Eastern part, the Byzantine Empire, until its fall in 1453. As in other areas, here, too, the West and the East diverged.

Two main features distinguished the reformed Roman coinage (and these continued in Byzantium). First was the creation of a standard gold coin called the *solidus*, meaning "whole, complete, pure (gold)," named in Byzantium *nomisma* "gold coin." Its nominal weight was ca. 4.55 g, and corresponded to 4 *scrupuli* (of 1.135 g) and to 24 *siliquae* (carats of 0.1895 g). One Roman pound (*libra*) of 327.6 g gold (nominal weight) was used for the minting of 72 *solidi* (4.55 g x 72 = 327.6 g).[1]

The second feature of the Roman (and Byzantine) system was the use in coinage of the three traditional monetary metals—gold, silver and copper (or bronze) in a hierarchical relationship. In the wake of the collapse of the Western Empire (A.D. 476), the barbarian successor kingdoms reduced the Roman hierarchical trimetalism to only one gold denomination called the *triens* or *tremissis*, weighing originally one third of the *solidus* (or 8 Roman carats, *siliquae*), the equivalent of modern 1.516 g (0.1895 g x 8 = 1.516g).[2]

In Gaul (later Francia), and especially in Frisia, Britain, and Germania, the weight of the *solidus* was termed *skilling* "shilling" (originally: "a cutting from a silver ring"; cf. Old Rus' *grivna* and Ukr.

1 For a general overview of Roman coinage, *see* Mattingly, 1960. Concerning the weight of the Roman pound *see* Nau, 1972, p. 19; and Grierson, 1943, pp. 23–24.

2 4.55 ÷ 3 = 1.5166. *See also* Nau, 1972, pp. 26–35.

hryvnia), but, since it was based on the Germanic reckoning (20 grains, meaning barleycorns), it was much lighter: 1.3 g.[3]

The Merovingian Franks imposed their native weight on the *tremissis* coined in their realm, so that the weight of one *solidus* was diminished there from 4.55 g to ca. 3.9 g and the number of carats (*siliquae*) reduced from 24 to 20 (0.1895 g x 20 = 3.79 g).[4]

In seventh- to tenth-century Gaul the gold to silver ratio was 1:14.4. Therefore, one gold *siliqua* (carat) of 0.1895 g was valued at 2.73 g silver equal to one-tenth of the Roman ounce (of 27.3 g). It now became the *silver siliqua* of Western Europe (and later the African *dirham* of 2.73 g; see below).

Around A.D. 640/649 (cf. "Codex Gudianus" and "Lex Salica") there appeared in Gaul a new silver coin called *denarius* (denier, pence). This weighed one-twentieth of an ounce (27.3 g ÷ 20 = 1.365 g), and had as its basis the 20-*siliquae solidus* (0.1895 g x 20 = 3.79 g gold, equal to 54.57 g of silver at the ratio 1:14.4). The new Frankish money of account, now called *skilling* (see above), contained 12 such silver deniers and weighed 16.38 g (1.365 g x 12 = 16.38 g); it was then reduced in value to one-third of the Roman *solidus*, now called *aureus*, whose own theoretical silver weight was 54.57 g, or 40 deniers, and that of the new *tremissis*—13 1/3 deniers/pence; i.e. 18.19 g.[5]

The denier of 1.365 g had outlived the Merovingians and continued to dominate the Frankish monetary system until the reforms of Charlemagne.

Since the Roman pound weighed 327.6 g, it was equivalent to 20 silver *skillings* (money of account: 16.38 g x 20 = 327.6 g) and 240 deniers (silver coins of 1.365 g). This is the origin of the famous (later English!) system:

1 pound = 20 shillings = 240 deniers/pence.

Toward the close of the seventh century gold and the *tremisses* disappeared from use, and the Franks, Frisians, and Anglo-Saxons launched the medieval phase of monetary history, replacing the gold-

3 Grierson, 1961a.

4 Nau, 1972, pp. 30–33. On Merovingian coinage, *see* Prou, 1892.

5 Nau, 1972, pp. 35–37; Jesse, 1955–56, pp. 11–21.

silver bimetalism by silver monometalism and introducing the system of monies of account, i.e., the system based on a gold to silver ratio of exchange.

Charlemagne's Currency Reform

Charlemagne's currency reform has given rise to an enormous scholarship and many controversies.[6] In trying to resolve these controversies, I base my argumentation on comparative metrology and Eurasian historical developments. Like Harry A. Miskimin[7]—but for different reasons—I presuppose two stages in Charlemagne's reforms. One very clear coeval difference between the "new" and the "old" denier is that 9 new deniers were equal to 12 old ones.[8] This ratio of 9:12 will provide a check on my hypothesis.

During the reign of Pepin the Short (752–768) sources note the existence of *seigniorage*. Pepin determined that not more than 22 *solidi* (of account, i.e. 264 nominal deniers à 1.2409 g) were to be minted from one pound, of which the monier would be allowed to retain one *solidus*, i.e. 12 deniers.[9]

Charlemagne decided, according to my hypothesis, that from one pound 256 deniers were to be minted, i.e. one denier weighed 1.2796875 g (327.6 g ÷ 256 = 1.2796875 g). This came to be known as the "old" denier prior to Charlemagne's currency reform proper.

As Philip Grierson has suggested,[10] Charlemagne's monetary reform took place in the winter of 793–794. Its main goal was to establish parity with the Byzantine monetary and economic system. After the synod in Regensburg (792), and with the fall of the Avar realm (796), Charlemagne regarded himself as an equal partner of the Byzantine

6 *See* Morrison, 1963; *id.*, 1967; Grierson, 1965; Miskimin, 1967.

7 Miskimin, 1967, pp. 35–52.

8 "*Argenti [solidos] cxx ana novem denariorum per solidum de moneta Sancti Petri Finitum pretium.*" In Capobianchi, 1892, p. 82.

9 "*De moneta constituimus similiter ut amplius non habeat in libra pensante nisi XXII solidos, et de ipsis XXII solidis monetarius accipiat solidum I, et illos alios domino cuius sunt reddat*" (*Monumenta Germaniae Historica, Capitularia regum Francorum*, vol. I, ed. Alfred Boretius [Hanover-Berlin, 1883], p. 32, no. 13, c. 5).

10 Grierson, 1965, p. 510.

Emperor.[11] In Charlemagne's time the Franks maintained a 1:14.4 gold to silver ratio,[12] and the Byzantines a ratio of 1:18.[13] The difference between the two systems was a correlation factor of 1.25. Charlemagne now raised the traditional Frankish standard weight of 1.365 g.[14] 1.25 times, to 1.70625 g (1.365 g x 1.25 = 1.70625 g).

For this reformed denier the Roman pound of 327.6 g was of no use. Charlemagne, therefore, created a new system based on the famous (and "enigmatic") *pondus Caroli*, "Charlemagne's pound." Its characteristic feature, so difficult for scholars to detect, was that its stable element was not the pound, but the denier. In fact, there were two variants of the pound depending on its use. For his minting-pound, containing the traditional 240 deniers (240 x 1.70625 g = 409.5 g), Charlemagne employed the Baghdad *raṭl* of 409.5 g (see below), which, containing 16 oz., was more flexible than the Roman *libra* of 15 oz. The commercial variant of the pound contained Charlemagne's above-mentioned figure of 256 deniers. Thus, his commercial pound weighed 436.8 g. (A variant of it is known in the Near East as the commercial "Fatimid" pound.)[15]

The proof:

$$1.70625 \text{ g} \times 240 = 409.5 \text{ g}$$
$$1.70625 \text{ g} \times 256 = 436.8 \text{ g}$$

All three figures—1.70625 g for the new denier, and, respectively, 409.5 g and 436.8 g for the variants of the *pondus Caroli*—have been proposed before. What made it difficult to accept these figures, however, was the absence of a theoretical foundation. The final proof of the validity of my hypothesis is in the relationship between the "old" and the "new" deniers in the rate of 12:9.

Charlemagne's "old" deniers weighed, as was mentioned above, 1.2796875 g and the "new" deniers were à 1.70625 g. The relationship between them becomes clear from the following:

11 Classen, 1965, pp. 537–608.

12 Nau, 1972, pp. 31–40.

13 Grierson, 1960, p. 258.

14 Nau, 1972, pp. 36–40.

15 Xinc, 1970, p. 35.

12 "old" deniers, i.e., 12 x 1.2796875 g = 15.35625 g
9 "new" deniers, i.e., 9 x 1.70625 g = 15.35625 g

As we can see, there is total agreement, and the data of the contemporary sources find complete corroboration.

The new denier was used for the Carolingian *solidus*/shilling of 20.475 g (1.70625 g x 12 = 20.475 g).[16]

The Monetary System in Anglo-Saxon England

The Frisians[17] coined their "sceattas" (proto-pence) at home and in England between A.D. 675 and 750.[18] Its novelty consisted in the fact that it was a silver coin equalling (but not corresponding to) the local post-Roman *tremissis* ("thrymsas"), i.e., it weighed 1.3 g of silver. It may be assumed that ten silver "sceattas" of fine silver were worth one *solidus* (in England called the shilling) of fine gold.[19]

The "sceattas" were replaced by the "true" pence (*denarii*, deniers) in the wake of the monetary reform carried out by the Mercian king Offa in 792,[20] probably on the advice of his Frisian merchants. This brought into being the first Anglo-Saxon standard silver pence at a nominal value of 1.365 g. This was, in fact, a usurpation of the Frankish standards. Apparently Offa's intention was to arrest Frankish commercial activities. Naturally, Charlemagne reacted negatively to this move.[21]

There were 240 pence in one pound (= Roman *libra*; 240 x 1.365 g = 327.6 g). The pence was calculated in Anglo-Saxon England not in

16 Cf. the weights from Heithabu, in Jankuhn, 1963, p. 219.

17 On the Frisians and their role; as intermediaries between continental Europe and England, *see* Lebecq, 1983 and Wilson, 1986, pp. 219–44.

18 *See Sceattas* (1984). According to the Kentish laws, one shilling was divided into 20 units of account called *sceat* (pl. *sceattas*), each worth one grain of gold. They should not be confused with the Frisian coins wrongly referred to by scholars of the seventeenth century by the same name; *see* Grierson, 1961a, p. 346.

19 *See* Kent, 1961; and Whitting, 1961. On Anglo-Saxon coinage, *see Anglo-Saxon Coins*, 1961; and Lyon, 1976.

20 Blunt, 1961. *See also* Grierson, 1961a.

21 On Offa's adaptation of the Carolingian monetary practice and on the resulting difficulties with Charlemagne, *see* Wallace-Hadrill, 1965, pp. 683–98.

terms of [gold] *solidi* (as it was in Francia), but [silver] shillings. There were two main systems: in Wessex one shilling equalled 5 pence (1.365 g x 5 = 6.825 g), while in Kent one shilling contained only 4 pence (1.365 x 4 = 5.46 g).[22] Hence one Anglo-Saxon pound represented either 48 shillings à 6.825 g (Wessex) or 60 shillings à 5.46 g (Kent). On the West Saxon shilling in Rus' see pp. 43–44.

West Saxon domination of England reached its peak during the reign of Alfred the Great (871–899). In response to the economic challenge of his time—the popularity of the heavy Arabic *dirhams*—Alfred raised the standard of his pence from 1.365 g to ca. 1.6 g. The figure 1.6 g is generally accepted by numismatists,[23] but without proper explanation. I propose the following. The standard weight of the *dirham* was 2.9646 g,[24] and the difference between that silver coin and one pence of 1.365 g was 1.5996 g (2.9646 g – 1.365 g = 1.5996 g). The new pence was created to level the difference between the two currencies.

The pence of 1.5996 g would soon find an important place in the North.

The Silver ora *and the* healfmarc *of the Vikings*

In the *Domesday Book* (A.D. 1086), there appears the term *ora*, a relic of the ninth–tenth century *Danelaw*. It refers to a unit of account consisting of 16 pence.[25]

The *ora* is the English rendering of the Old Norse word of Latin origin (*aurar*/sg. *eyrir* < Latin *aureus* [*solidus*]) which formed (to this day) the basis of the Scandinavian monetary system (> modern *øre*).[26]

Four *ora*s constituted a *healfmarc* (a silver unit of account) of 120 *penningar* (Old Norse pence); 1 *ora* was divided into 3 *ertog* (< **erta-vóg* < Latin *argenteus* + Old Norse *vóg* "weight"), of 10 *penningar* each.

22 Lyon, 1976, pp. 186–87.

23 *See*, e.g., Grierson, 1975, p. 25; Lyon, 1976, p.183.

24 There is a very small difference (1/10,000): the nominal weight of the *dirham* was 2.9645 g.

25 *Domesday Book*, vol. 1, fol. 164 (Arlington, Gloucestershire): *XL Libras alborum nummorum de XX in ora*. Concerning the terminology, *see* Harvey, 1967, pp. 221–28.

26 Details in Skaare, 1976. *See also* the etymological dictionary by de Vries, 1961, pp. 108 and 683.

During the Viking period in Scandinavia two silver *hálfmörk* made a silver *mark* (*marca argenti*); the extant *mörk* as bars of silver of that era weigh between 204 g and 211 g (*KHL*, vol. 11, col. 422), hence their theoretical weight was apparently 204.75 g.

As will be shown here, it was Alfred's pence of 1.5996 g that was used to calculate the weight of the *ora* of 25.5936 g: 1.5996 g x 16 = 25.5936 g; the weight of one *ertog* and 1 *penning* was, respectively, 8.5312 g and 0.85312 g.[27]

One *healfmarc* was 102.375 g (25.5936 g x 4 = 102.3744 g),[28] exactly one-fourth of the *pondus Caroli* (= 1 Baghdad *raṭl* of 409.5 g) and one-tenth of the Khazaro-Volga Bulgarian *bezmen* of 1023.75 g. Clearly, the Old Norse Vikings knew what they were doing. Their monetary system was created to serve as an economic entity unifying the West, North, and the East.

It may be added that one-hundredth of the *healfmarc* (1.023 g) became the new *rězana/kuna* in Novgorod sometime not later than the beginning of the eleventh century (see below, pp. 55–56).

The German mark

The *mark* (*marca argenti*) later used in Germany, contained eight inflated ounces (à 29.232 g), but derived from the rearranged and renamed Roman Gaulish light *libra*-pound of 234 g. This was the prototype of the famous *mark* of Cologne (233.856 g). In A.D. 1166 one mark in Cologne contained twelve shillings (à 19.5 g) and 144 (72 x 2 = 144) pence (*pfennigs*; 144 = 12 x 12) à 1.625 g.[29] The silver mark was divided into 4 *vierdungs*.

During the second half of the tenth century in many West European (Carolingian rooted) mints the weight of the *denarii* diminished from 1.706 g to 1.36 g or even 1.023 g.[30]

27 On the weights, *see* Jankuhn, 1963, p. 219; Skaare, 1976, pp. 37–38. *See also* Brøgger and Steinnes, 1982; and Malmer, 1966. On the *ora*'s impact on the Rus' currency, *see* pp. 50–51 below.

28 The *healfmarc* occurs first in the Viking milieu in England, probably in the second half of the ninth century; *see* Jesse, 1924, pp. 7–8.

29 Nau, 1972, pp. 44–46.

30 Suchodolski, 1971, especially pp. 24–27; Jammer, 1952.

By this period also billon, a silver-copper alloy, containing less than 50 percent silver, was being introduced into coinage for domestic consumption.[31] In the later Latin language sources it was called "black money" (*argentum nigrum, nigri argenti*).[32]

While the later Merovingian and, especially, Carolingian periods, as well as the reign of Offa and his successors in England, were marked by a restoration of state control over coinage, by A.D. 1028 a process of decentralization and regionalization of mints reemerged in continental Europe.[33] This initiated the feudal age of coinage, with an almost infinite variety of silver and billon coin types. But this period lies outside the scope of this study.

The Byzantine Monetary System

The Byzantine emperors were able to maintain continuous production of their standard gold *solidus* (in Greek, *nomisma*).[34]

Seventy-two pieces were struck from one pound of pure gold, weighing ca. 327.6 g, i.e. 24 Roman carats (*siliquae*, *keratia* à 0.189 g), i.e. 4.536 g each. The actual weight of extant coins varies between 4.41 g and 4.59 g, i.e., for practical reasons ca. 4.55 g.[35] Subdivisions of the *solidus*, the *semissis* (one-half) and the *tremissis* (one-third), were also gold, but they are not greatly relevant to our study.

Byzantine silver coins were represented first by the *milliarēsion*; in Justinian I's time (527–565) 1 *solidus* contained 12 *milliarēsia*. Heraclius (610–641) minted a heavier silver coin (the *hexagram*), one-sixth of the solidus. But in the early eighth century silver coinage was practically abandoned altogether.[36]

31 Suchodolski, 1971, pp. 25, 147–56.

32 Luschin von Ebengreuth, 1926, pp. 43, 193. On the "black money" in the Samanid realm in Central Asia, *see* Davidovič, 1966, pp. 110–25.

33 *See*, e.g., Dolley and Metcalf, 1961; Nau, 1972, p. 43.

34 On Byzantine coinage, *see* Grierson, 1961b; Bellinger and Grierson, 1966–1973; Longuet, 1961; Whitting, 1973. *See also* Morrisson, 1970.

35 Whitting, 1973, pp. 45–47. On the lightweight *solidi* (*nomismata*) in the years 963–1025, *see* Grierson in Bellinger-Grierson, 1966–1973, vol. 3, pt. 1, pp. 34–35.

36 Whitting, 1973, pp. 47–54. On silver coinage after A.D. 720, *see* Grierson in Bellinger-Grierson, 1966–1973, vol. 3, pt. 1, pp. 62–68.

The basic copper coin was the *follis* with, first, 15, and later (in the ninth century) 24 to the *milliarēsion*; the subdivision of the *follis* was the *nummion* (1 *follis* = 40 *nummia*).[37]

It will be of interest to East European medievalists to note that in Crimean Chersonese (Korsun') copper coins were struck in multiples of five *nummia*, namely 40 (8 x 5) and 20 (4 x 5).[38]

The Muslim Monetary System

In order to appreciate and evaluate the Muslim contribution to the East European monetary system and its metrology, it is first necessary to present the basic facts and a new analysis of these data.[39] Although the prototype for the Muslim silver coin called *dirham* ("dirhem" < Greek *drachmē*) was furnished by the Sassanid silver drachma (averaging 3.906 g),[40] the weight of the reformed "legal" *dirham* (*dirham šar'ī*) was established in the wake of the currency reforms of the Umayyad caliph 'Abd al-Malik, which took place between A.H. 74 and 79 (= A.D. 693/694–698/699).[41]

At that time there were also in existence Muslim gold coins based on the Byzantine models. As stated above, the actual weight of the extant *solidi* is between 4.41 g and 4.59 g. Apart from the full-weight *solidi*, however, there were also in circulation, since Justinian I (527–565), lightweight *solidi*, averaging 4.23 g–4.36 g.[42] Similar variations can be observed in the early Arabic transitional gold *solidi* (called *dīnārs*) weighing between 4.19 g and 4.40 g.[43]

37 Whitting, 1973, pp. 54–55.

38 Ibid., p. 55; Grierson in Bellinger-Grierson, 1966–1973, vol. 3, pt. 1, pp. 91–92; and Anoxin, 1968, pp. 99–113.

39 General background and metrology: Hinz, 1955; Xinc, 1970; de Tiesenhausen, 1873. *See also* articles by Richard Vasmer (Roman R. Fasmer) in v. Schrötter, 1930; by George C. Miles, in *EI*^{2} (Miles 1962a, 1962b), and by Ulla S. Linder Welin in *KHL* (Welin, 1956, 1958a, 1958b). Special monographs and studies: Vásquez Queipo, 1859; Sauvaire, 1879–1886; Decourdemanche, 1908; al-Balāḏurī,1916 and 1924; al-Maqrīzī 1797; Grierson, 1960. *See also* Walker, 1941; and 1956.

40 Ibid., 1941, p. cxvii.

41 On the reforms, *see* Grierson, 1960, pp. 241–64.

42 Ibid., 1960, pp. 247–48; Whitting, 1973, p. 39.

43 Walker, 1956, pp. 6, 11.

As the standard for his reform, 'Abd al-Malik chose the *miṯqāl*, i.e., the "weight" of the gold *solidi* of Byzantine and Muslim-Byzantine prototypes; for the minted *solidi* the Arabs used the term *đīnār* (< late Greek *dēnarion*). Now the two terms, *miṯqāl* and *đīnār*, became synonymous in many contexts.

'Abd al-Malik fixed the relationship between the golden *miṯqāl* and the silver coin, the *dirham*, at 10 to 7.[44] Consequently, the weight of a given type of *dirham* depended on that of the *miṯqāl* since the latter was taken as the starting point. The classic formula for establishing the weight of the dirham is: (*miṯqāl* x 7) ÷ 10 = *dirham*.

But the *miṯqāl* presents problems, since apart from the canonical Mecca *miṯqāl* (see below), there was no single standard (monetary) *miṯqāl* in the Muslim world. For historic and economic reasons, three types of "canonical" *miṯqāl*s achieved significance at one period or another: the Syro-Arabian (the Umayyad dynasty), the Iraqi (the Abbasid dynasty) and the Egyptian (separate dynasties since the ninth century).

The *miṯqāl*s varied both in the "canonical" weight of their component elements called *qīrāṭ*s "carats," and in the number of *qīrāṭ*s in the given "canonical" *miṯqāl*.

Table 1-1 shows the comparative structure of the most important *miṯqāl*s:[45]

Table 1-1. Structure of the *miṯqāl*s.

	Syro-Arabian I[46]	Syro-Arabian II[47]	Iraqi[48]	Egyptian I[49]	Egyptian II[50]
qīrāṭ (weight in grams)	0.2125 g	0.2125 g	0.2232 g	0.195 g	0.195 g
Canonical number of *qīrāṭ*s in one *miṯqāl*	20	21	20	20	24
The "canonical" *miṯqāl* (also the Mecca *miṯqāl*)	4.25 g *(non-canonical variant: 4.235 g)*	4.46 g *(variant: 4.5 g)*	4.46 g	3.90 g	4.68 g

44 For general information, *see* Miles, 1962a and 1962b.

45 I have been unable to find such a comparative table in the existing literature.

46 Miles, 1962a, p. 297; cf. Grierson, 1960, p. 253.

47 Hinz, 1955, p. 27. Grierson, 1960, p. 253.

'Abd al-Malik's reform created two types of *dirham*: the commercial *dirham*—that is, the *dirham* of account (Arabic *dirham al-kayl*), and the silver coin (monetary) "epigraphic" *dirham*.

For the commercial *dirham* the full-weight *miṯqāl* = *dīnār* of 4.46 g was taken as the basis. According to the formula, quoted above, it gave the fixed figure 3.125 g ([4.46 g x 7] ÷ 10 = 3.125 g) if the *miṯqāl* was 4.46 g. But along with this there coexisted the *dirham al-kayl* of 3.15 g, originating from the *solidi* weighing 4.5 g: (4.5 g x 7) ÷ 10 = 3.15 g.[51] For the silver coin, the "epigraphic" *dirham par excellence*, a different standard was chosen—the debased (lightweight) *solidus* averaging 4.25 g. This is the origin of the weight of the classic silver *dirham* of 2.97 g, according to the formula (4.25 g x 7) ÷ 10 = 2.97 g (or 2.9646 g if the *solidus* weight was 4.235 g).[52]

The figure of 4.25 g holds special importance in Islamic economic history, since it became the canonical *miṯqāl* of Mecca. Every Muslim was expected to contribute one-tenth of his annual revenue as *zakāt* or "loan made to God" and in the *miṯqāl*s of Mecca; hence the *miṯqāl* at 4.25 g became the common Muslim standard.[53]

The stimulus for the North African lightweight *dirham* came from the European West not unexpectedly, since gold coinage continued there throughout Islamic times. During the seventh century the average weight of the Gaulish golden *tremissis* (one-third of the *solidus*) was reduced to 1.3 g (from ca. 1.5 g), i.e., the golden *solidus* there weighed only 3.9 g. Because of this and since originally one canonic *miṯqāl* consisted of 20 *qīrāṭ*s, and 20 Egyptian *qīrāṭ*s à 0.195 g were precisely 3.9 g, the *miṯqāl* of 3.9 g was taken as the basis for the North African *dirham* in the last decades of the eight century. The result was the light

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48 Hinz, 1955, p. 27. *See also* ibid., p. 5.

49 Ibid., p. 4.

50 Ibid.

51 This was the weight of the commercial (practical) *miṯqāl* in Khwārizm—4.55 g; *see* Fedorov-Davydov, 1958, pp. 239–46.

52 Miles, 1962a, p. 297.

53 The authoritative data are given by al-Balāḏurī (d. 892), 1916, and 1924; *see also* the data of the Egyptian historian Aḥmad b. 'Alī al-Maqrīzī (1364–1442) in his special essay *Nubḏat al-'uqūd fī umūr al-nuqūd*, trans. Silvestre de Sacy, 1797, pp. 2–3, 11–14.

dirham of 2.73 g ([3.9 g x 7] ÷ 10 = 2.73 g),[54] equal to the silver *siliqua* of Western Europe.[55]

The Egyptian (non-canonical) *miṯqāl* of 24 Egyptian *qīrāṭs* (4.68 g) was widely used in commerce under the name of "practical *miṯqāl*"; it corresponded to 21 *qīrāṭs* in the Iraqi *miṯqāl* (0.2232 g x 21 = 4.68 g). This *dirham* weighed, accordingly, 3.276 g.[56]

There is one other *miṯqāl* still to be mentioned: the Egyptian *miṯqāl* of 25 *qīrāṭs* = 4.875 g (0.195 g x 25 = 4.875 g), which is responsible for the weight of the Samanid *dirham* of 3.41 g ([4.875 g x 7] ÷ 10 = 3.4125 g), very popular in Volga Bulgaria in the 10th century.[57]

The non-canonical, commercial *miṯqāl*s were derived according to the following formula: (canonical *miṯqāl* x 100) ÷ 96. For example, the Egyptian practical *miṯqāl* of 4.68 g was formed from the variant of the canonical *miṯqāl* of 4.50 g: (4.50 g x 100) ÷ 96 = 4.68 g; the latter in turn gave rise to the Egyptian practical *miṯqāl* of 4.875 g (used in Volga Bulgaria) (4.68 g x 100) ÷ 96 = 4.875 g.[58]

Basically, the *miṯqāl* referred to the weight of gold; its silver correspondence depended on the coeval local gold to silver ratio. Thus we find in a fourteenth-century inscription from New Saray (*Saray al-Jadīd*) on the lower Volga (former Khazar territory) the designation *nuqrat miṯqāl* defined as *beš sōm taqi igirmi nuqrat miṯqāl yarim* "five *sōm*s are equal to 20.5 silver *miṯqāl*s."[59] Since the weight of 5 *sōm*s was 1,023.75 g (204.75 g x 5 = 1,023.75 g, i.e., 1 *bezmen*, one silver *miṯqāl* equalled 49.939 g (1023.75 g ÷ 20.5 = 49.939 g). The coeval gold to silver ratio in Volga Bulgaria and Khwārizm was about 1:10.245, and hence this golden practical *miṯqāl* was 4.875 g (4.875 g x 10.245 = 49.94 g).

In New Saray there was also found an iron weight of 468 g, which has been recognized as a multiple (96 x) of the *miṯqāl* of 4.875 g, which

54 On the coinage of the North African *dirhams*, *see* Noonan, 1985, especially pp. 140–57; *see also* Janin, 1956a, pp. 86–100.

55 *See* above, p. 6.

56 Hinz, 1955, p. 4.

57 *See* below, chapter 3.

58 Muxamadiev, 1983, p. 52.

59 Ibid., 1983, p. 53 (not exact). On the gold to silver ratio, *see* Fedorov-Davydov, 1965b, p. 208.

capped the system (*miṯqāl* x 96), i.e., 96 x 4.875 g = 468 g.[60]

The Khazars of the eight–ninth century, like the Khwārizmians, used the ratio 1:15; hence, their "silver *miṯqāl*" (based on the gold weight 4.55 g = Byzantine *solidus* of 4.55 g) weighed 68.25 g.[61]

The canonical *miṯqāl* was subdivided into 96 fractions called *ḥabba* "grain"; 4 *ḥabba*s made one *qīrāṭ* and 4 *qīrāṭ*s one *dānik,* which equalled one-sixth of the *miṯqāl.*

In Iraq where the Abbasid capital Baghdad was located, 130 commercial *dirham*s (*dirham al-kayl* à 3.15 g) made up one canonical pound, or *raṭl*, and two *raṭl*s, or 260 dirhams, were one *mann/manā* (< Greek *mnā*). The canonical weight of 1 *raṭl* was 409.512 g and that of the *mann* was 819 g (409.5 x 2 = 819 g). But depending on the weight of the commercial *dirham*, the Iraqi *raṭl* could also be 406.25 g (3.125 g x 130), and correspondingly one Iraqi *mann* could be 812.5 g (406.25 g x 2).

The so-called "Fatimid" *raṭl* of Egypt was, according to its weight model (presently at the Louvre), heavier: 437.2067 g, but it had 140 *dirhams al-kayl* (à 3.125 g) rather than 130.

The *raṭl* was divided into 12 *ūqiya* (< Greek **unkia*) "ounces," each subdivided into 8 parts, thus producing 96 fractions as non-canonical commercial *miṯqāl*s. One ninety-sixth of one *raṭl* weighed, respectively, 4.265625 g (*raṭl* of 409.5 g), 4.23 g (*raṭl* of 406.25 g), or 4.55 g (*raṭl* of 436.8 g). The fraction 4.26[5625] g was very popular in Volga Bulgaria as non-canonical *miṯqāl* (canonical *miṯqāl* weighing 4.25 g).[62]

Two of the *raṭl*s discussed here, the *raṭl*s of 140 and 130 *dirham*s respectively, were apparently popular also in international exchange, since Charlemagne, when reforming the currency of Francia, introduced both to Europe. Philip Grierson has suggested that Charlemagne's commercial pound was 437 (= 436.8) g in weight, while the pound of 409 (= 409.5) g served as his mint *libra* (= 240 *denier*s à 1.7 g).[63]

60 *See* Muxamadiev, 1983, p. 52.

61 *See* p. 32 below. The Khazars, Volga Bulgars and even the early Rus' maintained political and trade relations with Khwārizm; *see*, e.g., Pritsak, 1981, pp. 445–51. *See also* fn. 54.

62 *See* Muxamadiev, 1983, p. 27, fn. 18.

63 *See* pp. 7–8.

Gold to Silver Ratios and Profits

During the seventh to ninth centuries there existed several zones with different gold to silver ratios (*see* table 1-2). In coeval Byzantium the gold to silver ratio was 1:18, as it was during the greater part of its history.[64]

For the Muslim and early Abbasid Empire there is good reason to assume a ratio of 1:14.[65]

As for Western Europe (especially Francia), this ratio in the seventh to mid-ninth century was 1:14.4. During the second half of the ninth century it changed to 1:12, and possibly to 1:10.[66] A similar change probably occurred in Anglo-Saxon England and in post-Avar (A.D. 800) Central Europe.[67]

Later we will show that the gold to silver ratio in Eastern Europe in the eighth to tenth centuries (in Khazaria and Rus', but not in Volga Bulgaria!) was 1:15; this later changed to 1:12 (in Volga Bulgaria) and to 1:9 in tenth-eleventh century Rus'.

Table 1-2. Gold to Silver Ratios

Date	*Ratio*	*Place*
ca. 695	1:14	Caliphate
7th –mid-9th cent.	1:14.4	Francia (Western Europe)
7th–11th cent.	1:18	Byzantium
800	1:15	Eastern Caliphate > 10th century Volga Bulgaria
8th–10th cent.	1:15	Khazaria and Rus'
800	1:10	post-Avar Central Europe
847–861	1:17.3	Eastern Caliphate
2nd half of the 9th cent.	1:12	Western Europe, Anglo-Saxon England
907–932	1:15.4	Eastern Caliphate
after 928	1:11.6	Eastern Caliphate
941	1:12	Eastern Caliphate > Volga Bulgaria
986	1:15.4	Egypt
10th–11th cent.	1:9	Rus'

64 Grierson, 1960, p. 263.

65 Ibid. I keep to this figure since it happens to be an average. *See* the figures of Watson, 1967, p. 27, table 2.

66 Nau, 1972, pp. 36–40. *See also* Lyon, 1976, pp. 188–89.

67 Nau, 1972, p. 42; Pošvář, 1966, pp. 280–81; Lyon, 1976, pp. 177, 189 (ratio 1:10).

Table 1-3 provides some appreciation of the opportunities for gain resulting from this coexistence of different ratios.

The starting point is the silver weight of one Byzantine gold *solidus* (4.55 g of gold = 81.90 g of silver) according to the respective coeval ratios. The Byzantine gold to silver ratio was 1:18. That ratio is put in relation to the Khazarian and Rus' ratio of 1:15, the Western European ratio (1:14.4), the Caliphate ratios (1:14; 1:12), etc. From this one can see that silver was more expensive in Khazaria and Rus' than in Byzantium. The difference was 13.65 g of silver (81.90 g – 68.25 g = 13.65 g) per one gold *solidus*; it was 982.80 g of silver per one Byzantine gold *litra* (13.65 x 72=982.80 g).

Table 1-3 contains seven columns (I, II, IIIa, IIIb, IV, Va and Vb). In column I the Byzantine ratio is put in relation to another ratio. Columns III through V show gains in silver moving from one system to another: IIIa – gains in silver per one gold *solidus*; IIIb—gains in silver per one gold *litra*. These gains in silver are translated in *litras* of silver (Column IV), in silver *dirhams al-kayl* (Column Va) and in "African" silver coin *dirham*s (à 2.73 g; Column Vb).

From table 1-3 we can observe some striking differences in the weights which undoubtedly affected the intensity of international trading activities in gold and silver during the period under investigation. Incentives for such trade were very strong indeed.

Table 1-3. Gains in Interzonal Exchanges

	I Gold to silver coeval ratios; (silver correspondence of 1 *solidus* in parentheses)	II Correlation between the two coeval silver correspondences	IIIa Gains in silver units of account *per gold solidus* (1 *solidus*=4.55 g)	IIIb *per gold litra* (72 *solidi*=327.6 g)
1.	1:18 (81.90 g) vs. 1:15 (68.25 g)	1.2	13.65 g	982.80 g
2.	1:18 (81.90 g) vs. 1:14.4 (65.52 g)	1.25	16.38 g	1,179.36 g
3.	1:18 (81.90 g) vs. 1:14 (63.70 g)	1.29	18.20 g	1,310.40 g
4.	1:18 (81.90 g) vs. 1:12 (54.60 g)	1.5	27.30 g;	1,965.60 g
5.	1:18 (81.90 g) vs. 1:10 (45.50 g)	1.8	36.40 g	2,620.80 g
6.	1:18 (81.90 g) vs. 1:9 (40.95 g)	1.8	40.95 g	2,948.40 g
7.	1:15 (68.25 g) vs. 1:14.4 (65.52 g)	1.04	2.73 g	196.56 g
8.	1:15 (68.25 g) vs. 1:14 (63.70 g)	1.07	4.55 g	327.60 g
9.	1:15 (68.25 g) vs. 1:12 (54.60 g)	1.25	13.65 g	982.80 g
10.	1:15 (68.25 g) vs. 1:10 (45.50 g)	1.5	22.75 g	1,638.00 g
11.	1:15 (68.75 g) vs. 1:9 (40.95 g)	1.66	27.30 g	1,965.60 g
12.	1:14.4 (65.52 g) vs. 1:14 (63.70 g)	1.03	1.82 g	131.04 g
13.	1:14.4 (65.52 g) vs. 1:12 (54.60 g)	1.2	10.92 g	786.24 g
14.	1:14.4 (65.52 g) vs. 1:10 (45.50 g)	1.44	20.02 g	1,441.44 g
15.	1:14.4 (65.52 g) vs. 1:9 (40.95 g)	1.6	24.57 g	1,769.04 g
16.	1:14 (63.70 g) vs. 1:12 (54.60 g)	1.66	9.10 g	655.20 g
17.	1:14 (63.70 g) vs. 1:10 (45.50 g)	1.4	18.20 g	1,310.40 g
18.	1:14 (63.70 g) vs. 1:9 (40.95 g)	1.55	22.75 g	1,638.00 g
19.	1:12 (54.60 g) vs. 1:10 (45.50 g)	1.2	9.10 g	655.20 g
20.	1:12 (54.60 g) vs. 1:9 (40.95 g)	1.33	13.65 g	982.80 g
21.	1:10 (45.50 g) vs. 1:9 (40.95 g)	1.11	4.55 g	327.60 g

Table 1-3 (con't). Gains in Interzonal Exchanges

	IV Gains translated in *litras* of silver;	Va Gains from IIIb in dirhams. *dirham al-kayl* (à 3.15 g) [68]	Vb Gains from IIIb in dirhams. coin-dirham (à 2.73 g)
1.	3	312.0	360
2.	3.6	374.4	432
3.	4	416.0	480
4.	6	624.0	720
5.	8	832.0	960
6.	9	936.0	1,080
7.	0.6	62.4	72
8.	1	104.0	120
9.	3	312.0	360
10.	5	520.0	600
11.	6	624.0	720
12.	0.4	41.6	48
13.	2.4	249.6	288
14.	4.4	457.6	528
15.	5.4	561.6	648
16.	2	208.0	240
17.	4	416.0	480
18.	5	520.0	600
19.	2	208.0	240
20.	3	312.0	360
21.	1	104.0	120

68 Only the *dirham al-kayl* à 3.15 g gives exact multiples, as does the Byzantine *litra* of 327.6 g. (Thus à 3.15 g, the figure 2,620.80 g [no. III, 5] is precisely equal to 8 Byzantine *litras*, or 832 *dirhams al-kayl*; à 3.125 g. one gets a fractional entity 838.654 g.) The same is true throughout the entire table; thus, e.g., the second figure 1,965.60 g (no. III, 4 or no. III, 11) = 6 *litras* = 624 *dirhams al-kayl* à 3.15, but a fractional 628.992 g of *dirhams al-kayl* à 3.125 g.

CHAPTER 2

Did the Khazars Possess a Monetary Economy?

Controversies

In 1982 and 1984, Thomas S. Noonan reopened the discussion on the important question, did the Khazars possess a monetary economy?[1] There are two schools of thought on this problem. In 1902 the Austrian numismatist Edward von Zambaur suggested that many of the imitation Arabic coins found in Eastern European and Scandinavian hoards were produced in Khazarian mints. His thesis has been subsequently supported by two Russian numismatists, Vladimir V. Kropotkin[2] and, especially, Aleksej A. Bykov.

Bykov adduced three new arguments for the existence of a Khazar money economy:[3]

1) strange coins were discovered in 1939 at Devica near the river Don (Korotojakskij rajon of Voronež Oblast) on the territory which had belonged to the Khazar state. The entire coin-treasure hoard, datable to A.D. 838, contained 299 whole and 24 fragmented *dirhams*. The misspellings in the Arabic texts of the epigraphic parts, which is based on Abbasid patterns, and the marked discrepancy between the Hegira years and the names of rulers mentioned on the coins convinced Bykov that the coins were not minted on Muslim territory.

2) 42 strange coins of the Devica hoard (and a few of the Dobrino hoard)

1 Noonan, 1982, pp. 219–67. Since Professor Noonan presents an excellent summary of the arguments of both camps, the reader is referred to his essay.

2 See Kropotkin, 1962.

3 Bykov, 1971, pp. 26–36; id., 1974, pp. 26–71. For some reasons Bykov (1971, 1974) did not mention the large hoard of 527 Cufic coins discovered in 1962 in Dobrino (Ljozno rajon, Vicebsk Oblast; USSR), published in Rjabcevič, 1965.

have depicted on them a twig-like sign ᛉ known from Sarkel; they have dates A.H. 142 (A.D. 759–760), 150 (767–768) and 162 (778–779).

3) Apart from the coins with the "twig," several *dirhams* with the date A.H. 223/A.D. 837–838 were minted in a place whose name Bykov—following Richard Vasmer—convincingly reads as *Arḍ al-Khazar* "[the mint of the] land of Khazaria."[4]

A contrasting view was propounded in 1956 by Valentin L. Janin, who claimed that "the small percentage of coin finds in relation to their overall quantity in Eastern Europe characterizes not so much the degree of monetary circulation among the Khazars as the complete absence of this circulation."[5]

According to Noonan (1984), who had painstakingly collected data on the recent hoard finds on Khazar territory, especially in the North Caucasus, the entire problem has to be examined from another focus. There was, in his view, extensive trading activity in Eastern Europe in the ninth century. But the appearance of the *dirham* there, mainly around the year 800, was not the result of a monetary economy in the Khazar kaganate, but rather a reflection of a commercial initiative by Islamic merchants. After the conclusion of the Arab-Khazar conflict they made a strong push in the area and transformed the local pre–800 Arab-Khazar trade (centered in Darband), into an international economic factor, which fundamentally changed the course of both Khazar and Rus' history.[6]

The Khazarian tïn *and* altïn

Leaving aside for the moment the problems of the "strange coins" of Devica, we should reexamine the data provided by the written sources concerning the coexistence of metal currency with pelt units in the

4 On the identification of the mint as *Arḍ al-Khazar*, *see* Bykov, 1974, pp. 50–56, where he quotes the opinions of Christian D. Fraehn, Richard (Roman) Vasmer, Evgenij Paxomov, and Wilhelm (Vasilij) Barthold. One *dirham* minted in Arḍ al-Khazar A.H. 223/A.D. 837–838 (of the type de Tiesenhausen, 1873, no. 1854) was also found in the Dobrino hoard (but not recognized by its describer; *see* Rjabcevič, 1965, p. 159, no. 523).

5 Janin, 1956a, pp. 104–105.

6 Noonan, 1984, pp. 151–282.

Volga regions. The oldest description of this dates back to ca. A.D. 912, in the geographic work of the Arab writer Ibn Rustah. In his own day (ca. A.D. 900), economic dominance in Eastern Europe was already passing from the Khazars to their former tributaries—the Volga Bulgars. But Ibn Rustah's data still refers back to the Khazar period. This can be clearly seen in the work of the Persian geographer Gardīzī, who updated Ibn Rustah's information ca. 1050, and provides the Volga Bulgarian rate of exchange (between silver *dirhams* and pelts), that is different from that given by Ibn Rustah. This will be discussed below.

Ibn Rustah writes:

> The greater [part] of their [i.e., of the Volga Bulgars within the Khazar economic system] wealth [consists] of *dalaq* ("pelts"). They do not possess [their own] solid (= silver) money (*amwāl ṣāmita*) since their *dirhams* are *dalaq* (pelts). Their exchange rate is one *dalaq* (pelt) for 2.5 [silver] *dirhams*. The white, round [silver] *dirhams* are brought to them from the lands of Islam in trade for their wares.[7]

Gardīzī adds the following: "Then they [the Volga Bulgars] again [in their turn] pay out that [Muslim silver] *dirham* to the Rus' and *ṣaqlabs*, since these peoples will not sell [their] goods except for solid [silver] money (*derām-i-ṣāmet*)."[8]

As Tadeusz Lewicki has shown, the Arab term *dalaq* corresponded to the Old Rus' word *kuna* in the meaning of "(pale) marten (skin)" (= French *fouine*).[9] The corresponding Khazar-Turkic word for *dalaq/kuna* was apparently **tīn* (< *tiyin~teyin*).

In the post-Khazar territories, especially in the Volga region, there was a very popular term referring to a coin— *altīn*; during the Golden Horde period this term passed as a loan into Muscovite Russian.[10] This word is different from the Turkic *altin* (< *altun*) "gold," and originally consisted of two Turkic words: *alti* "six" and the just-mentioned *tīn* "marten, squirrel." The form *tīn* goes back to the word *tiyin*, which is attested in the Old Turkic runic inscriptions of the first half of the eighth century.[11]

7 Ibn Rustah, 1892, p. 142.

8 Gardīzī in Martinez, 1982, p. 207 (Persian text), pp. 158–59 (English translation).

9 T. Lewicki, 1977, p. 92.

10 *See* Janin, 1956b; and Fedorov-Davydov, 1981, p. 143.

11 *See* Clauson, 1972, p. 569, s.v. *teyiŋ*.The form *altīn* developed from * *altitīn* due to haplology.

It may thus be assumed that one *altīn* was equal to six *tīn*s. Numismatists have established that the typical coin found in Eastern Europe hoards during the period 787–833 was the North African light *dirham* of 2.73 g.[12] Since one *tīn* equalled 2.5 *dirham*s, it contained 6.825 g of silver (2.5 x 2.73 g = 6.825 g); therefore, one *altīn* as a money of account was equivalent to 40.95 g (6.825 g x 6 = 40.95 g) of silver. The latter figure is equal to one-tenth of the Baghdad *raṭl* (409.5 g ÷ 10 = 40.95 g), but it also indicates the gold to silver ratio in Khazaria—1:15. Since 15 silver *dirham*s were exchanged for 1 *altīn*, one *altīn* is 40.95 g (2.73 g x 15 = 40.95 g). A direct corroboration of the Khazarian 1:15 ratio is the fact that the silver value of 1 gold *solidus* (= 1 gold *dīnār miṯqāl* à 4.55 g) was 68.25 g (4.55 x 15 = 68.25 g), a figure which would continue to play an important role in the East European metrology.

As we can see, the Khazar monetary system was based on two pillars: the *altīn* of 40.95 g; and the silver value of one *solidus/miṯqāl* of 68.25 g. Their relation was 1:1.6 (68.25 : 40.95 = 1.6). It became necessary to find a common denominator. This crucial number, a *sām,* was 204.75 g (one half of the *raṭl*), since it contained 5 *altīn*s (40.95 g x 5 = 204.75 g) which were equal to 3 *solidi/miṯqāl*s (68.25 g x 3 = 204.75 g).[13]

The existence of the *sām* in Khazaria is corroborated by a Khazar-Hebrew letter from Kyiv, datable to ca. A.D. 930. The Hebrew word referring to it is *zeqūq,* lit. "pure silver."[14] But in some texts from the Rhineland, *zeqūq* is explained as *media libra*, which was the half pound of Charlemagne.[15] The weight of the *media libra* found in Haithabu/Hedeby (the Frisian merchants' factory near Schleswig, ca. 800–975) was exactly 204.615 g.[16]

The interconnection between Khazaria and the Carolingian monetary system is again corroborated by the finding in the Petergof coin hoard (dated to ca. A.D. 805) of circulary trimmed *dirham*s weighing

12 Janin, 1956a, pp. 90–94.

13 On *sām* (~ *saum[a]* > *sōm*), *see* Muxamadiev, 1972; id., 1983, pp. 69–70; and Fedorov-Davydov, 1958, pp. 67–68. *See also* Doerfer, 1963–1975, vol. 3 (1967), pp. 309–406 (no. 1307).

14 Golb and Pritsak, 1982, pp. 7, 12, 13.

15 Kupfer and Lewicki, 1956, p. 58.

16 Jankuhn, 1963, p. 219.

ca. 1.7 g, i.e., *dirham*s adopted to the weight of the heavy denier of Charlemagne (1.706 g).[17]

Still another proof of the commercial interrelation between Khazaria and the West that may be mentioned here is the unusual role of the Khazarian weight called **besmän~bezmen* (discussed below).

The Mystery of the "Twig-like" Signs

I mentioned above that approximately half of the "strange" Devica hoard *dirham*s carry a twig-like sign ᛉ.[18] It needs to be stressed that this is not a graffito-like later adornment, but an integral component of the epigraphy of that particular type of *dirham*. But the sign cannot be explained on the basis of Arabic epigraphic tradition. What is its origin?

The sign occurs within a circle containing the *šahāda* (the Muslim profession of faith) just below it. This is the place where usually was inscribed the name or title of the early Abbasids' lieutenant, e.g al-Faḍl (name) or Ḏū al-Riyāsatayn (his title) designating the powerful vizir of the caliph al-Ma'mūn (813–833).[19]

In other words, the "twig"-sign stands for the name/title of the actual ruler of the land. The "twig"-sign can be easily recognized as the Old Norse rune R in the so-called Older Futhark alphabet—ᛉ. As is well known, all Old Norse runes have their specific names. This particular rune R (ᛉ) appears in the three lists of runic names from the ninth century (St. Gall, Brussels nos. 9565 and 9311) as *elux/elox/ilix*.[20] In Old Norse the word had the meaning of "elk," and was pronounced as **ilig-R~elg-R*.[21]

Coincidentally, however, *ilig/elig~eläg* was the Old Turkic royal title that sometime during the second half of the eighth century was usurped by the Khazarian majordomo.[22]

17 Mel'nikova *et al.*, 1981, p. 37.

18 Good photographs of the respective coins are reproduced in Bykov, 1974, pictures 9,10, 11, 12, 13; for a discussion of that sign: ibid., pp. 49–50.

19 *See*, e.g., de Tiesenhausen, 1873, nos. 1628, 1644, 1724, 1732, 1736 etc.

20 Musset, 1965, p. 109; cf. Krause, 1970, p. 29.

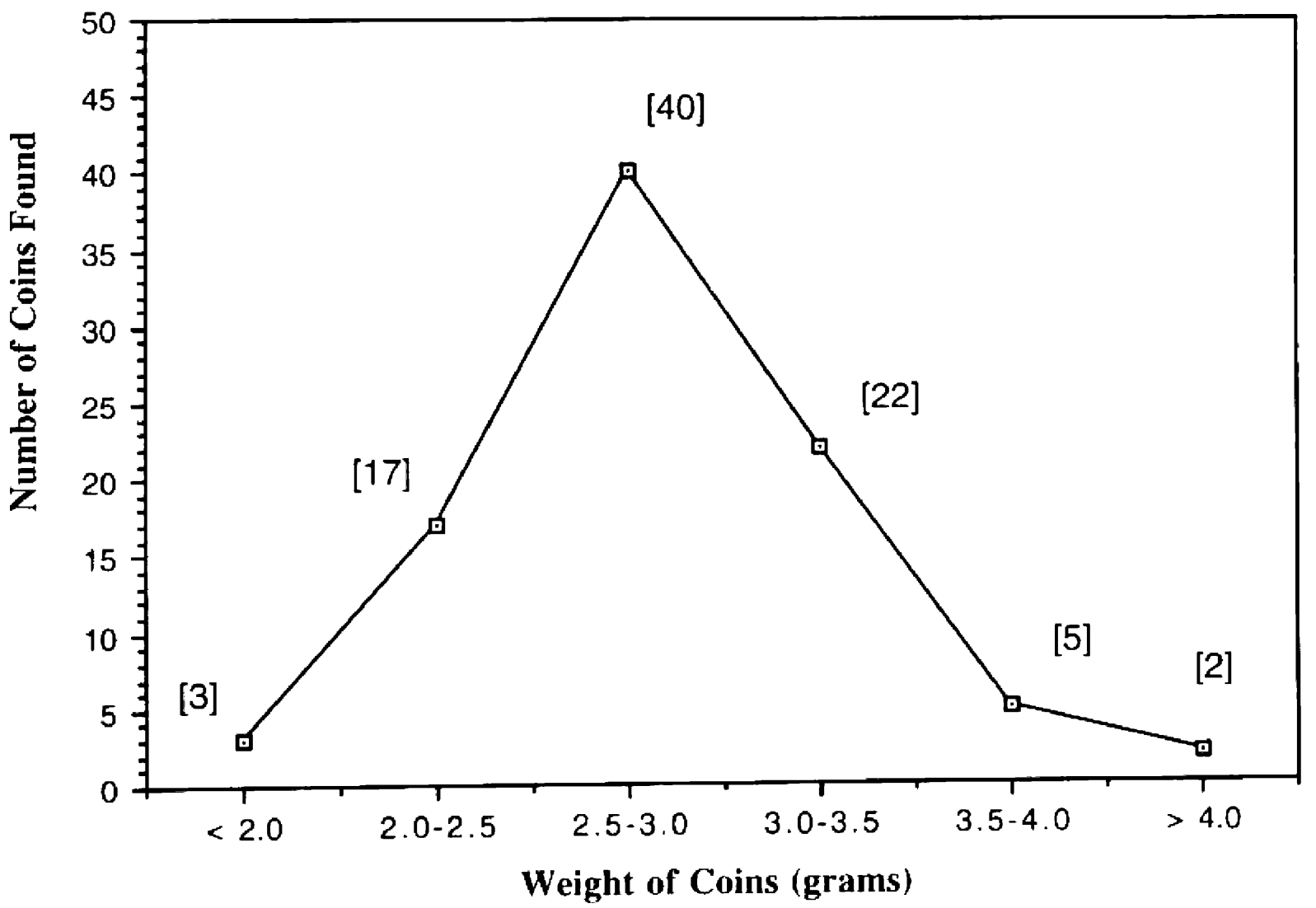
21 De Vries, 1961, p. 100.

22 Golden, 1980, vol. 1, pp. 184–85.

This decipherment of the rune R as a homonym for the Khazar royal title *iləg/ilig* resolves the mystery of the "strange" Devica *dirhams*. These, in fact, were produced by the Khazars—not by the kagan, but by the majordomo, the actual ruler after the Arab victory of 737. It was apparently the majordomo (and not the kagan) who introduced into the Khazar economic structure the famous movable scale called after his clan *besmän~bezmen* (see below).

Analysis of the weight of the Devica hoard *dirham* (including the Arḍ al-Khazar coins) corroborates their Khazar provenance. The majority of these coins weighed between 2.51 g and 3.01 g (see figure 2-1) which gives an average figure of 2.75 g, i.e., the weight of the African *dirham* (theoretically 2.73 g). The Volga Bulgar coins present an entirely different picture (see figure 2, p. 34 and following).

Figure 2-1. The Weight of the 89 Khazar dirhams
(Devica hoard and the Arḍ al-Khazar coins)



Source: Bykov 1974.

The bismar/bezmen

A very popular type of scale and its name date apparently from the first period of Baltic-Khazar trade. It was used in the Scandinavian-Germanic (including England) and Slavo-Baltic world on the one hand, and is attested in Bulgaro-Chuvash-Turkic and some Caucasian languages on the other.[23] The Germanic form was *besman* (later Germanized to *bismar*),[24] and corresponds in fact to the Chuvash *pasman* (< **bäsmän*); in Turkic and Slavic[25] the word is *besmen/bezmän*.

The *Sache* (actual object) was a movable handscale with wooden beam arms of unequal length. "The counterpoise of the bismar"—writes Bruno Kisch—"is fixed to one end of the [wooden] beam and the axis of the beam can be quite easily shifted. As soon as the beam is horizontal, indicating that equilibrium had been reached, the correct weight can be read on the [wooden] beam from the position of the loop of cord (the fulcrum)."[26]

The measurements of weight were marked on the wooden beam by nails. As a result, the word "nail" developed in this system a new semantic meaning—"pound."[27]

[23] The attested Bulgaro-Chuvash-Turkic forms suggest that the word was a borrowing in both groups with the result that there are two respective "original" forms: Bulgaro-Chuvash **bäsmän* (> *pasman*: *see* Ašmarin, 1928–1950, vol. 9 [1935], p. 120) and Turkic **bezmän*: *see* Karaim-Troki (1974, p. 111), *b'ez'm'an*, Kazan Tatar (1966, p. 70), Bashkir (1958, p. 98): *bizmän* < *bezmän*. On etymologies in Turkic, *see* Räsänen, 1969, p. 73; and Sevortjan, 1974–1980, vol. 2 (1978), pp. 81–82.

On the Caucasian forms, *see* Kabardino-Cherkes: *bezmän (Russko-kabardinsko-čerkesskij slovar'*, ed. A.O. Kardanov [Moscow, 1955], p. 43) < Turkic; and Ossetian *bazman* (Vasilij I. Abaev, *Russko-osetinskij slovar'*, 2nd ed. [Moscow, 1970], p. 32, < Turkic Karachay-Balkar *bazman* (X.I. Sujunčev and I.X. Urusbiev, *Russko-karačaevo-balkarskij slovar'*, [Moscow, 1965], p. 37; < late Khazarian (with the substitution of *-zm-* for *-sm*).

[24] Poul Rasmussen, Hilmar Stigum, and Kauko Pirinen, "Bismerpund," *KHL*, vol. 1 (Copenhagen, 1956), cols. 634–642; Poul Rasmussen, "Bismervogt," *KHL*, vol. 1, cols. 642–43. *See also* Jóhannesson, 1956, p. 952; de Vries, 1957, p. 38; M.S. Falk and Alf Torp, *Norwegisch-Dänisches etymologisches Wörterbuch*, 2nd ed., vol. 1 (Oslo, 1960), p. 75; Friedrich Kluge and Alfred Götze, *Etymologisches Wörterbuch der deutschen Sprache*, 15th ed. (Berlin, 1951), p. 71.

[25] Erich Berneker, *Slavisches etymologisches Wörterbuch*, 2nd ed., vol. 1 (Heidelberg, 1924), pp. 53–54; M. Vasmer, 1953–58, vol. 1, pp. 69–70; Mel'nyčuk, 1982, p. 162.

[26] Kisch, 1965, p. 56.

[27] Klejnenberg, 1973, p. 140.

In Rus' the term *bezmen* is first attested in a Novgorodian birchbark inscription of the twelfth century (no. 439).[28] During the archaeological excavations in Novgorod in 1960–1961 the remains of a wooden *bezmen* were found in the cultural layer datable to the thirteenth century.[29]

The *besman/bismar* was in use in Denmark and England since the Viking Age, until declared illegal in England by Henry II (1133–1187) and, again, by Edward III (1327–1377). It is still in use, "not only in the Scandinavian countries, including Finland, but also in Burma, India, and the Malay Peninsula."[30]

All etymologists agree that the word *besmen~bezmen* entered the Germanic and Slavic (as well as Baltic) languages from the Turkic, although the corresponding "Turkic" etymon could not as yet be identified. Scholars often connect the word *bezmen* with another "Turkic" designation of weight, *batman*. The latter is first attested in Kāšγarī's comparative dictionary of Turkic languages (ca. 1070), where *batman* is explained with the help of the Arabic term *al-manā*,[31] which like its cognate *al-mann*, goes back ultimately (through the Greek *mnā*) to the Akkadian weight *manu*.

In medieval Muslim lands 1 *mann* (*manā*) was usually equal to 2 Baghdad *raṭl*s of 819 g (2 x 409.5 g = 819 g).[32] There were, especially in Iran-Turan, three types of *mann*: the "small," "middle," and "big" with the respective weight of 819 g; 1,024 g–1,920 g; and 2,880 g–2,900 g (ca. 3 kg).[33] The "big" *mann* was often called *batman*, e.g, the "big" *mann* of Tebriz in the descriptions of the Europeans travellers: *batman* (1566), *batman of Teuris* (1581), *batman tauriss* (1638).[34] One type of the "big" *mann* was called in Persian *männ-e šah* "the royal *mann*," and had the weight of two "big" *mann*s, i.e., ca. 6,000 g.

28 *Nov Gram Ber (1951–)*, pt. 7, p. 42 (*četyri bezmene*); cf. pt. 8, p. 266.

29 Klejnenberg, 1973, p. 140. On *bezmen* in Volga Bulgaria, *see* Valeev, 1990, p. 14.

30 Kisch, 1965, p. 58.

31 Dankoff, 1982–1985, vol. 1, p. 334.

32 Hinz, 1955, p. 16.

33 Ibid., pp. 16–23.

34 Ibid., pp. 18–19.

From this one can see that *man* in *batman* in Turkic and Persian is the Arabic *mann* (*manā*) in garbled form.[35]

The element *bat-* is apparently the Turkicized form of Iranian **pat-* "royal," which in another variant (**pad-*) appears in the Ottoman imperial title *pād-i-šāh*.[36] Hence the Turkic *batman* (i.e., *bat-man[n]*) can be interpreted as the forerunner of the Safavid *männ-e šāh*, in the meaning of "royal *mann*." Cf. here *Ḥasan Pādišāh batmani* introduced by Uzun Ḥasan, the ruler of the Aq-Qoyunlu Türkmens (1466–1478).[37]

In my view, the element *men* in *bezmen* is also to be derived from the Arabic *mann/mnā*. But what of *bes-/bez-*? It is important, first of all, to note that there are two basic forms of this element, one with final *-s* (*bes-*), which occurs both in Bulgaro-Chuvash and Germanic, and the other with *-z*, to be found in Turkic and Slavic (*bez-*).

In an unpublished study on the governmental structure of the Khazar realm, I have shown that the name of the clan of the Khazar majordomo was originally Iranian *varāz ~varāč* (lit. "boar") which was modified by speakers of Altaic languages to bárəč > *bárč* > *bárs* > *bás* (Hunno-Bulgar) and *bárəz* > *bárz* > *báz* (Turkic). The vowel of the Arabic word *mann* is still pronounced by the Iranians as *männ*, and it, too, was adopted in Altaic as a front vowel. The nominal group **bás* + *män* / **báz-män* developed under the influence of the stress shift into *bäsmán*/ *bäzmán* as the designation for the "middle" *mann* (2.5 of *raṭl* = 1023.75 g) which was probably introduced in Khazaria (together with the handscale) by the majordomo of the *Barč* (> *Baz~Bas*) clan.

As was mentioned above, the *bezmen* scale used units on the wooden beam to mark the measures of weight. As a result in many languages of peoples using the *bezmen* scale the word for "nail" acquired the meaning "pound." The corresponding Turkic word was *qadaq* (> *qadaγ*):[38] "1. nail; 2. pound." Interestingly, the *-d* in the final position of the root

35 On the Turkic Etymology of *batman*, *see* Arat, 1949, pp. 342–44; Clauson, 1972, pp. 305–306; Räsänen, 1969, pp. 65 and 73; Sevortjan, 1974–1980, vol. 2 (1978), pp. 81–82.

36 *See* Babinger, 1936, p. 1098.

37 Hinz, 1955, p. 20.

38 The data on Turkic *qadaq* is in Doerfer, 1963–1975, vol. 3 (1967), pp. 420–22 (no. 1435).

(*qad-*) was not affected by the shift *-d-> -δ-> -y-// > -z-// -t-*, so characteristic in the classification of Turkic languages. The form with *-d-* prevailed; it occurs first in the "Codex Cumanicus" (ca. 1300) as *cadau/qadaw/chadak/qadaq* "nail."[39]

In the language of the mercantile-minded Volga Tatars the word has survived in both meanings as *qadaq* (1. nail; 2. pound), but *qazaq* only in the meaning of "pound."[40] I would call attention to the fact that the *-z-* Turkic linguistic group is known to have lived on the former Khazar territories (as attested, for example, by the toponym *Azov* < **Azaγ* (< *Adaq*).[41]

The possibility that the Khazars did have a weight for larger cargoes, the sack called **qáp-* (> Old Rusʹ *kapь*) of 160 *raṭl* (65.52 kg) is discussed below.

The Khazar Monetary System Reconsidered

Unfortunately, surviving sources do not contain Khazar designations for weights and coins. But we have good reason to assume that *qadaq* was used among the Khazars for a *raṭl*-pound, *sām* for the half pound, and *yarmaq* for "dirham."[42] This last word is, according to Sir Gerard Clauson, an Old Turkic loanword from Tocharian (B *yarm*; A *yärm* "a measure").[43] However Martti Räsänen explains *yarmaq* from Turkic *yarmaq* (< *yar-*) "to split."[44]

It is now possible to establish the Khazarian metrological system using the reconstructed name forms for the monies of account as well as for the actual coins:

39 Grønbech, 1942, p. 189.

40 The data is in Radloff, 1899, vol. 2, col. 307 (*qadaq*) and col. 366 (*qazaq*).

41 On problems concerning the Turkic *-z-* languages, *see* Pritsak, 1959, pp. 92–116.

42 *See* Muxamadiev, 1972. The term *yarmaq* "dirham" is known to al-Kāšγarī (ca. 1070); *see* Dankoff, 1982–1985, vol. 2 (1984), p. 170.

43 Clauson, 1972, p. 469.

44 Räsänen, 1969, p. 190; Doerfer, 1963–1975, vol. 4, p. 160 (no. 1854).

1 **bäsmän* (1023.75 g) = 2.5 **qadaqs* (*raṭls*) à 409.5 g
1 **qadaq* (409.5 g) = 150 **yarmaqs* (*dirhams*) à 2.73 g = 240 fractions[45] à 1.7 g (cf. 240 pence in one pound)
1 **qadaq* = 2 **sām*
1 **sām* (Hebrew *zeqūq*, Latin *media libra*) = 204.75 g; = 5 *altīn* (= 3 *solidi/miṯqāl*; see below)
1 **qadaq* = 10 *altīn* à 40.95 g
1 **altīn* (= 40.95 g) = 15 *yarmaq*
1 **altīn* = 6 **tīn* à 6.825 g

1 *tīn* (6.825 g) = 2.5 *yarmag* = 4 fractions à 1.7 g
1 *yarmag* (= 2.73 g)

The *yarmaq* fraction weighed ca. 1.7 g (more exactly 1.706 g) and it was equal to 1 Carolingian denier. Only the *dirham* (*yarmaq*) and its subdivisions were coins; all other units were simply monies of account.

The system here presented was basically applied for silver weights. If gold was involved, the appropriate weight was:

1 *solidus/miṯqāl* à 4.55 g = 24 carats à 0.189 g
1 pound à 436.8 g = 96 *miṯqāl* (4.55 g x 96 = 436.8 g)[46]

As was mentioned above, in Khazaria a gold to silver ratio of 1:15 was observed, so that 1 gold *solidus/miṯqāl* was equal to 68.25 g of silver (4.55 g x 15 = 68.25 g), which was just 10 *tīn*s in Khazaria.

Thus, the Khazars did have their own metrology, money economy and their own coinage in the eighth–tenth centuries. As one might expect from a nation engaged in international commerce, their monetary system was built upon the international standards.

45 à 1.7 g. (cf. 240 pence in one pound).

46 Cf. Charlemagne's commercial pound.

CHAPTER 3

The Monetary System of Volga Bulgaria

Emergence of the Volga Bulgarian Monetary System

In the tenth century the money economy of Western Eurasia was dominated by the splendid heavy Samanid silver *dirham*, which in the first half of the tenth century acquired a new standard weight of 3.41 g.[1] The Volga Bulgars, who opportunely accepted the religion of Islam ca. A.D. 900, became the conveyors of Samanid silver into Eastern Europe.

We are much better informed about the metrology and monetary system of the Volga Bulgars. After the research conducted by Richard Vasmer (Roman R. Fasmer)[2] and more recently by S. A. Janina,[3] there is no doubt that the Volga Bulgar rulers minted their own coinage.

Analysis of the weight of the extent Volga Bulgarian coins makes it clear that their focal point was between 3.01 g and 3.51 g, hence the Volga Bulgarian preference for the Samanid *dirham* of 3.41 g (see figure 3-1).

This tendency was conditioned above all by the Volga Bulgarian gold to silver ratio, which differed from the Khazarian, with a 1:12 correspondence. This is corroborated by the new relation between the *fin* and *nayat/yarmaq* (see below).

The Samanid *dirham* of 3.41 g had quickly received the Turkic designation of *nayt/nayat*, which was, however, an Arabic loan word (< *naqd* "pure silver [money]").[4]

As was mentioned above, however, Gardīzī updated earlier information on the relation between the silver *dirham* and the pelt-money used

1 Janin, 1956a, pp. 122–26.

2 R. Vasmer, 1925, pp. 63–84; id., 1926, pp. 29–60.

3 Janina, 1962, pp. 179–204. *See also* Valeev, 1990, p. 16.

4 On the etymology of *nayat* > Old Rus' *nogata*, *see* Menges, 1979, pp. 118–20.

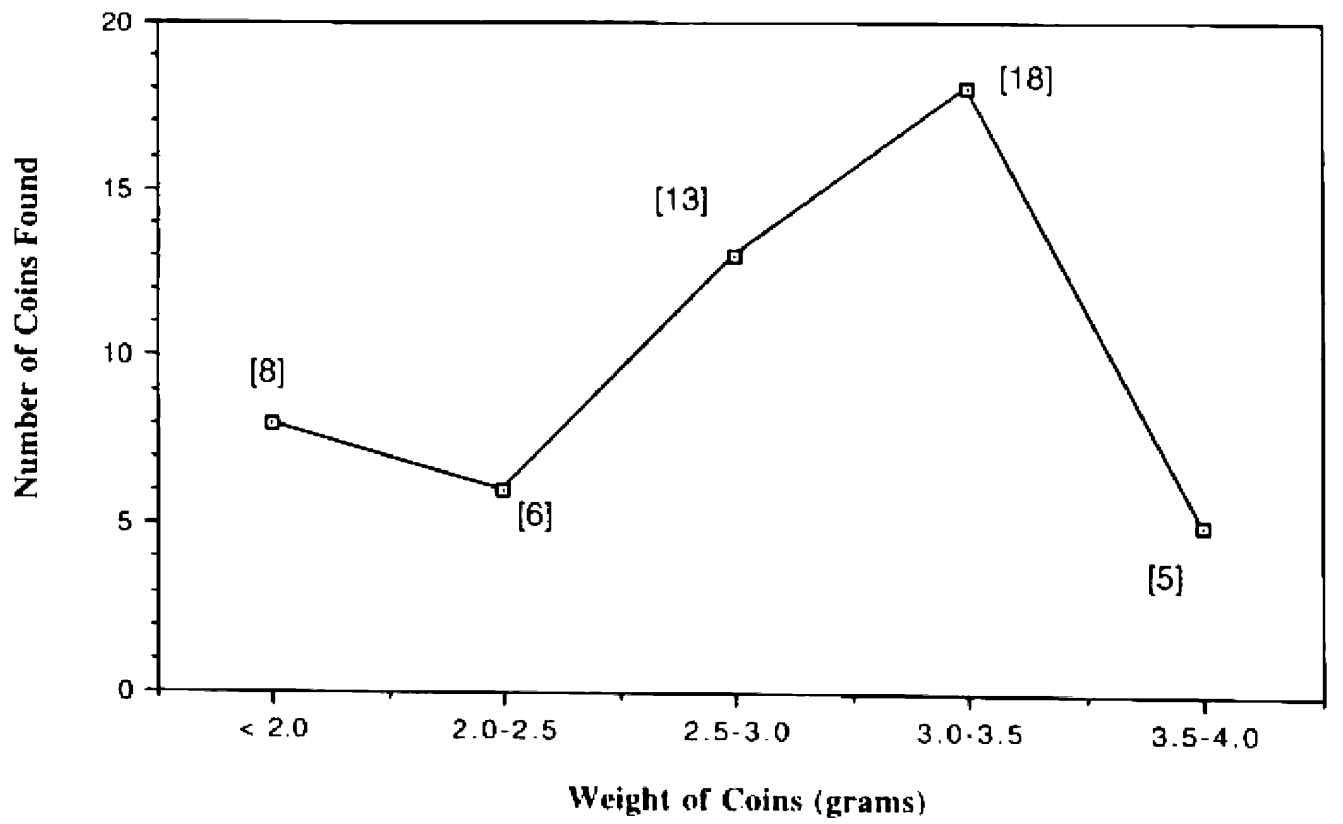
in Volga Bulgaria. While during the Khazarian period 1 pelt equalled 2.5 *dirhams*, the Volga Bulgarian ratio was 1 pelt to 2 *dirhams*.[5]

Scholars commenting on this passage in Gardīzī's work usually "correct" the Persian text on the basis of Ibn Rustah's data and put—as A. P. Martinez recently did—in Gardīzī's text "two [and a half]."[6] But this is truly what the Germans call *Verschlimmbesserung* (a hypercorrection) based on a lack of knowledge of both the Khazarian and Volga Bulgarian monetary systems, as can be seen from the following:

2.5 Khazarian *dirhams* à 2.73 g = 6.825 g (2.5 x 2.73 g = 6.825 g)
2 Volga Bulgarian *dirhams* à 3.4125 g = 6.825 g (2 x 3.4125 g = 6.825 g)

It is quite clear that the value of one pelt (*tīn*) was 6.825 g and this equalled 2.5 *dirhams* in the Khazarian system, but only 2 *dirhams* in the Volga Bulgarian system. Not only did the Volga Bulgarian *dirham* (*yarmaq/nayat*) change in weight, but so did the fraction, which was no longer based on the *dirham*, but rather on the *bezmen*, since one-one-thousandth of a *bezmen* now corresponded to the new debased Western pence (1.023 g).[7]

Figure 3-1. Weight of the Volga Bulgar Coins of the Tenth Century



Source: Janina 1962.

5 Martinez, 1982, pp. 207 (Persian text).

6 Martinez, 1982, pp. 158–59.

7 Janin, 1956a, p. 146.

Adaptations to the Muslim Metrology

Since the Volga Bulgars adopted Islam (ca. A.D. 900), they also adopted the basic elements of Muslim metrology. Rather than use Byzantine style full-weight gold *solidi*, they introduced the Muslim canonical gold *miṯqāl* of 4.25 g, which soon came to dominate in Eastern Europe. As the commercial *miṯqāl* it weighed 4.265625 g (or simplified, 4.26 g). Ninety-six *miṯqāl*s made up a *raṭl* and its *miṯqāl* fractions (4.265625 x 96 = 409.5 g). A system of standard commercial bronze weights in terms of the *raṭl* and its *miṯqāl*-fractions: 1/96 1/48, 1/32, 1/24, 1/16, 1/12, 1/8, 1/4, 1/2 has been unearthed in Volga Bulgaria, especially in its capital Biljar.[8]

The *miṯqāl* variant à 4.235 g is also attested in Volga Bulgarian glass weights, as are its multiples and fractions (*qīrāṭs* and *ḥabba*s).[9] For silver weight transactions the Muslim canonical *dirham al-kayl* began to be used in the Volga region (3.15 g~3.125 g), with the canonical relation of 130 *dirham*s *al-kayl* to 1 *raṭl*.

In fourteenth-century Volga Bulgaria the silver weight of a gold *miṯqāl* was called *nuqrat miṯqāl* "silver *miṯqāl*."[10] According to the coeval gold to silver ratio 1:10.24, the Volga Bulgarian "silver *miṯqāl*"—i.e., the silver price for one gold *miṯqāl* of 4.875 g—was 49.94 g).[11] Silver ingots of 204.75 g called *saum(a)* (> *sōm)* are well represented in Volga Bulgarian finds.[12] In sum, the Volga Bulgarian metrological system was as follows:

1 **besmen* = 2.5 *qadaq*s à 409.5 g
1 *qadaq* = 120 *nayat*s (*dirham* à 3.4125 g)
1 *qadaq* = 2 *saum(a)*s/*sōm*s (à 204.75 g)
1 *qadaq* = 10 *altīn*s (409.5 g:10 = 40.95 g)
1 *altīn* = 12 *nayat*s (12 x 3.4125 g = 40.95 g)
1 *altīn* = 6 *tīn*s à 6.825 g
1 *tīn* = 2 *nayat*s à 3.4125 g (= 6.825 g)
1**besmen/bezmen* = 1000 fractions à 1.023 g

8 Xalikov, 1985, p. 106; Muxamadiev, 1983, p. 59.

9 Ibid., 1983, pp. 27–28. Cf. Valeev, 1990, p. 15: 1 *raṭl* (*qadaq*) had 525 *daniks* à 0.78 g.

10 It is possible that the Arabic word *nuqrah* "minced silver" was already current in Volga Bulgaria in the tenth century.

11 Cf. Xalikov, 1985, pp. 106–110.

12 Muxamadiev, 1983, p. 70.

All of these terms but one are monies of account. The actual coin was the *nayat* (the Samanid or Volga Bulgar *dirham* averaging 3.41 g), or its fractions, and the *besmen* fractions, corresponding to the debased West European pence.

As for the common Islamic metrological units, these were in use in Volga Bulgaria: the commercial *dirham al-kayl* (3.15 g or 3.125 g) and the non-canonical *mi̲tqāl* (4.26[5625] g; with its variant: 4.235 g).

The *nuqrat mi̲tqāl*, or the silver value of the *mi̲tqāl* of 4.875 g, contained 49.93 g of silver; the silver value of the commercial *mi̲tqāl* of 4.265625 was 51.1875 g

The common denominator between the *altīn* system and the *mi̲tqāl* system was the *saum(a)* of 204.75 g, which equalled 5 *altīn*s à 40.95 g and 4 silver commercial *mi̲tqāl*s à 51.1875 g. The ratio between the Khazarian and Volga Bulgarian systems was 1:1.25 or 1 *nayat* to 1.25 *yarmaq*s.

CHAPTER 4

The Origin of the Old Rus' Grivna Serebra

The grivna *and the* grivenka

The starting point for all research in the Old Rus' metrological and monetary system must be the comparison of two sets of figures as preserved in two types of sources, both dating to approximately the same period: the "Zakon Ruskij," quoted in the two Rus'-Byzantine treaties (Oleg's of 911, and Igor's of 944), and the short version (i.e., the oldest, dating from ca. 1016) of the "Pravda Rus'skaja."

The legal context is presented as follows: "If any man should strike another with a sword or assault him with any other sort of weapon, he shall pay for each blow or assault . . . " The penalty attached is then presented in two different versions in the two source groups:

"Zakon Ruskij"[1]	"Pravda Rus'skaja"[2]
"5 *litras* of silver"	"12 *grivnas*"

There can be hardly any doubt that the *litra* cited in the "Zakon Ruskij" is to be understood within the context of the Byzantine metrological-monetary system, while the *grivna* of the "Pravda Rus'skaja" provides the corresponding figure in the Rus' system.

Since the *litra* (= *libra*) is specified as a unit of silver (*litra 5 srebra*), its Rus' equivalent must have been the *grivna serebra*, i.e., the grivna of silver.

The Byzantines had continually used the Roman imperial pound (*libra*) of 327.6 g, which they called λίτρα (> Slavic *litra*).[3] Therefore,

1 Quoted in *PVL*, vol. 1, p. 27 (*s.a.* 912), p. 38 (*s.a.* 945).

2 *Pravda Rus'skaja*, 1940, p. 70 (Akademičeskij I spisok).

3 *See* Sreznevskij, 1893–1903, vol. 2 (1895), col. 25.

5 *litras* is 327.6 g x 5 = 1,638 g; one twelfth of this, or a Rus' *grivna serebra*, equalled 136.5 g—(327.6 x 5) ÷ 12.

Two questions may occur in this connection. First, is it by chance that five Byzantine *litra*, equal to 12 Rus' *grivnas* of silver, was the penalty chosen by the Old Rus' "legislators," or was there a particular reason for their choice?

The twelve *grivnas* (= five *litras*) must have been a traditional—not Roman—rate, since it occurs in the *PVL* in the legendary account of the conquest of Constantinople (dated A.M. 6415/A.D. 907). The Rus' victor is said to have demanded from the Greeks, as a contribution for the crews of his fleet, twelve *grivnas* per bench.[4]

Since there were forty men reckoned to a ship, the crew was to receive 40.95 g per capita (1,638 g ÷ 40 = 40.95 g). This is certainly not a random figure: we have already encountered it as the traditional Khazarian and Volga Bulgarian *altīn* (40.95 g = 1/10 of the *raṭl*), called (probably, see below) in Rus' *osminik*.

The second question may be formulated as follows: Does the figure of 136.5 g—i.e., one Rus' *grivna serebra* (equal to five Roman ounces of 27.288 g [27.288 g x 5 = 136.5 g]) and to 100 Merovingian (and early Carolingian) deniers à 1.365 g—have any significance from the perspective of Byzantine metrology? In other words, can we establish on that basis the Rus' gold to silver ratio?

If we accept for tenth-century Rus' the Khazarian ratio of 1:15, one gold *solidus* (4.55 g) would be equal to 68.25 g of silver, and one gold *litra* (4.55 g x 72 = 327.6 g) to 4,914 g of silver (68.25 x 72 = 4,914 g). Since the correlation between the Byzantine *litra* and the Rus' *grivna* was—as shown above—5:12, two further arithmetical operations are necessary: 4,914 g x 5 = 24,570 g, and 24,570 g ÷ 12 = 2,047.5 g, i.e. 5 *raṭls* à 409.5 g. On the above assumption that the Rus' gold to silver ratio was 1:15, we divide 2,047.5 g by 15 to obtain the Rus' silver correspondence (*grivna serebra*) to the Byzantine *solidus*. And in fact, 2,047.5 divided by 15 = 136.5 g, confirming that the Rus' gold to silver ratio in the tenth century was indeed 1:15.

Since 136.5 g is nothing but 68.25 g x 2, one Rus' *grivna serebra* was worth two Byzantine silver *solidi*, i.e., it was the silver equivalent of two gold *solidi*.

4 *PVL*, vol. 1, p. 24.

The two figures established above, 136.5 g and 40.95 g, must have been fractions of the same larger metrological unit, since 136.5 cannot be explained as a multiple of 40.95.

This larger unit is 409.5 g, one we have already met as the weight of the Baghdad *raṭl*.[5] It is the product of both 3 x 136.5 and 10 x 40.95 (2047.5 g were—as shown above—equal to 5 *raṭl*s à 409.5 g).

The Old Rus' designation for this unit seems to have been "great" *grivьnka*, in opposition to the "small" *grivьnka* (of 204.75 g). Corroboration for their supposition is provided by the *Torgovaja kniga* (sixteenth to seventeenth century) which mentions both a great *grivenka* of 96 *zolotnik*s (4.265625 g x 96 = 409.5 g) and a small *grivenka* of 48 *zolotnik*s (4.265625 x 48 = 204.75 g).[6]

This term *zolotnik/zlatnik* was a designation for the gold weight (Arabic *miṯqāl*) and equalled 1/96 of the *raṭl*. *Grivna* and *grivenka* appear side by side in the charter of Prince Vsevolod Mstislavič (of Novgorod) from ca. 1136 as two different monies of account.[7]

The osminik

Since we have already shown that the Rus' gold to silver ratio was 1:15, the figure 40.95 g (1/10th of the "great" *grivenka*) is clearly identical with one Khazarian *altīn* of the same weight; the oldest current coin in Rus' must have been the "Khazarian" (North African) *dirham* of 2.73 g, one-fifteenth of the *altīn* (15 x 2.73 g = 40.95 g). This finding serves to corroborate the supposition of archeologists and numismatists that originally the Old Rus' *kuna* was the African *dirham* à 2.73 g.[8] Unfortunately, extant written Old Rus' sources do not mention the Rus' name for the Khazarian *altīn*.

I propose that it be called the *osmьnik-* (> *osminik-*) for the following reason.

5 On the weight of the Baghdad *raṭl* used in Eastern Europe, *see* Xalikov, 1985, p. 107.

6 Kamenceva and Ustjugov, 1965, p. 119. Cf. Kaufman, 1906, pp. 7–8; and Beljaev, 1927, p. 279.

7 Quoted from *Xrest Ist*, 1949, pp. 166–68.

8 Janin, 1956a, p. 204; Anoxin, 1975, p. 379.

From the written sources (Ibn Khurdāḏbeh, ca. 840–880) we know that the Khazars imposed a commercial tithe on foreign merchants:[9] from one *qadaq* (409.5 g) it would be naturally 40.95 g (409.5 ÷ 10 = 40.95 g). But if Byzantine units were involved, this sum of 40.95 g would be equal to one-eighth of the *litra* (327.6 g ÷ 8 = 40.95 g). The figure of 40.95 g in this way became identical with the commercial tax.

Old Rus′ written sources mention the office of the *осмьник-* (e.g, *Hypatian Chronicle,* s.a. 1158),[10] who was a collector of customs duties. His title attests that the tax rate was one-eighth of the value of goods taxed. The word *osminik* in the meaning of "one-eighth (of a pound)" was soon abandoned, since by the end of the tenth century as a result of the new Rus′ gold to silver ratio of 1:9, the figure 40.95 g in Rus′ became identical with both the old tithe and the new silver value of one Byzantine *solidus*.

The grivna *and the* kuna

In his study on the lexicon of the *Pověst′ vremennyx lět*, Andrej S. L′vov identifies three meanings for the term *kuna*: (1) "pelt"; (2) "a monetary unit; 1/25th of a grivna"; (3) "money in general."[11] Here L′vov follows the footsteps of his predecessors who believed that the primary meaning of the word was the designation for northern fur-bearing animal.[12] Significantly, the entry *kuna* is absent from the *Lexicon linguae Palaeoslovenicae*, being published by the Czech Academy of Sciences,[13] and its diffusion in living Slavic languages (other than East Slavic) is for the most part limited to meanings connected with "money."[14] This meaning of "money" should be regarded as primary. Several numismatists have expressed the view that this word—like Old Frisian *cona* (in *skilling cona*)—goes back to the late Latin *cuneus* (> Old French, *coing* > Old English, *coin*) meaning "wedge; design

9 Pritsak, 1970, pp. 253–57.

10 *Ipat let*, 1908, col. 489. The additional data are given in Sreznevskij, 1893–1903, vol. 2 (1895), cols. 729–30.

11 L′vov, 1975, pp. 268–70.

12 Vasmer, 1953–1958, vol. 1, p. 693; cf. Russian trans., vol. 2 (1967), p. 417.

13 *Prague Lexicon*, 1966-, fasc. 16 (Prague, 1967).

14 *See* Berneker, 1924, p. 644; and especially Holub and Kopečny, 1952, pp. 193–94.

stamped on a coiner's die; coin."[15] This is my view as well. Accordingly, *kuna* acquired its secondary meaning of "pelt, fur-bearing animal" only after the Rus', having taken over the Khazar monetary system, had to find a term for the only concrete coin in circulation—the pelt unit *tīn*. *Kuna* in the meaning of "pelt; fur-bearing animal" is simply a calque of the Khazarian *tīn* "1. squirrel, martin"; 2. "2.5. *dirhams* (à 2.73 g)."

The word *grivna* (Modern Ukr. *hryvnia* < OESl *griva*) has a Slavic etymology. It is derived from *griva* "mane," and its original meaning was presumably "necklace, ring."[16] Not unlike Old Norse *baugr* "ring,"[17] *grivna* acquired a special semantic meaning during the Viking-Varangian age as a measure of wealth, which at that time consisted of gold and silver rings and necklaces (as attested by Ibn Faḍlān, A.D. 922,[18] and archeological finds).

In the post-Roman West (Franks, Frisians, Anglo-Saxons) the gold *tremissis* was referred to as "gold shilling." The Germanic word *skilling* (< **skildling*) connected to the Old Norse verb *skilja* "to split, to cut,"[19] which originally meant "a cutting from a (gold) ring," by A.D. 690 acquired (cf. the Code of Æthelberht) the meaning "the (Frankish gold) *tremissis*," the only coin then current in England.[20]

In an analogous way the Slavic word *griva* (> *grivna*) "ring" developed, as a linguistic calque from the Franco-Frisian *skilling "tremissis,"* the special meaning "one-third (of the standard money of account)." In the Khazar state the standard money of account was one silver *raṭl* (409.5 g), one third of which was 136.5 g (409.5 g ÷ 3 = 136.5 g); hence the Rus' used the word "grivna of silver" for one third of the *raṭl*, i.e., for 136.5 g.

15 Tolstoj, 1886, p. 12n. On *cuneus*, *see* Walde, 1938, vol. 1, p. 308; du Cange, 1762, vol. 2, pp. 1, 622, 669; Dauzat-Dubois-Mitterand,1964, p. 177 (s.v. **coin*).

16 M. Vasmer, 1953–1958, vol. 1, p. 308; Mel'nyčuk, 1982, p. 593. The *Prague Lexicon,* 1966 –, vol. 1, p. 434, gives two meanings for *grivna*: "1. armilla; 2. nummus."

17 De Vries, 1961, p. 29; *see* Berneker, 1924, p. 352 (s.v. *griva*).

18 T. Lewicki, 1985, p. 62 (Arabic text) = p. 109 (Polish translation); *see* pp. 197–98 (commentary).

19 On the etymology, *see* Jóhannesson, 1956, p. 847; de Vries, 1961, p. 492. *See* Old Gothic *skillings* "*solidus*," in Feist, 1939, p. 433.

20 Grierson, 1961b, p. 345; Sawyer, 1978, p. 172.

Thus, there was in circulation both chopped silver, and coined silver, or *kuna*. Two terms consequently developed to express this opposition: (1) *grivna serebra*—chopped silver piece, weighing 136.5 g = 1/3 of the *raṭl*; and (2) *grivna kun*—50 coins (i.e., North African *dirhams* à 2.73 g), equivalent in silver weight to 2 gold *solidi* at the gold to silver ratio of 1:15 ([4.55 g x 15] x 2 = 136.5 g).

The two words *shilling* and *grivna* developed—as did later the word *mark* (originally "a mark on a bar of metal")[21]—the meaning "unit of money of account" and were applied as attributes either to a concrete coin, or to measured metal, e.g.:

concrete coins (denier, *kuna*)
skilling cona (Old Frisian)[22]
marca denariorum[23]
grivna kun
5 marc cunen (Old Low German translation from Old Rus' *grivna kun*)[24]
monetary metal
3 healf marcum asodenes goldes "3 half-mark of refined gold" (ca. 900)[25]
grivna zolota[26]
marca argenti[27]
grivna serebra
20 mark silvers (Old Low German translation from Old Rus' *grivna serebra*).[28]

21 On *mark*, *see* Nils Ludvig Rasmusson, Poul Rasmussen, Sam Owen Jansson, and Halvard Bjørkvik, "Mark," *KHL*, vol. 11 (1966), cols. 420-41. Luschin von Ebengreuth, 1926, pp. 162–65; Nau, 1972, p. 19.

22 Pritsak, 1981, p. 496.

23 Zvaryč, 1973, p. 87.

24 *Gramoty*, 1949, p. 59.

25 Jesse, 1924, p. 7.

26 Sreznevskij, 1893–1903, vol. 1, col. 590.

27 Luschin von Ebengreuth, 1926, pp. 180–83.

28 *Gramoty*, 1949, p. 61.

The Shilling in Old Rus'

In addition to the calque of the Germanic *skilling* that gave the Slavic *griva* (*grivna*), the actual word *skilling* (> shilling) was spread in Eastern Europe no later than in the course of the ninth century.

In the *Pověst' vremennyx lět* the word *ščьljag-* occurs and refers to the money of account in which the Vjatiči and Radimiči were required to pay tribute to the Khazars: "1 *ščьljag-* per ploughshare." The word appears under the chronicle dates 885[29] and 964.[30] It is my thesis that the reference is to the Anglo-Saxon (West-Saxon) shilling, and that those who transmitted this particular unit were the Frisians, who were active both in England and in Eastern Europe.

It can hardly be a coincidence that the Khazarian *tīn* (lit. '[pale] marten[skin], squirrel[skin]') weighed exactly the same amount as the West-Saxon shilling—6.825 g. The *Pověst' vremennyx lět* contains yet another account about the Khazarian tribute. It is embedded in the famous story about the invitation of the Varangians (s.a. 6367/859), and must, therefore, be dated to ca. 1072 (when the so-called "Primary Kyivan Chronicle" was compiled).[31] Here the tribute to the Khazars is defined not in terms of the shilling (*ščьljag-*), but as "[one] *běłъ* and [one] *věverica* from each hearth."[32]

Věverica (lit. "squirrel [skin]"), I suggest, is identical with the Khazarian *tīn* (6.825 g) discussed above, and not with the later smallest Rusʹ coin *věkša* = *věverica* (0.34 g).[33]

At that time (eleventh century), however, the Frankish shilling current in Eastern Europe weighed 20.47 g[34]—three times the weight of the old West-Saxon shillings (6.825 g x 3 = 20.47 g). How are the two different figures, 6.825 g and 20.47 g, to be explained?

Turning first to the term *běłъ*, it certainly does not mean "squirrel-skin" (as translated, for example, by Samuel H. Cross),[35] but rather

29 *PVL*, vol. 1, p. 20. On *ščьljag-*, *see* fn. 45, p. 59 below.

30 *Ibid.*, p. 47.

31 Pritsak, 1987, pp. 134–40.

32 *PVL*, vol. 1, p. 18. On *běłъ* and *věverica*, *see* L'vov, 1975, pp. 269–70.

33 See Janin, 1956, p. 160.

34 Jankuhn, 1963, p. 219.

35 Cross, 1973, p. 144.

"(pure) white [silver coin]"—i.e., the *nogata* (< Volga Bulgarian *naγat) of 3.41 g.

Adding the two weights—the old West-Saxon shilling and the *nogata*—gives 10.235 g (6.825 g + 3.41 g = 10.235 g), exactly half the weight of the Carolingian shilling (20.47 g ÷ 2 = 10.235 g). As was explained above, in the eleventh century the gold to silver ratio in Rus' changed dramatically—from 1:15 to 1:9. For Southern Rus', however, the standard continued to be the exchange rate current in Constantinople. There the gold to silver ratio remained the same, 1:18, i.e., twice the new Kyivan rate of exchange. Hence, the Kyivan authors "corrected" (again, *Verschlimmbesserung*) the figures accordingly—naturally from the Kyivan point of view! In this way 20.47 g was exactly halved, to 10.235 g.

There is yet another proof for this calculation, this time from the Byzantine point of view. In our attempt to determine the weight of the Rus' *grivna serebra*, we compared the relevant passages of both the Byzantine-Rus' treaties (911, 944) and the *Pravda Rus'skaja*. The Byzantine figure given there was "5 *litra*s of silver." This was corrected by an unknown editor—probably in the twelfth century (as reflected in the Novgorodian IV and V Chronicles, as well as the Sophia I Chronicle)[36] to "10 *litra*s of silver"—i.e., the number was doubled. This substitution of "10" for "5," which has puzzled scholars to this day, also finds its solution here.

From all this, it is evident that one Frankish "shilling" was reckoned in eleventh–twelfth-century Rus' as a money of account that in Constantinople weighed 20.47 g and in Rus' corresponded to 10.235 g.

36 *See* Janin, 1956a, p. 51. This resulted in a doubling of the *wergeld* for a warrior in the "Jaroslavičі Pravda," from the original "forty" *grivna*s of silver to "eighty." *See Pravda Russkaja*, 1940, pp. 70 and 71.

CHAPTER 5

The Development of the Old Rus' Weight and Monetary Systems

The Old Rus' Weight and Monetary Systems in the Tenth Century

Philip Grierson has repeatedly stressed the interrelation between legal compensation in the Germanic barbaric societies and the concept of value.[1] The oldest documents issued by the Germanic barbarians were their "Leges" (Old Rus': *pravda*) dealing with the *wergeld*, literally "man-money (i.e., "man-value")." In such texts a man's value depended on his rank in society, with a well-celebrated scale for different types of personal injuries or insults.

In the "short" (i.e., the oldest) version of the *Pravda Rus'skaja* ("Lex Russorum" of ca. 1016), the *wergeld* for a warrior is given as 40 *grivnas* of silver (*Pravda Rus'skaja*, 1940, p. 70). In England, William the Conqueror (1067–1087) established a *wergeld* of 46 marks of silver for the murder of a Norman.[2]

The nominal value of both the *grivna* of silver and the mark of silver was identical: 204.75 g. The difference between the figures 40 and 46 apparently stems from different gold to silver ratios. Novgorod in the eleventh century maintained a ratio of 1:9, while in England and Western Europe, it is assumed, it was between 1:10 and 1:12. It is quite likely that the figures 40 and 46 refer to the same actual, concrete silver value, but at two different gold to silver ratios. Since the ratio of 46:40 is 1.15, the Anglo-Norman ratio was apparently 1:10.15 (= 9 + 1.15), i.e., the gold worth of one *solidus* (4.55 g) in Novgorod was 40.95 g of silver, while its correspondence in Norman England was 46.1825 g of silver

1 Grierson, 1975, pp. 5–8; cf. Lyon, 1976, pp. 187–88; Sawyer, 1978, pp. 51, 168–69, 172–74.

2 Lyon, 1976, p. 189.

(4.55 g x 11.15 = 46.1825 g). The occurence of the "epic" number of forty as the *wergeld* is remarkable.

"Such a scale of values, once arrived at," Grierson writes, "would be easily transferred to services and goods . . . "[3] They were habitually expressed in weights of precious metals, especially gold or silver. As could be expected, the "Short" version of the *Pravda Rus'skaja* and the *Pokon virnyj* (the "Customary Wergeld")[4] are also based on a scale of values, in terms of the Old Rus' monetary system.

The relationship between the different monies of account is as follows:

1 *grivna serebra* = 2 *grivnas kun* (136.5 g ÷ 2 = 68.25 g)
1 *grivna kun* = 20 *nogatas* = 25 *kunas* = 50 *rězanas*[5]

Since 1 *nogata* weighed 3.41 g (2.5 x 1.365 g, which was the weight of the Frankish denier; 3.41 g was also the weight of the Volga Bulgarian *nayt*), and 1 *kuna* weighed 2.73 g (equal to the Khazarian *yarmaq*, and to 2 Frankish deniers à 1.365 g), this provides additional corroboration that one *grivna kun* equalled 68.25 g (3.41 x 20 = 68.25 g; 2.73 x 25 = 68.25 g).

This again enables us to determine the weight of the "original" (tenth-century) *rězana*. It was 68.25 g divided by 50, i.e., 1.365 g, or the weight of the Merovingian-early Carolingian denier. On the other hand, 2 *rězanas* (1.365 g x 2 = 2.73 g) was the weight of one *kuna*, equal to the Khazarian (African) *dirham*.

The word *rězana*, however, is already of Slavic origin; it simply means "cut,"[6] and apparently is a linguistic calque from the Khazaro-Bulgarian *yarmaq* "split, cut; coin." 30 *rězanas* comprised one *osminik* (30 x 1.365 g = 40.95 g), or one-tenth of the *ratl*, equal to one-eighth of the Byzantine *litra* (40.95 g; 409.5 g ÷ 10 = 40.95 g; 327.6 g ÷ 8 = 40.95 g).

The actual coins in circulation were the North African *dirham* à 2.73 g, equal to the *kuna*, and the Samanid *dirham* of 3.41 g, which was identified with the early Old Rus' *nogata*.

3 Grierson, 1975, p. 7.

4 Added at the end of the "short" version of the *Pravda Russkaja*.

5 Janin, 1956a, pp. 38–40.

6 On *rězana*, *see* L'vov, 1975, p. 270.

The Old Rus' monetary structure, adapted to its weight system, was as follows (in the 10th to the beginning of the 11th century):

1 "great *grivenka*" (409.5 g) = 3 *grivnas serebra* (à 136.5 g) = 96 *mitqāls* (*zolotnik* à 4.265625 g)
1 "great *grivenka*" = 2 "small *grivenkas*" (à 204.75 g) = 48 *mitqāls* (*zolotnik* à 4.265625 g)
1 "small *grivenka*" = 5 *osminiks* (à 40.95 g)
1 *osminik* (à 40.95 g) = 9.6 *zolotniks* (1 *zolotnik* = 1 *mitqāl* à 4.265625 g)

The Monetary System of Volodimer the Great

One of the first actions undertaken by Volodimer Svjatoslavič (later "the Great") after he became sole ruler in Rus' (980) was a large-scale campaign against the Volga Bulgars in 985: "Accompanied by his uncle Dobrynja," we read in the *PVL*, "Volodimer set out by boat to attack the [Volga] Bulgars. He also brought Torks [Oghuz Turks] overland on horseback, and he defeated the [Volga] Bulgars. [But] Dobrynja remarked to Volodimer: 'I have seen the prisoners who all wear [leather] boots. They will not pay us tribute. Let us look for those with bast shoes.' So Volodimer made peace with the [Volga] Bulgarians."[7]

The chronicle does not state the reasons for the campaign. One can only assume that Volodimer's main goal was to obtain Volga Bulgar (Samanid) silver. But he started his coinage only after his baptism, probably around 1001–1005.[8]

The number of preserved, unambiguous, Old Rus' coins is quite small: 10 gold and 298 "silver." They are now easy to study in the new summary catalogue by Marina P. Sotnikova and Ivan G. Spasskij.[9] All of the gold coins bear the name "Vladimir," and there is reason to assume that they were the first coins of Volodimer Svjatoslavič (the Great, 980–1015). The metal of these gold coins is of high fineness (916°–958°) and corresponds to the high standard of the Byzantine *solidi* at the turn of the tenth–beginning of the eleventh century.[10]

7 *PVL*, vol. 1, p. 59.

8 I discuss the problem below.

9 English edition: Sotnikova and Spasskij, 1982; Russian original: idem., 1983. Because of ambiguities within individual descriptions, the totals given for the coins vary and range as high as eleven gold coins and 330 silver pieces.

10 Ibid., 1983, p. 62.

The weight of the 10 known gold coins is: 4.00 g; 4.09 g; 4.15 g; 4.28 g; 4.30 g; 4.32 g; 4.35 g; 4.37 g; 4.40 g (2 x),[11] which averages to 4.266 g equal to the low-weight Byzantine *solidi* = Islamic *dīnārs*, and very close to the *zolotnik* weight 4.2656 g (409.5 g divided by 96). Interestingly, the known gold coins were found in three characteristic places: 1 in Kyiv (the capital), 6 in Pinsk, located on the waterway to the Baltic area, and 3 in Kinburn, near the old Rus' port of Olešje at the mouth of the Dnieper.

The "silver" coins are of different degrees of fineness, as their testing shows, but in their majority should be classified as billon. The results of tests on silver content of 183 coins are summarized in table 5-1.[12]

Table 5-1. Fineness of Volodimer's Silver Coins

	Fineness	*Number of Coins Tested*
silver	960°	8
	900°–875°	3
	860°–800°	6
	720°–600°	7
	500°–480°	12
	375°–300°	20
not silver (billon)	n/a	127

The table shows clearly that Old Rus' "silver coins" cannot be treated as one type. As in Western European, Byzantine, and Eastern practice, two types of coins were minted from the same dies: coins of high fineness—for international trade (these are usually found in hoards together with high quality Western and Muslim coins), and debased silver coins and billon coins for internal use.

The latter are known in Rus' source under the name *černyja kuny* "black [silver] coins"[13] in contrast to silver coins of high fineness (*bělъ*

11 Sotnikova and Spasskij, 1982, pp. 151–55.

12 Sotnikova and Spasskij, 1983, p. 109.

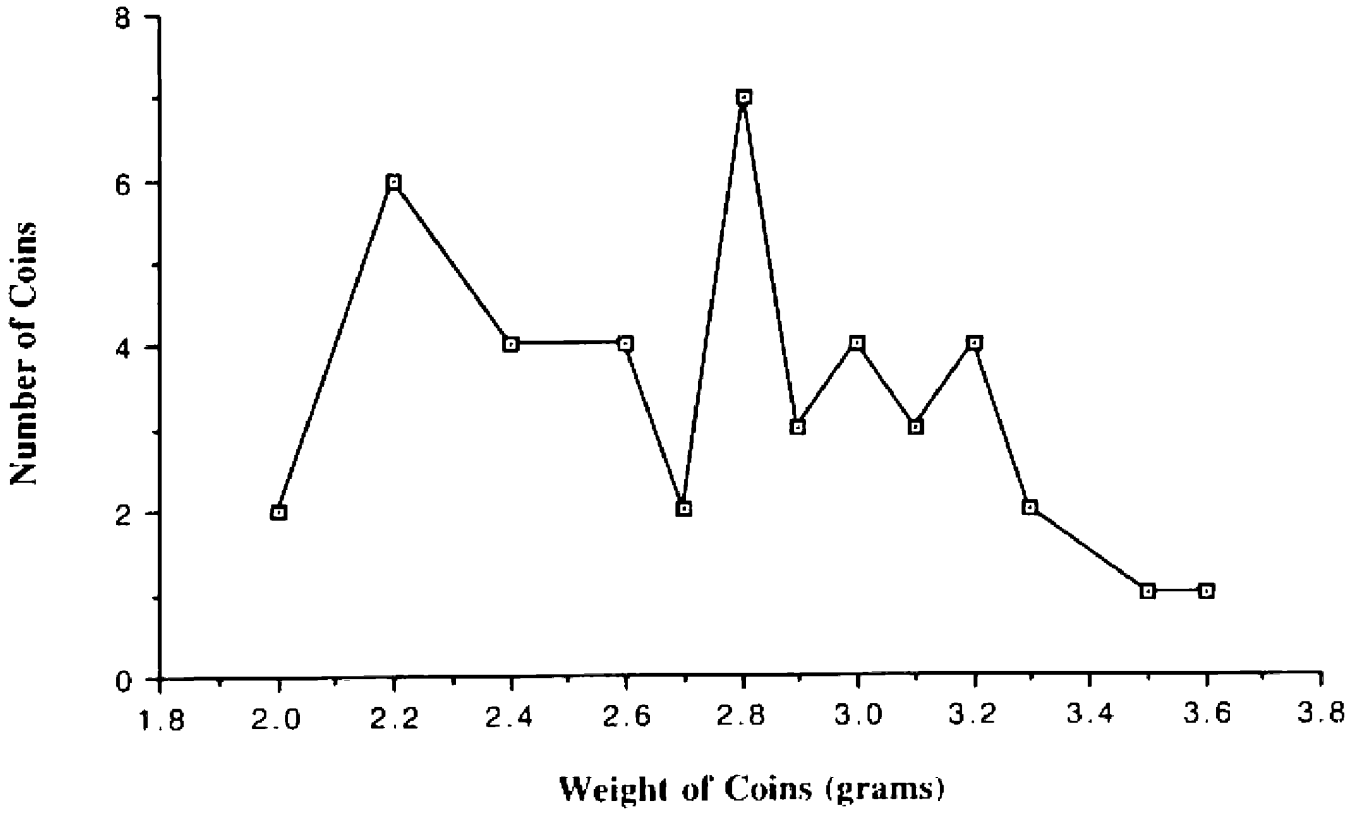
13 *Ipat let*, 1908, col. 835 (*s.a.* 1257).

serebro "pure silver [coins]"). In the contemporary West, billon coins were designated as *argentum nigrum*.[14]

The majority of the Old Rus' silver coins bear the name of Volodimer ("Vladimir"). In 1882 Ivan I. Tolstoj classified them into four groups.[15] The "Vladimir I" group simply repeats the iconology and epigraphy of the gold "Vladimir" coins. It is crucially important to note that there is a clear dichotomy in the dispersion of Volodimer's silver coins. On the one hand, there are only coins of the "Vladimir I" type (the Kyiv hoard),[16] on the other coins of type "Vladimir II–IV" (the Nižyn hoard).[17]

The metrological diagrams of the two hoards, prepared by Sotnikova and Spasskij, also clearly show that the Kyiv and Nižyn coins do not belong to the same period. The diagrams are reproduced in figures 5-1 and 5-2.[18]

Figure 5-1. Old Rus' Silver Coins from the Kyiv Hoard



Source: Sotnikova and Spasskij (1982, 92).

14 Luschin von Ebengreuth, 1926, pp. 43, 193. *See* fn. 35.

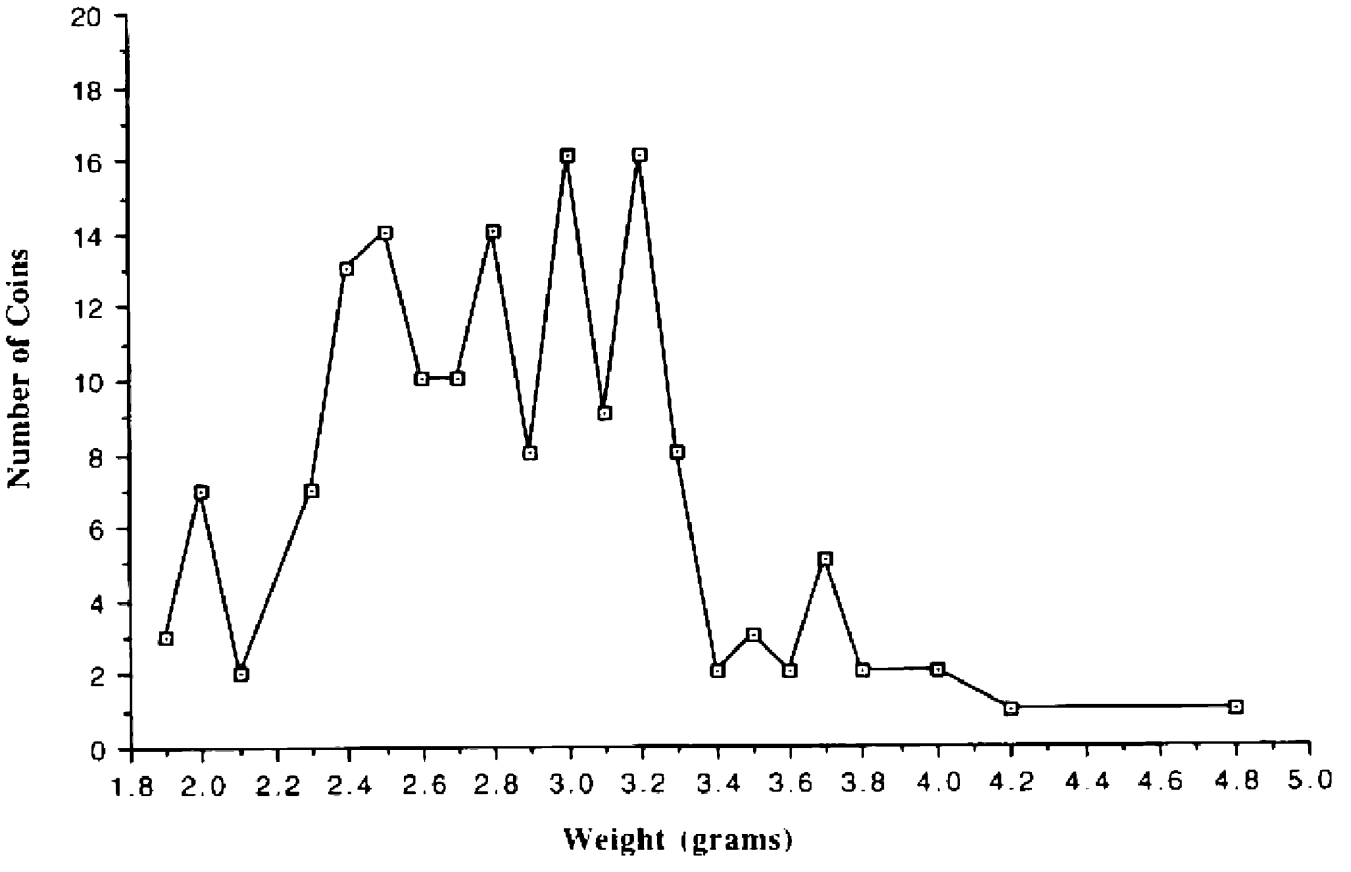
15 Tolstoj, 1882, pp. 187–94.

16 Sotnikova, 1968, pp. 114–37.

17 Idem., 1971, pp. 15–41. *See also* p. 50 below.

18 Adapted from Sotnikova and Spasskij, 1982, p. 92.

Figure 5-2. Old Rus' Silver Coins from the Hoard of Nižyn



Source: Sotnikova and Spasskij (1982, 92).

There is also historical evidence, which is discussed in part two of this book, that proves beyond any doubt that the type "Vladimir II–IV" coins were minted for Volodimer Monomax (1078–1125) and not for Volodimer Svjatoslavyč (d. 1015).

Only the gold coins and the silver coins of the "Vladimir I" type were minted for Volodimer Svjatoslavyč. They are the oldest specimens of Old Rus' own coinage, judging by the common epigraphy of both the gold issues and the silver coins of the "Vladimir I" type.

The metrological diagram of fifty-nine extant silver coins of the "Vladimir I" type shows that there were three major weight concentrations, one ca. 2.73 g (the "Khazar" *dirham*), another of 3.41 g (the "Volga Bulgarian" *dirham*; see figure 5-3), and the third ca. 2.40 g. This last seems to indicate an entity in the making which I shall call the "new *nogata*," with a nominal weight of 2.5593 g or one-tenth of the Norman *ora* (see p. 11). I use the term "new *nogata*," because of the basically same structure of both, each being 2.5 times the current small denomination.

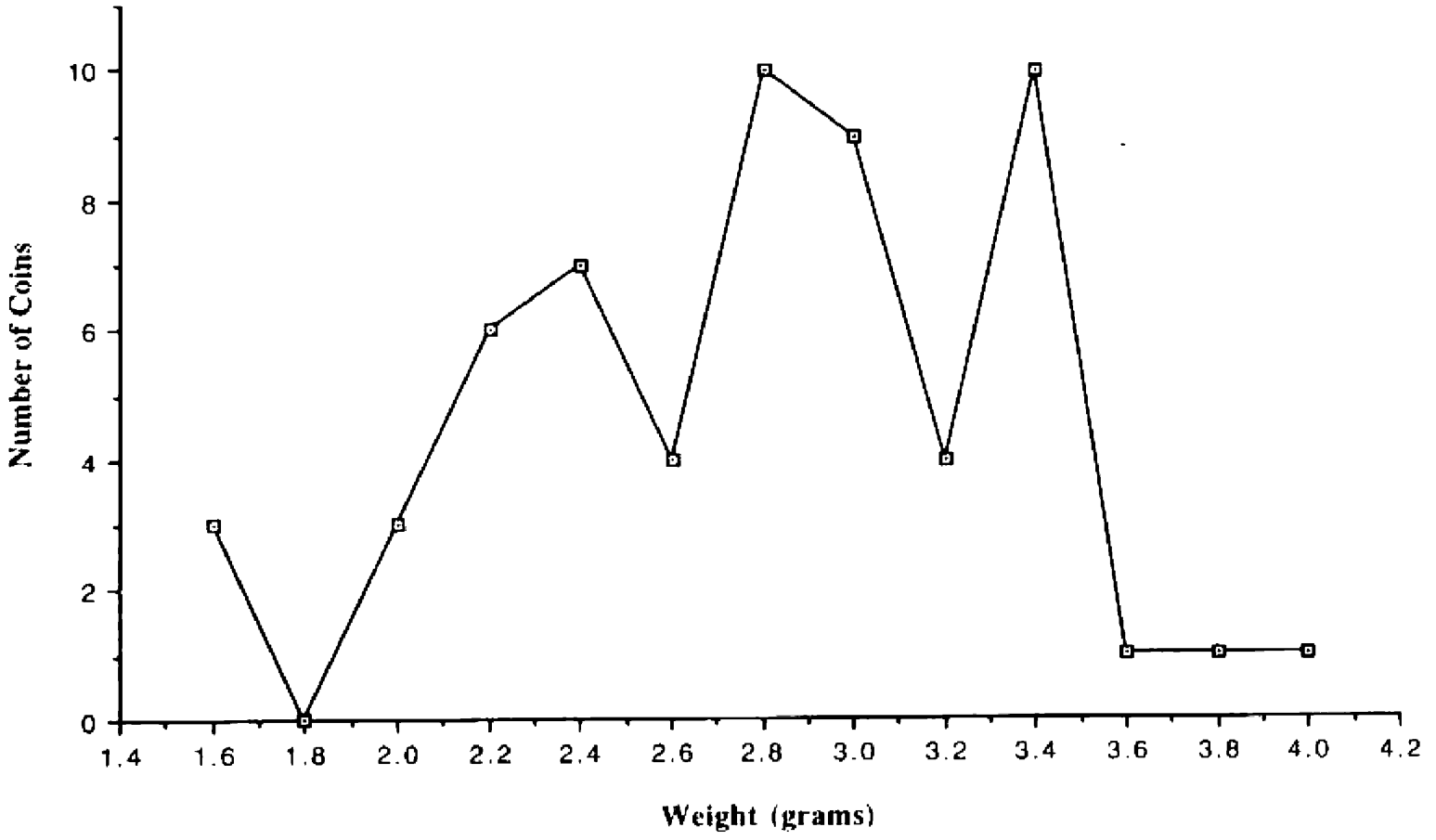
The original *nogata* (3.41 g) was 2.5 x 1.365 g (the Merovingian denier); the "new" *nogata* would be 2.5 x 1.02372 g (= 1 West European denarius/pence = 1 Volga Bulgarian fraction), i.e., 2.5593 g (2.5 x 1.023[72] g = 2.5593).

Six silver coins of the "Vladimir I" type (and one fragment) have been tested. Four were of high fineness (875°–500°); their average weight is 2.7 g. The average weight of the two debased coins (300°–375°) is 3.49 g.[19]

This analysis can be regarded as supplementary to the general weight analysis of the "Vladimir I" type coins. It shows that the high fineness silver coins had a nominal weight of 2.73 g, and the debased coins 3.41 g.

Volodimer's *nogata* was apparently no longer the pure silver coin, being gradually replaced instead by the *nogata* of account weighing 2.5593 g (one tenth of the Norman *ora*).

Figure 5-3. Weight of the Silver Coins of the "Vladimir I" Type



Source: Sotnikova and Spasskij (1982, 91).

19 Idem., 1983, esp. p. 109.

The Southern Rus' (Kyivan) Monetary System

Although our information concerning Volodimer's monetary policy is only fragmentary, all indications are that already during his reign two parallel systems had developed—one in the South (Kyivan) influenced by the Byzantine economic system, and one in the North (Novgorodian) in response to the German-Scandinavian economic challenge. The two monetary systems are well evidenced by two types of silver ingots and two systems of subdivisions in silver coinage.

The Kyivan ingot had been correctly recognized as the equivalent of half a Byzantine *litra*, with a standard weight of 163.80 g (327.60 g ÷ 2 = 163.80 g).[20] This was the new *grivna serebra*, now divided into 4 *grivna*s *kun*, each with a nominal weight of 40.95 g (163.80 g ÷ 4 = 40.95). The subdivision current in the South, equal to one two-hundredth of the Byzantine *litra* (and one hundredth of the new *grivna serebra*), weighed 1.638 g,[21] neatly corresponding to one-tenth of the late Merovingian Frankish shilling (16.38 g) as well.

But why was it found necessary to divide the *grivna serebra* into four subunits? As was explained above, in Western Eurasia in the ninth to tenth centuries the gold to silver ratio was 1:15. After the supply of Central Asian silver dried up, however, silver became more scarce and expensive there. In the Rus'-Byzantine exchange system in the first half of the tenth century, one *grivna kun* was equal to the silver value of one *solidus*. Based on the 1:15 ratio this was 68.25 g silver (4.55 g x 15 = 68.25 g). As the price of silver increased and with a gold to silver ratio now at 1:9, 1 golden *solidus* fell in worth to only 40.95 g of silver (4.55 x 9 = 40.95 g).

Interestingly enough, the new *grivna kun* was exactly equal to one Volga Bulgarian *altīn* and one-tenth of the Baghdad *raṭl* (409.5 ÷ 10 = 40.95 g).

The Southern (Kyivan) monetary system in the last decades of the tenth–first decades of the eleventh century was as follows:

20 Janin, 1985, p. 52–55.

21 Ibid., 1985, p. 364.

1 *grivna serebra* = 1/2 Roman-Byzantine *litra* of silver = ingot of silver (= 163.80 g; corresponding to 10 late Merovingian shillings à 16.38 g)
1 *grivna serebra* = 4 *grivnas kun*
1 *grivna serebra* = 100 *rězanas* (à 1.638 g = one-tenth of the late Merovingian shilling of 16.38 g)
1 *grivna kun* (40.95 g) = 12 *nogatas* (à 3.41 g); [= 16 "new" *nogata* à 2.5593 g]
1 *grivna kun* = 15 *kunas* (à 2.73 g)
[1 *grivna kun* = silver weight of 1 Byzantine *solidus*].
1 *kuna* = 2.73 g

Or,

1 *grivna serebra* = 4 *grivnas kun* = 64 *nogatas* = 60 *kunas* = 100 *rězanas*.

The actual concrete coins were Byzantine light-weight *solidi* and their weight correspondence—"Vladimir's gold" (*zlato*; average 4.25 g–4.26 g), and three types of "silver" issues: of high fineness (*bělъ serebro*) as well as debased silver, and simple billon (*černyja kuny*). They were all either produced locally, or imported from Byzantium, the East (Volga Bulgaria) and the West.

The Southern (Kyivan) system reflected the relationship of Rus' with the Byzantine Empire as its main trading partner.

The Northern Rus' (Novgorodian) Monetary System

In contrast to the Southern (Kyivan) system oriented toward Byzantium, the Northern (Novgorodian) system in the same period was clearly designed to maintain an equilibrium between the East (represented by the Volga Bulgars) and the West (mainly German lands, England and Scandinavia). The new *nogata* (2.5593 g) was simply one-tenth of the Norman *ora* (25.593 g ÷ 10 = 2.5593 g). The Khazaro-Bulgarian *raṭl* pound was accordingly adjusted to the Northern/German *mark*; the Novgorodian silver ingot weighed between 198 g and 204 g (the nominal weight was 204.75 g),[22] and was in weight, not removed

22 Bauer, 1929, pp. 32–42, 46–50; Janin, 1956a, pp. 46–48.

from the Volga Bulgarian *sōm* (see above). This ingot was the Novgorodian *grivna serebra*. It was the Northern system which is reflected in the *Pravda Rus'skaja* of the twelfth century.[23]

Since the *mark* was subdivided into four parts called *firdung/vierting* "farthing," the Novgorodians likewise divided their *grivna serebra* into four *grivnas kun* of 51.1875 g, and thus one *firdung* became identical with one *grivna kun*. The new *nogata* was now only money of account (2.5593 g).

The Novgorodian fraction weighed 1.02375 g (~1.045 g);[24] it equalled one four-hundredth of the Khazaro-Bulgarian pound (*raṭl*), but also corresponded to the debased Western (especially recent Anglo-Scandinavian) pence (= *denarius*).[25]

In Novgorod this subdivision was called either *kuna* or *rězana*, i.e., it reflected a situation when the difference between the *kuna* and the *rězana* (which had an 8:3 ratio), had disappeared. Thus, in the last decades of the tenth–eleventh centuries the Novgorodian system appeared as follows:

1 *grivna serebra* (204.75 g) = 4 *grivnas kun* (à 51.125 g)
1 *grivna kun* = 20 *nogatas* (à 2.5593 g)
1 *grivna kun* (51.1875 g) = 50 *kunas/rězanas*
1 "new" *kuna* = 1 *režana* = 1.023 g

Or, 1 *grivna serebra* = 4 *grivnas kun* = 80 *nogatas* = 200 "new" *kunas/rězanas*.

The Novgorodian correspondence to the Volga Bulgarian and Western systems was as follows:

Novgorodian-Volga Bulgarian Exchange

1 Volga Bulgarian *bezmen* = 1,000 Novgorodian *kunas/rězanas* (à 1.023 g)
1 Volga Bulgarian *sōm* = 1 Novgorodian *grivna serebra* (à 204 g)

23 Described by Janin, 1985, p. 366.

24 Idem., 1956a, pp. 159–60; Id., 1985, p. 364.

25 In 1018 Cnut (Canute) the Great of Denmark and England made the largest of all the payments (*danegeld*) to Scandinavian warriors amounting to 72,000 pounds of silver; *see* Sawyer, 1978, p. 215.

Novgorodian-Western Exchange

1 Western *mark* = 1 Novgorodian *grivna serebra*
1 Western *firdung* = 1 Novgorodian *grivna kun*
1 Norman *ora* = 10 Novgorodian "new" *nogatas*
1 Western *denarius/pence* = 1 Novgorodian *kuna/rězana*

In trade relations with Kyiv, a ratio of 1:1.25 was maintained, that is, one Novgorodian *grivna serebra* was equal to 1.25 Kyivan *grivnas serebra*. It is noteworthy that the Novgorodian-Kyivan exchange rate in the eleventh century replicated exactly the Khazarian-Byzantine and the Volga Bulgarian-Khazarian ratio (see above).

Finally, it may be added that one Novgorodian *grivna serebra* was equivalent to five Byzantine *solidi* (at a new value of one *solidus* = 40.95 g; see above; 204.75 g ÷ 5 = 40.95 g).

Eleventh-Century Developments

The ultimate victor in the struggle for succession to Volodimer the Great was Jaroslav the Wise (d. 1054). Presently only 11 of his magnificently designed silver coins are known to exist. By size, they fall into two groups: 4 heavy and 7 light coins.

The average weight of the 4 heavy coins (2.80 g; 3.06 g; 3.24 g; 3.77 g)[26] is 3.2175 g; which is rather close to the nominal weight of two new Kyivan (< Carolingian) silver *rězanas* à 1.638 g (3.2175 g ÷ 2 = 1.60875 g). Two of Jaroslav's heavy coins (2.80 g; 3.77 g) were tested and show great fineness (960°).[27] The extant light coins of Jaroslav have an average weight of 1.398 g,[28] quite close to the Merovingian standard (1.365 g); this was also the original weight of the Old Rus' *rězana*.

In the charter issued in 1137 by Svjatoslav Ol'govič in behalf of St. Sophia's Cathedral in Novgorod, there occurs the designation "*grivna* of new *kunas*" (*100 griven novyx kun*).[29] On the other hand, in the Rus'

26 Sotnikova and Spasskij, 1983, pp. 196–198.

27 Idem., p. 109.

28 Idem., pp. 199–201.

29 Quoted by Janin, 1956a, pp. 41–42; cf. Anoxin, 1975, pp. 379–380.

version of the treaty between Novgorod and Gotland (Hanse) there appear side-by-side the terms "*grivna* of old *kunas*" (*3 grivny starye*) and "*grivna* of ancient *kunas*" (40 *grivnas "vetxymi kunami"*).[30] Until now scholars have ignored the difference between the designations "old" versus "ancient," regarding the two adjectives as synonymous. But this is certainly not the case. The "old" *kunas* are mentioned in the context of crimes committed against male warriors, while the "ancient" *kunas* are mentioned in connection with females. The jurisdiction and respective wergelds belong to two different epochs.

Apparently the *grivna* of the "ancient" *kunas* maintained the standard of the old *rězana* (1.365 g). The original *grivna serebra* (known from the Treaties of 911 and 944) was equal to 100 *rězanas*, and the *nogata* as a money of account was equal to 2.5 times the *rězana* (1.365 g x 2.5 = 3.41 g). But—as stated above—the weight of the *rězana* is the same as of the Merovingian denier, renewed by the Carolingians (1.365 g).

The *grivna* of the "old" *kunas* follows the weight pattern of the late Merovingian shilling à 16.38 g. Ten such shillings now constituted the weight of the new, Kyivan *grivna serebra* (late tenth—early eleventh centuries), since 163.80 g is simply 16.38 g x 10.

During the eleventh and twelfth centuries Novgorod was flooded with the new attractive Anglo-Saxon–Danish silver coins. These were minted according to new metrological principles[31] following not the weight of the *libra/litra* or the *raṭl*, but the Germanic *healfmarc*, *mark*, and *ora*. At the same time, the Frankish denier was being displaced as a standard by the Germanic *pfennig/penningar* at the nominal weight of 1.023 g. This newly dominant weight replaced in Novgorod both the *rězana* and the *kuna*. The *kuna*, for a long time identical with an actual coin (the African *dirham* of 2.73 g), now became a money of account, the weight of which was that of the new *rězana*, i.e., 1.023 g. The two entities, the *kuna* and *rězana*, consequently became synonymous.[32]

Such is the origin of the "new *kuna*" and the "*grivna* of new *kunas*." The change was indeed revolutionary: The Old Rus' monetary system ceased to follow the Frisian (Anglo-Saxon)–Frankish/Khazarian pattern.

30 *Gramoty*, 1949, p. 55.

31 Suchodolski, 1971, pp. 174–75.

32 Cf. Janin, 1956a, p. 147; and Zvaryč, 1973, pp. 107–108.

The Old Rus' System of Weights

We have already called attention to the interrelation between the *wergeld* and the weights of precious metals. There was also "a general tendency for coins to be given the same names as those of contemporary weights."[33] This observation should also be extended to the names of monies of accounts, and to the names of specific scales as well.

In the period under investigation there were two types of scale: *bezmen/bismar* and *pud/punder*.[34] Both types "us[ed] the principle of a lever with unequal arms for the beam."[35] The *besman/bismar/bezmen* which was discussed above is associated with divisions of 2.5. Exactly 2.5 *raṭls* equalled one *bezmen* (2.5 x 409.5 g = 1,023.75 g).

The *punder/pud*, a variant of the "Roman scale" (*statera romana*), could be moved along the arm of the beam marked in units from 1–40.[36] Thus the *pud* is associated with the number 40 (which, significantly enough, appears also in the *wergeld* system). In the Old Rus' system the *pud* was 40 times the "great *grivenka*" (= *raṭl* of 409.5 g; 40 x 409.5 g = 16,380 g).

The standard for weights, kept (after 988) in a church, was called *карь*[37] (in Latin and Middle Low German *cap*); but this term also came to signify a specific weight. In 1269 it corresponded to 8 Livonian pounds (à 8,190 g), i.e., 65,520 g,[38] or 4 Old Rus' *pud*s (4 x 16,380 g = 65,520 g).

What was the origin of the term *карь* (*cap*)? Etymologists have connected it with the Turkic *qab*: "vessel, container, sheath, sack, leather bag,"[39] since—in addition to the meaning given above, *карь* had

33 Lyon, 1976, p. 174.

34 The third type, the *skalvy* (*skal-vy* < Middle Low German, Frisian *skal*, English *scale* [i.e., a balance]), was introduced to Rus' by the Hanseatic merchants during the second half of the thirteenth century; *see* Klejnenberg, 1973, pp. 143–46.

35 Kisch, 1966, pp. 56, 66.

36 Klejnenberg, 1973, p. 142.

37 E.g., the charter of Prince Rostislav Mstislavič for the bishop of Smolensk from 1150, in *Smolen Gram*, 1963, p. 75.

38 Kamenceva and Ustjugov, 1965, p. 52.

39 Clauson, 1972, p. 578; Doerfer, 1963–1975, vol. 3, pp. 366–88 (no. 1364).

also the significance of "container, sheath."[40] But Max Vasmer was disturbed by the final front jer -ь in the Old Rusʹ form, which cannot be explained on the basis of a Turkic derivation.[41] Now the problem can be solved. The etymon in question, in fact, is not Turkic—but Hunno-Bulgarian (~ Khazarian). This is proven by the Chuvash word *xupă* (<**qápĭ)* "container,"[42] which ends in a short vowel -*ĭ* the source of the Old Rusʹ front jer (> -ь).

The largest commercial weight for unit of mass used in Old Rusʹ, and even into modern times, was the *berkovec*. One *berkovec* as a unit of weight equalled ten *puds* i.e., the *berkovec* weighed 163,800 g or 400 "great *grivenka*."

Most figures that appear in both the weight and monetary systems in Rusʹ are multiples or fractions of either 2.5 (*bezmen*) or 40 (*pud*). Examples can be easily adduced to illustrate the point:

2.5

2.73 (1 *kuna*) x **2.5** = 6.825 g (2.5 *tĭns*)

1.365 g (1 *rězana*) x **2.5** = 3.41 g (1 *nogata*)

2.5593 g (1 "new" *nogata*) = 1.023 g x **2.5**

40.95 g (1 *osminik*) x **2.5** = 102.375 g =2 *grivnas kun* in Novgorod

327.6 g (1 *litra*) x **2.5** = 819 g (1 *mann*)

409.5 g (1 *raṭl*) x **2.5** = 1,023.75 g (1 *bezmen*)

40,950 g (1 *qinṭār*) ÷ **2.5** = 16,380 g (1 *pud*)

163,800 g (1 *berkovec*) ÷ **2.5** = 65,520 g (1 *карь*)

40

16,380 g (40 *raṭls* à 409.5 g) x **40** = 65,520 g (1 *карь*)

3.41 g (1 *nogata*) x **40** = 136.5 g (1 *grivna serebra*)

wergeld for a warrior = **40** *grivnas serebra*

409.5 g (1 *raṭl*) x **40** = 16,380 g (1 *pud*)

4,095 g (10 *raṭl*) x **40** = 163,800 g (1 *berkovec*)

40 Sreznevskij, 1893–1903, vol.1, cols. 1195–1196.

41 M. Vasmer, 1953–1958, vol. 1, p. 525.

42 Egorov, 1964, p. 305.

Conclusion

The Old Rus' weights and monetary systems have been the subject of many controversies in the last decades. Unfortunately, they have been analyzed by scholars in isolation from both their Eastern and Western counterparts. I have attempted to find a broader perspective and to discuss the Old Rus' systems where they belong—within their international context. I have shown—and it is witnessed by its terminology—that the Old Rus' weights and monetary systems do indeed reflect the West/East–North/South international trade relationship (centered in what is now Ukraine) in the period between the eighth and eleventh centuries.

As far as this weights and monetary terminology is concerned, its derivation is either Frisian (Franko-Frisian) or Khazarian (Khazaro-Bulgarian), both as direct borrowing and as linguistic calques.

Direct Frisian borrowings are:

Old Rus' *sklęzъ*[43] (further developments: *stělęzъ*[44] *ščьlęg-/ščьljag-*[45] the designation for a silver unit of account, borrowed from Old Frisian (and Anglo-Saxon) *scilling* "shilling," i.e., "the silver weight of the gold *solidus*."

Old Rus' *pěnęzь* (**pěnęgŭ*)[46] "coin, money" derived from Old Frisian *penning* (< Germanic *panning* ~ *panding*).

Old Rus' *pud* (*pǫnd*) "weight of 40," from Old Frisian *pund* (< Latin *pondō-*).[47]

Of special interest is the term *berkovec*. In the Old Rus' texts the first vowel of this word is written in three ways, with *ь*, *e*, and *ě*:

43 *See* Sreznevskij, 1893–1903, vol. 3, col. 376. Cf. M. Vasmer, 1953–1958, vol. 3, p. 639.

44 Sreznevskij, 1893–1903, vol. 3, col. 586.

45 Ibid., cols. 1615–16. *See also* M. Vasmer, 1953–1958, vol. 3, p. 453; L'vov, 1975, pp. 266–67.

46 Sreznevskij, 1893–1903, vol. 2 (1895), cols. 1784–85. The etymology, *see* Urbańczyk, 1970, p. 88.

47 The oldest mentions of *pud-* are ca. 1130: *a dati imъ 20 pudъ medu na podsytu čistago* (Sreznevskij, 1893–1903, vol. 2 [1895], col. 1724); *see also Xrest. Ist*, 1949, pp. 166-68; and ca. 1238–1268 (Novgorodian birch bark, no. 61, jarus 14, B): *10 pudovo mьdu (Nov Gram Ber*, 1951–, pt. 2, (1954), pp. 62–63, plate; cf. pt. 8 [1986], p. 294). On the etymology, *see* M. Vasmer, 1953–1958, vol. 2 (1955), p. 460.

bьrkovьsk-, *berkovьsk-*, and *běrkovьsk-*.[48] The word is attested in the charter of Vsevolod Mstislavič of ca. 1130,[49] in the Old Novgorodian birchbark documents,[50] as well as in narrative texts, e.g, "The Hypatian Chronicle," s.a. 6654/1146[51] and the Novgorodian I Chronicle, s.a. 6740/1232.[52]

The term *bьrkovьsk-* is an adjectival form from **Bьrka*.[53] This was the name of the trade emporium, Birka, located on an island in the Mälaren Lake (near Stockholm, Sweden). Birka was founded and operated by the Frisian (and Frankish) long-distance traders during the Viking period. (ca. 800–975).[54]

Finally, also of Franko-Frisian (< Latin) origin is the important Old Rusʹ term *kuna*, discussed above.

A Franko-Frisian linguistic calque is represented here by the second important Old Rusʹ term—*grivna* (**grivьna*), modelled on *skilling*.

Two important Khazarian weight designations that entered Old Rusʹ were *bezmen* and *kaрь* as well as the linguistic calque *rězana* (modelled on *yarmaq*).

The Old Rusʹ weight system had three primary origins: the Baghdad *raṭl* (via Khazaria); the Byzantine *litra*; and the Franko–Anglo-Saxon (through the Frisian intermediary) denier of 1.365 g, West-Saxon shilling (6.825 g), late Merovingian shilling (16.38 g), Norman *ora* (2.25593 g), and denier of 1.023 g.

Of special importance were the actual Muslim coins—the North African *dirham* of 2.73 g (via Khazaria), and the Samanid *dirham* of 3.41 g (via Volga Bulgaria), as well as the Muslim *miṯqāl* of 4.265625 g (1/96) of the *raṭl*), which became the Old Rusʹ *zolotnik*.

48 Sreznevskij, 1893–1903, vol. 1, cols. 70–71.

49 *Xrest Ist*, 1949, 167 (*berkovьsk voščanyj*).

50 *Nov Gram Ber*, 1951–, pt. 5, (1963), pp. 39–41: *ou jarъšъvicjaa douvou bьrьkъvьskou dove grivene i desjatь kn̄ъ*. On the dating, *see* ibid. 8, (1986), p. 307.

51 *F* [= 500] *berkovьskovъ medou*. *Ipat let*, 1908, col. 334.

52 . . . *i kupljaxu solь po 7 griven bьrkovьskъ*, *NIL*, 1950, p. 72.

53 On the etymology, *see* M. Vasmer, 1953–1958, vol. 1, pp. 78–79; Melʹnyčuk, 1982, p. 174.

54 On Birka, *see* Arbman, 1939; Ambrosiani, 1973; Wadstein, 1936; Dreijer, 1986, pp. 87, 90, 115–16.

The scales used in Rus' until the thirteenth century also have two origins: Khazaria (*bezmen*, *kapь*,) and the West (*pud* [< *pund*-(*er*)], or the so-called "Roman scale" (*statera Romana*).[55]

55 Kisch, 1966, p. 66. A detailed study of the Slavic terminology concerning trading activities would be of great interest. It would seem that apart from the Frisian-Frankish-German and Khazaro-Bulgarian (*see* here also Pritsak, 1983) connections, the Balkan (and later Balkan-Slavic) impact was of special importance, as attested by such Old Rus' terms as, e.g., *torg*- (also in Scandinavia), *koupati, koupьcь myto, cěna, zlatnik*-, *platiti*, *see* L'vov, 1975, pp. 253–70.

APPENDIX

Varango-Chazarica

*Whole Words (***gud**, **KutR**, **ubi***)*

The Russian Scandinavist Elena A. Mel'nikova and her associates have proved that some eighth–ninth century Muslim *dirhams* found in East European hoards (especially in the Bol'šoe Timerevo *tumuli*) have Old Norse runic graffito inscriptions.[1] These can be divided into two groups, those with whole words, and those with single letters.

So far four words have been identified: one written in the older runes (Futhark) and the other three, along with the isolated runes, in the younger Futhark alphabet. The word in older Futhark is **gud**.

The three words in the younger Futhark are **kutR** (or **kuts**), **kiltR,** and **ubi**.

The following three isolated runes occur on the coins: **k**, **u**, **s**. In some cases the runes **u** and **s** appear on the same coin. What was the significance of these Old Norse graffiti?

Elena Mel'nikova and her associates accepted the notion advanced by Ulla S. Linder Welin that the Old Norse runic graffiti possessed both magic and cultic meaning.[2] On the one hand the runic graffiti were to keep plunderers away from the hoards, and on the other they may have been signs that the given hoards were sacrificed to the gods; hence the term "god" in one of the graffiti.

This was the explanation of the word **gud**, meaning "(Christian) god."

1 Mel'nikova, 1977, pp. 142–52; Idem., *et al.*, 1982, pp. 26–47.

2 Linder Welin, 1956, pp. 149–71.

For **kut-** (**-R**, **-S**) several suggestions (in the same spirit) were made: 1. *gótr* ~ *gautr* "the Gaut warrior;" 2. *gauts* "belonging to Gaut (= Odin);" 3. *gods* (*t* ~ *d*) "(belonging to Christian) God;" 4. and *gots* "(my) property, goods."[3]

The word **kiltR** was identified as Old Norse *gildr* "(merchandise) of full measure; quality; complete."[4] Finally, the word **ubi** was interpreted as the well-known Old Norse personal name *Ubbi*.[5]

Isolated Runes (**k**, **s**)

As for the single letters, these were also interpreted within the framework of cultic theory, purportedly representing the idea expressed by the name of the particular rune. Thus **s** = *sól* "the sun" had an auspicious connotation, while **k** = *kaun* "a sore of wounds and scabs," was a negative expression.

Although Mel'nikova and her associates proposed these interpretations, they remained dissatisfied, hoping for a better explanation when more data are available.

A New Interpretation

I shall propose here a new interpretation of the Old Norse runic graffiti on the Muslim coins. First of all they should not be viewed in isolation but within the context of Arabic notations on Muslim coins of the ninth to tenth centuries and the function they served. It must be kept in mind that the Old Norse merchants and mercenaries, the Varangians who inscribed these graffiti, were interested in economic matters, and had to have some familiarity with the Arabic script and language. It was on that basis that they developed their own system of markings.[6]

Muslim *dirhams* were not all identical in current value and being struck *al marco* possessed different weights. As a result the moniers would put special inscriptions on the coins indicating the status of the

3 Mel'nikova, 1977, pp. 149–50.

4 Idem., 1982, pp. 27–29.

5 Idem., pp. 29–30.

6 *See* de Tiesenhausen, 1873, pp. xviii–xxii, 77–80; Czapkiewicz, 1957, pp. 230–31.

given issue.[7] These were expressed either *in extenso*, or in abbreviated form—by single letters.

Two Arabic value designations are of relevance here:

(1) جَيِّد (*ğaiyid*) "excellent" = abbreviation ح (**ğ*) written without the diacritics.[8]

(2) وَاف *wāf*^{in} or وفي *wafiy* "full weight, complete, total, perfect" = abbreviation و *w*.[9]

The single letter س *s* was very often employed for the value designation سَلِم *sālim* "unimpaired, unblemished, faultless, whole, perfect."[10]

In my opinion, both Old Norse runic inscriptions, **gud** (in old Futhark) and **kutR** (in younger Futhark), should be interpreted as Old Norse *gódr* "good." They stand as a value designation, an Old Norse translation of the Arabic جَيِّد *ğaiyid* "excellent."

In some cases the Old Norse graffito should be explained not on the basis of the runic script, but Arabic. I refer to the sign ᚳ, which cannot be anything other than Arabic letter *kāf*. It would appear that both the Old Norse rune **K** (*kaun*) and the Arabic letter *kāf* were used by the Norsemen as an abbreviation for Old Norse **kiltR**, a linguistic calque from the Arabic جَيِّد *ğaiyid*.

The Old Norse **ubi** and the rune **u** have to be viewed in connection with the Arabic *wafiy* "full weight," and the letter و (*wāf*), but through the mediation of Khazarian.

7 Stickel, 1845, vol.1, p. 32.

8 *See* de Tiesenhausen, 1873, p. xix, fn. 3. There are some other interpretations, e.g., *khayr* "good"; *see* Czapkiewicz, 1957, p. 230. On ح, *see* de Tiesenhausen, 1873, index, p. 367. In the Cufic script there was no distinction between ح *ḥ*, خ *kh*, and ج *ğ*.

9 On *wāfin*, *wafiy*, *see* de Tiesenhausen, 1873, p. 89; Czapkiewicz, 1957, p. 231. On و *w*, *see* de Tiesenhausen, 1873, index, p. 368; Czapkiewicz, 1957, p. 231.

10 De Tiesenhausen, 1873, p. 74, explains سلم here as *salām* "salutem/salve." I prefer to follow the proposal made in Stickel, 1845, vol. 1, pp. 44–45.

There was no phoneme /w/ in Khazarian and Old Turkic, hence Arabic /w/ (*wāf*) was perceived there as /ua/ being phonemically identical with their /ō/. Also there was no /f/ in the Khazaro-Turkic phonemic system, and the foreign [f] was replaced with /p/. In this way the Arabic *wafiy* became in Khazaro-Turkic **ōpi*,[11] for which in the Old Norse runes (in the younger Futhark) **ubi** was the only possible rendering: the rune **u** stands (again as in the Arabic script, the mater lectionis *wāf*) for the vowels *o* (*ö*) and *u* (*ü*). The rune **b** is used for *b* and *p*. Finally, the rune **s** (*sól*) stands for the Arabic letter س *sīn*, the abbreviation of the Arabic *sālim*.

11 Such a Turkicized form is attested to, e.g., in Kyrgyz: *ōpa~opā* (< Arabic *wafā*) "fidelity"; *see* Judaxin, 1965, pp. 574, 575.

PART II

Essays on the Old Rus' Coins

Eastern Europe to 1220

Introduction to Part II

The great majority of known Old Rus′ coins (205 out of 227)[1] have an obverse representing the ruler facing, sitting on the throne, and holding a large cross with the left hand.

The greater part of these coins (amounting to 176) has the name of *Vladimir,* the smaller (29)—the name of *Svjatopolk*.

Scholars have established four types of Volodimer coins, referred to in the special literature as "Vladimir I," "Vladimir II," "Vladimir III," and "Vladimir IV."

* *
*

The following five types of figures are depicted on the Old Rus′ coins: 1) Ruler seated; 2) Bust of Christ the Pantocrator; 3) Portrait of respective patron saint; 4) Christian votive formulas; 5) Trident or bident.

"Ruler seated" (facing) is represented on the obverses of the coins of Volodimer (all four "Vladimir" types), and "Svjatopolk" (*see illustration,* p. 128).

The bust of Christ the Pantocrator occurs only on the reverses of the coins of the type "Vladimir I" (*see illustration,* p. 130).

Jaroslav's silver (= Ivan I. Tolstoj's "Jaroslav III") coins, as well as the issues of the types (according to the Tolstoj) "Jaroslav I" (= "ΠΕΤΡΟΣ"), "Jaroslav II" (= "ΠΕΤ∇Ρ"), as well as "Michael" have

1 These numbers represent individual *stampings* within the Sotnikova and Spasskij corpus, not individual *items*. As mentioned above (p. 57) the total number of coins is around 308 (340 according to Sotnikova and Spasskij 1983, p. 112, including ambiguous or now lost items).

on their obverses images of their respective patron saints (*see illustrations,* pp. 135–37).

A Christian votive formula covers the entire reverse of the coins of the "Michael" and bracteate "Cyril" types.

All Old Rus' coins, with the exception of those struck for "Michael" and (bracteate) "Cyril," have either a "Trident" or a "Bident" as their main figure on the reverse, but not on the issues called "Vladimir I" (*see illus.*, pp. 125–27 and 135–37). In these coins a small trident is placed on the obverse, just above the ruler's left shoulder.

There are two types of trident, one on the coins of "Vladimir I–IV," and another on the coins of "Jaroslav III" (= *Jaroslavle sьrebro* 'Jaroslav's Silver').

Only one basic type of bident, with three subdivisions, can be distinguished. It occurs on the coins of "Svjatopolk," "ΠΕΤΡΟΣ" and "ΠΕΤVΡ" (*see illus.*, p. 127).

The iconology of the Old Rus' coins has crucial value for attributing and dating the coins, since there the names of mints and/or dates are not given, and only a few single finds (apart from two undated hoards) have been obtained *in situ.*

CHAPTER 6

The Iconography of Old Rus' Coins

The Obverse Sides of the types "Vladimir I–IV" and "Svjatopolk"

Volodimer I the Great (980–1015) was the first Rus' ruler to strike his own coins. Since Christian symbols and icons already appear on these first coins ("Vladimir I"), scholars rightly assume that this activity of Volodimer was the result of his baptism in 988, although one may argue that the minting itself could hardly have begun in that year.

Volodimer's entrance into Christendom was accompanied by his acceptance into the Byzantine imperial family as the brother-in-law of the emperor.[1] It stands to reason, then, that he would have drawn on contemporary Byzantine practice in coinage and that he would have been advised in this by his wife, the sister of the ruling emperors. Because he was not a Byzantine ruler himself, though, he and his Byzantine advisors had to make choices appropriate to his situation. In this way, Volodimer's coinage was eclectic but, as we shall show, every element of it was derived structurally from Byzantine symbolism, even if some iconographic representations were of "local," non-Byzantine origin.

Volodimer needed for his coinage an iconology which would be both Rus' and Byzantine. It had to show him as the traditional ruler (*kagan*) of Rus', but also as a Christian monarch within the oikoumene of the Byzantine rite. Volodimer's imperial brothers-in-law (Basil II, 976–1025; Constantine VIII, 976–1028)[2] decided to use the bust of Christ

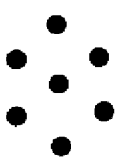
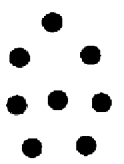
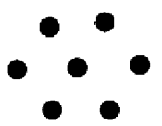
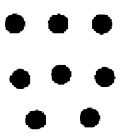
1 *See* Pritsak, 1989, pp. 5–15.

2 Grierson, 1973, pt. 2, pp. 599–633.

the Pantocrator (revived by Michael III [842–867])[3] on the obverse of their coins (the primary type). As a neophyte, Volodimer believed that it would be more reasonable for him to stress his intermediary role between the Christian God and his newly converted people, and thus he had himself, the patrimonial ruler of Rus' who had ordered the Christianization, represented on the obverse of the primary type of his coins. The reverse, however, was reserved for the propagation of the new religion (the bust of Christ the Pantocrator) in which he followed the usage of his imperial brothers-in-law.

On coeval Byzantine coins the Pantocrator appears nimbate in two main variant forms: pelletless and pelleted (or barred; *see illus.*, p. 130).

In the pelleted nimbus the pellets appear in each arm of the cross. Their number and place varies. There appear 1, 2, 3, 5 and 7 pellets (the latter in three rows).[4] The "Vladimir I" coins adopted two types of these issues: 1) the pelletless; and 2) the pelleted of seven pellets, whereby they made use of 8 pellets instead of 7. The 7 (= Rus' 8) pellets are grouped in the following way:

	Byzantine coins	"Vladimir I" coins
upper arm		
lateral arms		

The pelletless nimbus is to be seen on both: on all gold "Vladimir I" coins[5] and on some silver coins of the type: 7–1, 8–1(?), 8–2.[6] Their Byzantine prototype is also rare: they were struck either ca.

3 Ibid., 1973, pt. 1, pp. 454–55. It was Justinian II (688–695, 705–711) who first placed the effigy of Christ the Pantocrator on Byzantine coins as a main type. Grierson, 1968, vol. 2, pp. 568–69.

4 *See* Idem, 1973, pt. 2, pp. 886–87.

5 Sotnikova and Spasskij, 1983, pp. 115–20.

6 Ibid., pp. 121–22.

977–989,[7] or ca. 989–1001.[8] The seven pellets in each arm of cross appear already in the issues struck in ca. 989–1001[9], but more often in 1001–1005.[10] This data enables us to move the dating of the commencement of Volodimer's striking golden coins from 988 to ca. 989–1001, and the minting of the majority of his silver coins (type "Vladimir I") to ca. 1001–1005.

It was not unprecedented in Byzantium in Volodimer's time to use—following the Hellenistic, Imperial Roman, and Byzantine tradition—the ruler's portrait on the obverse of coins: on some issues of the *folles* of Nicephorus II Phocas (963–969) the obverse was reserved for the portrait of the emperor (Class 1, 7.1).[11] This portrait also contained two symbolic representations which Volodimer needed: the simple potent cross on the right side (the religious symbol),[12] and the *Globus* (Orb) *Cruciger* symbolizing the emperor's victory,[13] his dominion over the world. Volodimer took over the long cross-scepter (see below) for his coinage, but adorned his left side not with the *Globus Cruciger* but rather with the Rūs kaganate's symbol of the ruler's victory, the trident.

In the Rūs ceremonial system, which had been adopted from Khazaria, the *kagan* performed all his official duties while mounted either on the throne or on horseback.[14] According to Ibn Faḍlān (922), the *kagan* of Rus would mount his horse directly from the throne (Arabic *sarīr*): the horse had to be brought right up to the throne for this purpose.[15] The Byzantine emperors were depicted on their coins either in a half-length portrait or standing full-length, but never sitting on a throne. Nor were the Pantocrator or the Virgin Mary shown in a sitting position on any

7 Grierson, 1973, pt.2, pl. XLIII, 2k.

8 Ibid., pl. XLIV, 3h.

9 Ibid., pl. XLIV, 3F.1.

10 Ibid., p. XLIV, 4a.1; 4a.2; 4b.1; 4b.2; 4c. See also the same plate no. 5, struck in 1005.

11 Ibid., p. 586, pl. XLI.

12 Ibid., pt. 1, pp. 175–76.

13 Ibid., pp. 131–33.

14 The Old Turkic emperor, Bilgä Qagan, proclaimed in his inscription that he (in A.D. 716) *qaγan olərtəm* "I took my seat [= throne] as Kagan." (IS9); see Clauson, 1972, p. 150.

15 *See Kitāb* of Aḥmad Ibn Faḍlān, ed. Togan, 1939, p. 47 [= German translation, pp. 97–98] and Kovalivs'kyj, 1956, p. 313 [= Russian translation, p. 146].

coeval Byzantine coins. True, on coins of the first four Macedonian emperors (Basil I, 867–886;[16] Leo VI 886–912; Alexander 912–913;[17] and Constantine VII,[18] 913–945), Christ the Pantocrator sometimes appears seated on a lyre-backed throne, but in the period from 945 to 1028 this custom was abandoned. Since they could hardly have had a numismatic collection at their disposal, Volodimer's die-sinkers were at a loss as to how to portray him on a throne.

In Volodimer's time Byzantine rulers were represented full-face on their coins, not in profile (as had been the custom in the early Imperial Byzantine, Roman and Hellenistic period), and wearing ceremonial vestments:[19] either the emperor's consular stole, the lorus, which symbolized also his religious authority, or a long purple cloak, the chlamys, fastened on the wearer's right shoulder with a fibula adorned with pendilia. On the coins struck for Basil II and his brother, the two co-emperors are depicted standing together, both full-face, and holding between them a long plain ("Western") cross-scepter with pelleted ends (*see illus.*, p. 129). Though both wear crowns surmounted by a cross, Basil is dressed in the lorus, whereas Constantine wears the chlamys.[20] Being the emperors' brother-in-law, Volodimer occupied the rank of an imperial "younger brother," and the die-sinkers depicted him in full face and wearing the chlamys. Volodimer's rank may well have been perceived as being somehow higher than that of Constantine, since he is shown with beard and moustache, like Basil, in contrast to the beardless Constantine.[21]

Let us return, however, to the Rus' die-sinkers' difficulties in finding a model for the depiction of a seated ruler.[22] They found an ingenious

16 Grierson, 1973, pt. 2, pl. XXX, 1–2.

17 Ibid., pl. XXXIV, 2.1; 2.2.

18 Ibid., pl. XXXVI, 2.1; 2.2; 3; 7.3.

19 On imperial ceremonial vestments, see Ibid., pt. 1, pp. 112–25 and table 12.

20 Concerning the representation of two emperors, see Ibid., pt. 2, pp. 613–25 and pl. XLIII–XLVI.

21 *See* Ibid., pt. 1, p. 110.

22 On the Byzantine coins of the first half of the 10th century sometimes Jesus Christ was depicted as sitting on a lyreback or a backless throne. After 945, Christ sitting on the throne was replaced by Christ's bust. *See* Ibid., pt. 2, pp. 551–52. Apparently, during the rule of Volodimer I in Kyiv (980–1015), there were no old (pre-945) Byzantine coins available with a figure seated on a throne.

solution. To the half-length, full-face portrait of Volodimer they added a schematic representation of bent legs (knees not depicted) with both feet directed toward the ruler's right side (*see illus.*, p. 128).[23] On either side of the artificial legs, which appear on certain coins of this type, a semicircle has been added, apparently indicating the bolster of a throne. But, as we shall see, the representation of a backless throne became common in Byzantine coins only in the second half of the eleventh century, when the Pantocrator or the Virgin were shown sitting (on the reverse). Before this time a square-backed throne had been introduced on coins of Romanus III (1028–1034),[24] but the Rus' die-sinkers, working ca. 1005, clearly could not have made use of it.

The wide lyre-backed throne was re-introduced in the reign of Constantine IX Monomachus (1042–1055),[25] and is to be found on some coins of the second half of the 11th century.[26] This was undoubtedly the model for the same sort of throne on the coins of the type "Vladimir III." It is, therefore, reasonable to attribute this type to Volodimer II Monomax (1078–1125) rather than to Volodimer I. Volodimer II was the grandson of the emperor Constantine IX, and from 1093 a co-ruler with Svjatopolk.

We have seen how hard the die-sinkers of the type "Vladimir II" tried, with only partial success, to represent the ruler's backless throne. But on the coins of the type "Vladimir IV" and "Svjatopolk," the backless throne is depicted successfully. This was surely because the Rus' die-sinkers now had Byzantine coins as models. The backless throne appears at first sporadically on the coins of Michael IV (1034–1041).[27] It became more common in the reigns of Isaac I Comnenus (1057–1059)[28] and Nicephorus III Botaneiates (1078–1081).[29] On the coins of Alexius I

23 The addition of a backless throne on the coins of the type "Vladimir II" was a later development (see below).

24 Grierson, 1973, pt. 2, pp. 715–17: Romanus III (1028–1034), (pl. LVI, 1a.1–1d.11.)

25 Ibid., pp. 738–40 (1a.1–2c.), pl. LVIII.

26 Constantin X Dukas (1059–1067), e.g., Ibid., pl. LXIV (2.1; 2.4); Morrisson, 1970, vol. 2, pl. LXXXYIII, A/10, 11.

27 Grierson, 1973, pt. 2, p. 726, pl. LVIII, 2.

28 Ibid., p. 761, pl. LXIII, 1.2–2.5.

29 Ibid., pp. 825–26, pl. LXIX, 3a.1; 3a.6; 3b.12.

Comnenus before his reforms (1081–1091) the square-backed throne is used,[30] but on the post-reform coinage (1092–1118) the backless throne is most common.[31] A similar dichotomy is observed on the coins of his son John II (1118–1143).[32] These facts speak against the traditional dating of the type "Vladimir IV" and "Svjatopolk" to Volodimer I (d. 1015) and his son Svjatopolk I (d. ca. 1018). It would appear that these coins should rather be attributed to Volodimer II Monomax ("Vladimir II", 1113–1125) and Svjatopolk II (1093–1113) respectively.

As noted above, the chlamys was the usual attire of the Rus' rulers on their coins. The exception is the type "Vladimir II," where the ruler appears in military dress (*see illus.*, p. 129). This was the usual practice in Byzantium until the eighth century when military robes were replaced by ceremonial vestments.[33] In the tenth and eleventh centuries only Constantine IX Monomachus (1042–1055) was depicted standing in military dress, holding a long cross in his right hand.[34] This was apparently the model for the Rus' die-sinkers, and thus the coins of the type "Vladimir II" are to be attributed to Volodimer II Monomax (on the Černihiv, Perejaslav, and Kyivan thrones 1078–1125) rather than to Volodimer I (on the Kyivan throne 980–1015).

The Rus' rulers wear the Byzantine crown with a pelleted cross and pendilia (*stemma*, Philip Grierson's type G), usually represented by five large, horizontally aligned pellets, the third of which is the basis for the cross made of three other large pellets (*see illus.*, p. 131).[35] The pellets are sometimes arranged in such a way that some scholars have suggested that the headgear represented on the coins was the conic Rus' hat rather than the crown.

The cross-scepter[36] which the Rus' monarchs hold in their right hands is of the long, plain ("Western") type, usually attached to a long shaft (*see illus.*, p. 133). On coins of the type "Vladimir IV," however, there

30 Hendy, 1969, pl .1, IE1; 2E1; 3E1; 4E1.

31 Ibid., pl. 3, 4–10; Morrisson, 1970, vol. 2, pl. XCIII–XCIV.

32 Hendy, 1969, pl. 9–10; Morrisson, 1970, vol. 2, pl. XCV–XCVI.

33 On military dress in Byzantium, see Grierson, 1973, pt. 1, pp. 125–26.

34 Ibid., pt. 2, pp. 745–46, pl. LIX, 7a.1; 7b.3.

35 Ibid., pt. 1, p. 128, table 13.

36 On the Byzantine cross-scepter, see ibid., pp. 138–41, and table 15.

appears instead the well-known Byzantine figure of the "cross potent on steps," which had been introduced by the Iconoclast Leo III (717–741) and remained a very common numismatic element thereafter (*see illus.*, p. 132). Characteristic of the coins of the type "Svjatopolk" is the decoration of the V-shaped ends of the cross with four additional pellets, one on each side, reminiscent of Grierson's plain cross-scepter of the type A.[37]

In the early Byzantine period (especially in the sixth century,) the emperors were sometimes depicted nimbate.[38] This usage was later discontinued. The nimbus in the portraits of "Vladimir II," "Vladimir IV" and "Svjatopolk" was apparently taken over from the nimbate patron saints on coins of the types "Jaroslav I–III."

"Jaroslav's Silver"

As shown above, the iconography of the coins of the type "Vladimir I" and its symbolism are wholly Byzantine. Their attribution to Prince Volodimer I of Kyiv (980–1015) is certain, as is that of the type "Jaroslav III" to Jaroslav the Wise (1019–1054), Volodimer I's son and successor. Father and son had their differences. It is enough to recall that Volodimer I died while preparing a military campaign against his rebellious son. Jaroslav, who was not related to the Byzantine dynasty, did not, apparently, share his father's predilection for things Byzantine. His silver coins are the famous *Jaroslavle s(ь)rebro*, unique among the Old Rus' coins as to their compositional layout and to their almost perfect artistic execution. Unfortunately, only ten copies of these coins (and two cast copies) have survived.[39]

We can distinguish two "denominations" of Jaroslav's *s(ь)rebro,* corresponding to the Kyivan *nogata: one-nogata*, called by scholars the low-weight "Jaroslav's silver" (average 1.6 g of 960° silver; 4 copies), and *two-nogata*s, or the large "Jaroslav's silver" (average 3.2 g; 6 copies). One distinctive feature of Jaroslav's coinage, recognized by Aleksej V. Orešnikov (but not explained by him) will be discussed

37 Grierson, 1973, pt. 1, p. 141, table 15. *See also* Whitting, 1973, no. 302.

38 Grierson, 1973, pt. 1, p. 107.

39 All known copies of "Jaroslav's silver" are described by Sotnikova in Sotnikova and Spasskij, 1983, pp. 196–203.

below. It concerns the number of circlets on the trident of these coins: one class has four circlets, while the other has six.

The iconographic composition of the large coins of "Jaroslav's silver" (the *two-nogata* pieces) are different from that of the coins of the types "Vladimir I–IV" and "Svjatopolk," in that they have in the center of the obverse and reverse a circular design with two dotted borders round about. The margin between them is divided into quarters either by cross-like rosettes made up of dots (all obverses and some reverses), or by the letters of the word AMHN (in the same reverses) arranged to form a cross. This composition is reminiscent of that on Sassanian silver *dirhams* which have been found on the territory of Old Rus' in hoards from the ninth–eleventh centuries (*see illus.*, p. 134).

Unlike Volodimer I, Jaroslav did not put his own portrait on the obverse, but the effigy of his patron saint, George, copied from coeval Byzantine seals (*see illus.*, p. 135). This treatment deserves special attention. The first emperor to place the effigy of a saint other than the Virgin, and rather than the Pantocrator, on his coins was the Macedonian Alexander (912–913) with his patron, St. Alexander, on the reverse.[40] His example was followed only some 120 years later: the very rare *histamena* coined in Thessalonica for Michael IV Paphlagon (1034–1041) with the effigy of St. Michael.[41] More frequent appearances of the effigies of saints are to be found on the coinage of the Comneni (1081–1185) and the Angeli (1185–1203).[42]

The Rus' rulers, here also including Jaroslav, were apparently very susceptible to the fashions of Constantinople (Old ESl *Carьgradъ*). We have seen how the Byzantine depiction of the two types of royal throne made their subsequent career in coeval Rus'. On this basis one may venture the thesis that Jaroslav put the effigy of his patron saint (George) on his coin following the example of Michael IV. This means that his coinage should be re-dated to the thirties of the eleventh century.

However, Jaroslav's decision to elevate his trident to become the main element of the reverse was unusual. The trident of the Rus' rulers is apparently of Khazarian origin (via the Rūs kaganate), as the symbol of

40 Grierson, 1973, pp. 523–24, pl. XXXV, 2.1, 2.2.

41 Ibid., 1973, p. 723, pl. LVIII, Thessalonica 2.

42 Hendy, 1969, pp. 437–38.

the *kagan*'s charisma (*qut*), i.e., of his victory and glory. [43] The trident on the reverse of Khazarian coins has been discussed above. The reverse was used for purposes of religious propaganda both by Rome (Old and New) and the Sassanids (as well as their successors, the Arabs).[44]

The typical and main element of the reverse of the Sassanian *dirhams* was the symbol of Iranian victory, namely the fire altar raised on three steps with an attendant priest (*mōbedh*) on either side standing face front (*see illus.*, p. 134).[45]

From the early period Byzantine rulers used, as the main element on the reverse of their coins, several symbols for the "Victory of the Emperors," but always with the same inscription, *Victoria August-i* (*-orum*). First, this was the representation of the female personification of "Victory" advancing to the left (of the spectators), holding a long cross (simple or chrismée).[46]

During the reigns of Justin I (518–527),[47] Justinian I (527–565),[48] Maurice (582–608),[49] and Phocas (602–610)[50] this female "Victory" was changed into a male figure, an angel or St. Michael facing front, holding both the cross (turned into the christogram, in his right hand) and the cross potent on orb *cruciger* (in his left hand).[51] Tiberius I (578–582) replaced the "portrait" of Victory/Angel by the "Cross potent on steps" (Calvary), while keeping the Victory inscription.[52] This became the standard practice for a long time. Only the iconoclast emperor Leo III (717–741), on his *nomismata*, changed the "pagan" Victory inscription

43 The literature on the "Trident" is immense, even if the origin and the meaning of it still remains the subject of scholarly debate.

44 On Sassanian numismatics, see Walker, 1967.

45 *See*, e.g., ibid., p. 1, pl. Il'in (1924, p. 6) rightly speaks about the impact of the Sassanian coins (Kavadh I, 488–531; Khusrau II, 591–628) on the "Jaroslav's silver."

46 *See* Whitting, 1973. On "Victory," see Grierson, 1968, pp. 65, 67, 85, 95, 102, 103, 148, 159, 172, 203–204, 269–76, 348, 393.

47 Morrisson, 1970, pl. IV–VII.

48 Ibid., pl. IX–X, XVII, XX.

49 Ibid., pl. XXVIII–XXIX, XXXII–XXXIII.

50 Ibid., pl. XXXIV–XXXVI.

51 On "Angel," see Grierson, 1968, pp. 67, 85, 95, 152–58, 332.

52 Morrisson, 1970, pl. XXVI–XXVII. *See* Grierson, 1968, p. 703, s.v.

to IhSЧS XRISTЧS ПICA;[53] the old Victory inscription was kept, however, on the Byzantine *miliarēsia* until 977.[54]

Interestingly enough, Constans II (641–668) arranged the reverse in such a way that the "Cross on steps" divided his two younger sons, Heraclius and Tiberius,[55] a composition closely resembling the Sassanid altar on steps with two attending *mōbedh*s. This model was repeated by Basil II (976–1025) and Constantine VIII (1025–1028),[56] and by some of their successors (*see illus.*, pp. 132, 134).

The "Cross on steps" as the symbol of the ruler's victory was taken over by other rulers, e.g., by the Lombard-Italian prince of Salerno Siconolfus (840–849) with the "charismatic" inscription *Victor*[*ia*] *Princi*[*pis*].[57] Also, the conquering Muslims (in Syria and Palestine) continued to use the "Cross on steps" type; they merely, during the seventh century, changed the cross into the Muslim star-and-crescent arrangement, and replaced the "Victory" legend with the Muslim *šahāda* (the creed formula, in Arabic).[58]

The "Cross on steps" (Calvary) became the main element on the *miliarēsia* of Basil II (976–1025), first on the obverses (class I; A.D. 977),[59] and later on the reverses (with the busts of the emperor): the classes IIA and IIB (977–989) and the class IV (989–1025).[60] It reappears (with the busts) on one series of the *miliarēsia* of Constantine X Ducas (1059–1067).[61] But it was not in use between 1025 and 1059, hence Jaroslav's models were the *miliarēsia* of Basil II.

Modern scholars call the trident of the Old Rus' rulers a "family emblem." Unfortunately, no coeval written source, Old Rus' or foreign, describes it. The very name "Trident" (Ukrainian *tryzub*, Russian *trizubec*) was first introduced by the Russian historian Nikolaj M. Karamzin

53 Grierson, 1973, pt. 1, p. 231.

54 Ibid., pt. 2, p. 627.

55 Morrisson, 1970, p. 339, pl. LII–LIII.

56 Grierson, 1973, pt. 2, pp. 613–32, pl. XLIII–XLVII.

57 Tolstoj, 1893, pp. 317–18.

58 Whitting, 1973, nos. 428, 430.

59 Grierson, 1973, pt. 2, p. 627, pl. XLVI, 16.

60 Ibid., pp. 628–37.

61 Ibid., p. 771, pl. LXIV.

(1766–1826).[62] The word *trezub/trizub* never occurs in the Old Rus' texts. The explanation I propose is that the trident was of Khazarian origin and was taken over by the Rus' branch of the dynasty, as their "pagan" symbol of the charismatic ruler's victory. The Old Rus' texts, produced by a zealot Christian milieu in which the mention of pre-Christian religious rites and deities was already a taboo, preferred to ignore its existence.

As mentioned above, the trident on Jaroslav's coins is made up of either four or six pellets. One pellet is positioned within a circlet on the tip of the central spike, while in the four-pellet tridents the three remaining pellets are put on the horizontal bar of the trident. The six-pellet trident has additional pellets positioned upon the two blades of the trident.

All known *one-nogata* issues have the four-pellet variant of the trident; while the *two-nogata* issues have both four-pellet[63] and six-pellet types.[64]

The struggle for power after the death of Volodimer I ended in 1026, when two claimants, Jaroslav and Mstislav, made a peace treaty, according to which Jaroslav would rule the Right Bank of the Dnieper with Novgorod as his capital (but without Kyiv which, as the patrimony of the dynasty, remained with the "youngest" brother) and Mstislav over the Left Bank with his capital at Černihiv.[65] When in 1036 Mstislav died without issue, Jaroslav united in his hands all lands of Rus',[66] that is, he added to his domain the two capital cities: Kyiv (having dethroned and imprisoned his younger half-brother Sudislav),[67] and Černihiv.

The four previous centers of his authority, known also from his "testament," were: Novgorod, Smolensk, Volodymyr-in-Volhynia and Perejaslav.[68] On this basis the year 1036 should be used as the chronological dividing line for the two periods of Jaroslav's coinage: the

62 Karamzin, 1892, Primečanija, p. 22n56.

63 Sotnikova and Spasskij, 1983, pp. 197–98, nos. 223–1, 223–2.

64 Ibid., 1983, pp. 196–98, nos. 222–1, 222–2, 224–1.

65 *PVL*, vol. 1 (1950), p. 100.

66 Ibid., p. 101.

67 Cf. *PVL*, vol. 1, p. 109 (*s.a.* 6567/1059). Sudislav was imprisoned for 24 years (1036–1059). He died in 1063 (Ibid.).

68 Cf. *PVL*, vol. 1, p. 108, and vol. 2, p. 389.

first was ca. 1034–1036 (trident with 4 pellets) and the second after 1036 (and before 1054; trident with 6 pellets).

Jaroslav's iconography was adopted by ΠΕΤVΡ and ΠΕΤΡΟΣ (according to this writer): Demetrius-Izjaslav Jaroslavič (1054–1078), and his son Peter-Jaropolk (1073–1086). Hence, on the obverses of their coins there appear the effigies of their respective saints (St. Demetrius and St. Peter); and on their reverses the main element is the trident of their branch (actually already reduced to a "Bident"), each with its own distinctive sign.[69]

The types "Vladimir II–IV" and "Svjatopolk" (in my opinion Volodimer II Monomax, 1078, 1093–1125; and Svjatopolk II Izjaslavič, 1093–1113) present a mixed character: the portrait of the ruler on the obverse (like "Vladimir I") and the Trident as the main element on the reverse (like "Jaroslav I–III").[70]

Patron Saints

Four patron saints are represented on the obverses of the Old Rus' coins: St. George, St. Demetrius, St. Peter, and St. Michael.

The representations of all of these were taken from Byzantine iconology (e.g., icons and seals), but not from Byzantine coins. Only two saints, apart from the Virgin, appear on the Byzantine coins in the period 717–1081. As mentioned above, Alexander (912–913) was the first emperor to have an effigy of his patron saint on his coins.[71] The second was Michael IV (1034–1041) who placed the portrait of St. Michael on the (rare) Thessalonian *histamenon*.[72]

Saint George (Georgius)

The effigy of this patron saint appears on the coins called "Jaroslav's silver." Its description is as follows: half-length likeness of beardless saint, facing, with short curly hair, wearing a tunic and himation, with a

69 See below (pp. 88–89).

70 See below (pp. 86–88).

71 Grierson, 1973, pt. 2, pp. 523–24, pl. XXXV (reverse).

72 Ibid., pt. 1, pp. 174; pt. 2, pp. 721–23, pl. LVIII (reverse).

fibula on the right shoulder, and with a pelleted nimbus around his head. The right hand is holding a spear, the left hand is covered by a round shield, adorned on the margin with beads. Only the upper part of the shield is visible.

Arist A. Kunik (1814–1899) collected and published Byzantine iconographical materials pertaining to St. George, including coins, from the times of Alexius I Comnenus (1081–1118) to John III Ducas Vatatzes (1222–1254).[73] First appearances of St. George on the Byzantine coins is only under John II (1118-1143).[74]

However, two Old Rus' princely (ἄρχοντες) seals were found with the likeness of St. George and an inscription resembling those on "Jaroslav's silver." The first seal was attributed rightly to Jaroslav-George (d. 1054),[75] while the attribution of the second seal, some decades older, is still a matter of argument among specialists.[76] The representation of St. George on the Rus' coins occurs on the obverse of the "Jaroslav's silver" (= Tolstoj's type "Jaroslav III").

There can be no doubt about the sigillographic origin of the effigy of the patron saint on "Jaroslav's silver."[77] Here Jaroslav, self-willed as he was, acted independently from the usage in the Byzantine numismatics contemporary to him. However, Jaroslav's sigillographic materials were, certainly, of Byzantine origin.

Saint Demetrius

Some Old Rus' coins have portrait of a young saint with pelleted nimbus. He appears either as beardless[78] or with moustache,[79] wearing a coat of mail and short cloak, with a fibula on the left shoulder. His right hand

73 Kunik, 1861, "Priloženie I," pp. 121–36, pl. B, C.

74 *See* Hendy, 1969, p. 437.

75 Janin, 1970, vol. 1, pp. 23–24 [= pl. 3 (p. 251), no. 24]. *See also* N. P. Lixačev, 1928, pp. 155–56, no. 72.

76 Janin, 1970, vol. 1, pp. 30-31 [= pl. 4 (p. 252), no. 35]. *See also* Hončarov, 1966, p. 372.

77 *See* Tolstoj, 1890, pp. 73–80, 1 pl.

78 Sotnikova and Spasskij, 1983, p. 194 (no. 213-1).

79 Ibid., p. 194 (no. 212-1); p. 196 (no. 218-1).

holds a long shaft which has instead of a point a cross with four pelleted arms. His left hand seems to hold something, but it is impossible to determine what because of the bad state of the portrait on the known coins. This representation appears on the obverse of the coins with the inscription ΠETVP (according to Tolstoj: "Jaroslav II;" according to me: Izjaslav I, 1054–1078).[80]

The figure in question is, in my view, the Old Kyivan representation of St. Demetrius of Thessalonica. He appears there either beardless (especially the mosaic from the St. Michael's Church in Kyiv, ca. 1108–1113),[81] or with moustache, as in the picture of the patron saint of Vsevolod III Demetrius ("Bol'šoe Gnězdo," 1176–1212) from the church in the city of Dmitrov.[82] The first appearance of St. Demetrius on the Byzantine coins was under Alexius I (1081–1118).[83]

Saint Peter the Apostle

Some Old Rus' coins have the representation of an old man with curly hair and short bushy beard and moustache. He is wearing a tunic and over it a long folded chiton with a pelleted nimbus around his head. The right hand is holding a plain cross with pellets added to its end (see the coins "Vladimir IV"); the left hand is holding a scroll. The inscription on the coins explicitly tells that the saint in question is ΠETPOΣ, that is, St. Peter.

Nikolaj P. Černev, who studied the Byzantine iconography of St. Peter, found one medallion which in his view closely resembled the Old Rus' effigy of the saint.[84] But the curly-headed, bushy-bearded portrait on the Old Rus' coins appears to have the same origin as the effigy and the miniature of St. Peter in the *Codex Gertrudianus* in

80 ΠETVP's coins are described in Sotnikova and Spasskij, 1983, pp. 193–96.

81 Lazarev, 1966, pl. 63–65.

82 Karger, "Živopis'," in Voronin and Karger, 1951, vol. 2 (St. Petersburg, 1951), p. 391 (fig. 188). St. Demetrius often occurs in Old Rus' sigillography. *See* N. P. Lixačev, 1928, pp. 71–78; and Janin, 1970, vol. 1, pp. 106–107 (fig. 189–192; 196–202; 211–12, 216).

83 Hendy, 1969, p. 437.

84 Černev, 1891, pp. 25–26, pl. XI.

Cividale/Trier from 1075–1076.[85] Also known is a seal with St. Peter, found in Kyiv (dated to the 11th c.), published by Nikolaj P. Lixačev.[86] In later (12th–13th c.) pre-Mongol Old Rus' sigillography St. Peter never occurs alone, but always—as in Byzantium (where there are exceptions, see below)—together with St. Paul.[87]

The full-length figure of St. Peter (bearded and nimbate, turned to left, holding two keys in his right hand) is found on the coins (type J) of the Nicean emperor John III Vatatzes (1222–1254), who married Constance ("Anna") the daughter of the German emperor Frederick II, and exchanged embassies with Popes Gregory IX and Innocent IV.[88] The image of St. Peter alone (with short beard, dressed in tunic and colobion, holding keys or scepter *cruciger* and keys) occurs also on Latin imitative coinage of the 13th century (from Constantinople: type S).[89] St. Paul (with long beard) also appears, embracing St. Peter, again only on late Latin imitative coinage (type T).[90]

St. Peter is represented on the Old Rus' coins on the obverses of the silver issues classified by Tolstoj as "Jaroslav I." According to this writer, those coins were struck by Prince Jaropolk-Peter (d. 1086).

The ΠΕΤΡΟΣ coins are discussed by Sotnikova and Spasskij.[91]

Saint Michael

On four Old Rus' coins there appears a bust of Archangel Michael, beardless, with short curly hair, pelleted nimbus, winged and in military dress. He holds a shaft which had instead of a point a cross with three pelleted arms, and a crescent as a base.

St. Michael is also known in Byzantine numismatics. His first appearance there is, however, under Isaac II (1185–1195).[92] The saint

85 *See* below, p. 108.

86 Lixačev, 1928, pp. 160–162, no. 75.

87 *See* Janin, 1970, vol. 1, pp. 92, 94, no. 208; pp. 127–128 (nos. 209, 210).

88 Hendy, 1969, p. 293, pl. 43, no. 7.

89 Ibid., 1969, p. 196, pl. 27, nos. 8, 9.

90 Ibid., p. 217, pl. 27, nos. 10, 11.

91 Sotnikova and Spasskij, 1983, pp. 191–93.

92 Hendy, 1969, p. 437, pl. 20, no. 1–4, 5–8, etc.

often appears in Old Rus' sigillography[93] and also in mosaics.[94] The effigy of Archangel Michael is found on the coins of Michael-Oleg Svjatoslavovič of Tmutorokan' (1078–1094, d. 1115).[95]

"Tridents" and "Bidents"

General

The tridents occur on the obverses of the coins "Vladimir I" (the "mini-version") and on the reverses of the issues "Vladimir II, III, IV"; as well as "Jaroslav III" (the full-version). The bidents are the central figure on the coins of "Svjatopolk," "Jaroslav II," (ΠΕΤΡΟΣ), "Jaroslav I" (ΠΕΤ∇Ρ), and Cyril-Vsevolod Ol'govich. It is possible to group the coin-tridents into three classes: 1) "Vladimir I"; 2) "Vladimir II–IV"; and, 3) "Jaroslav III." While the tridents of "Vladimir I" and "Jaroslav III" are clearly distinct, those of "Vladimir II–IV" belong together. They have the same treatment of the tine's loop and small triangular pedestals, which are more elaborated on "Vladimir III" and "Vladimir IV" (*see illus.*, pp. 125–27 and 135–36).[96]

"Vladimir I's" Trident

The trident (see esp. nos. 1–4, 25)[97] consists of two almost equally tall parts which are interconnected by a wide crossbar at a right angle. The upper part (in the shape of ⊔) makes two symmetrical tines without a loop. There is a spike in the middle, a little taller than the tines. The lower part, the basis, is a rough triangle as broad as the whole. Some issues have in its interior a still smaller triangle (nos. 17, 28).

93 *See* N. P. Lixačev, 1928, pp. 71–73, 75; and Janin, 1970, vol. 1, pp. 27–30.

94 Lazarev, 1966, pl. 4–8. Svjatopolk-Michael, the founder of St. Michael's Monastery in Kyiv (1108–1113), followed the pattern of Volodimer by putting on his coins his own effigy, not that of his patron saint, as did Jaroslav.

95 Published in Orešnikov, 1915, p. 302; N. P. Lixačev, 1928, pp. 144–45. *See also* Ljucenko, 1878, p. 169; and Kropotkin and Makarova, 1973, no. 250–54.

96 The oldest "trident" of Volodimer and the "bident" attributed to his father Svjatoslav (d. 972) are graffiti on Muslim coins. *See* the illustrations below, pp. 125 and 127.

97 The numbers refer to the items in the *Korpus* of Sotnikova and Spasskij, 1983.

The Trident on "Vladimir II"

The interior lines of both tines form symmetrical loops close to their basis. The upper parts of the tines are rounded on their interior parts. The triangular basis of the trident, reduced in size and rounded off below, is divided into two halves by an interior line which is connected with the two interior looping lines. The spike is raised on a circle being the head of a triangular pedestal which is interconnected with the lower part of the interior lines of the tines below their loops (*see* especially nos. 58 and 66).

The Trident on "Vladimir III"

This type of the symbol is a combination of the types "Vladimir I" and "Vladimir II." Like the type "Vladimir I," it has a double triangle in its lower part. However, the triangle is smaller than in the type "Vladimir I." It makes the basis of the trident, and it joins, in rounded forms, the two arms of the two heart-shaped triangles. As in the type "Vladimir II," the interior lines of the both tines form symmetrical loops which often are interrupted. The spike, which assumes the shape of an arrow-head (e.g., no. 117-1), is raised on a small ring which is itself based on a triangle divided by a line in the middle. The latter joins the tines at the level of loop (see no. 123-1).

The Trident on "Vladimir IV"

This type which could be regarded as "classic," has the loops in the interior of its tines (as the type "Vladimir II"), the arrow-headed spine (as in the type "Vladimir III"), but its heart-like (divided) basic triangle (as in type III), is interconnected with the small triangle of the spike. The distinctive features of the type are short lines (bars) which connect the loops to their respective outside tine lines (e.g., nos 160-1; 168-1). But not all copies have it (e.g., no. 171-1).

Some copies of this type, especially those with the inscription "of St. Basil," have a small rectangular cross on the head of the spike (no. 175-1).

Jaroslav's Trident

Jaroslav's trident ("Jaroslav III") has a continuous one line design with two symmetrical tines without a loop, a wide even-ended spike lower than the tines, and a plain triangular base (see esp. no. 222-1). Over the spike there is posed a circle, apparently symbolizing the sun. Inside it there is a pellet, and over the circle is a rectangular cross.

There are three subdivisions of Jaroslav's trident, namely those with no ringlets, those with four ringlets, and those with six ringlets.[98]

The Bidents

The bidents occur on the coins of four Rus' rulers (*see illus.*, p. 127). Three of them join the same basic emblem which is a two-pronged fork with a cross at the tip of the left tine. The tines end with loops, but the spike, all-present on the "Vladimir I–IV" coins, is missing (see e.g., 196-2; 206-1; 212-1). The heart-shaped triangular base is present, also divided by a perpendicular line into two halves.

The distinctive features which individualize each of the three rulers are: crescent ("Jaroslav I"), anchor ("Jaroslav II") and cross ("Svjatopolk").

Since the anchor occurs on the coins with the name Peter (ΠΕΤΡΟΣ), the bident in question—marked by the fisherman's, that is, St. Peter's, anchor—must belong to a Rus' ruler called by his Christian name "Peter."

Similarly, the cross and the name Svjatopolk (-Michael) individualizes this bident as belonging to the Rus' ruler with the Archangel's name. The Archangel Michael was honored as the "captain [original Greek, *archistratēgos*] of the heavenly host" and protector of Christians in general.[99]

Svjatopolk II Michael (1093–1113) is portrayed by the Old Rus' chronicle as a fighter for Christianity and the friend of the Kyivan Caves Monastery. "For Svjatopolk, before he went forth to the war or on some other mission, made it a habit to kneel beside the tomb of [St.] Theodosius,

98 On the meaning of the ringlets, see pp. 81–82, above.

99 Attwater, 1965, p. 245.

and after receiving the blessing of the abbot who was present, he proceeded with his errand."[100]

Jaroslav I's (Demetrius) crescent cannot be explained from medieval Christian symbolics. But "sun and crescent" (Old Turkic, *kün ay*) were the symbols of a ruler's charisma since the beginning of the history of the Eurasian steppe. See, for example, the title of the ruler Chi-chu (174–160 B.C.): "The great *Shan-yü* of the Hsiung-nu, born of Heaven and Earth and ordained by the Sun and Moon."[101] Apparently one is confronted with still another Old Rus' borrowing from the Altaic cultural legacy.

It seems to me that Demetrius' (Izjaslav's, 1054–1078) crescent does not have to be taken out of context of Jaroslav's symbolism. We have seen that the father (*Kagan* George-Jaroslav) put on the top of his trident a circle representing the "Sun." It is not surprising that the son (Demetrius-Izjaslav,) who was chosen by his father, the *kagan*,[102] to succeed him, decided to complete the symbolism with his own "crescent."

The extant coin bidents are a clear example of the paradigmatic development from a basic dynastic symbol to an individualized princely emblem.

* *
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There is another type of bident which can be described as an outline of the Dimitrije-Petros-Svjatopolk emblem, but without tines. It occurs on the Taman' bracteate[103] and seals of the Prince Cyril-Vsevolod Ol'govič (d. 1146).[104] On one seal of that prince there are six ringlets, situated around the symbol. It seems that they had the same role as the six ringlets of George-Jaroslav.[105]

100 *PVL*, vol. 1, pp. 186–87 [= English translation by Cross and Sherbowitz-Wetzor, 1973, pp. 203–204].

101 Ssu-ma Ch'ien, 1955, ch. 110, fol. 16b [= English translation by Watson, 1961, vol. 2, p. 171].

102 On *Kagan* Jaroslav, see, e.g., Pritsak, 1981, pp. 28–29, 31, 171–72.

103 Èngovatov, 1963, pp. 103–108.

104 Rybakov, 1940, p. 237; Janin, 1970, vol. 1, p. 217, no 289. (There is also written the name of the owner: КНРНЛ.)

105 Orešnikov, 1930, p. 101, no. 21.

CHAPTER 7

The Epigraphy of Old Rus' Coins

Introductory Remarks

All epigraphic texts on the Old Rus' coins are written either in Cyrillic or in Byzantine Greek alphabets, or in a mixture of both and Latin. Some examples for the latter usage:[1]

d ~ b (Byz. *b*) for Cyrillic B (*v*), nos. 1, 6
Δ ~ ∇ (Byz. *d*) for Cyrillic Д (*d*), nos. 99, 211–18
o (Byz. *d*) for Cyrillic Д (*d*), no. 6
R (Latin > Byz.) for Cyrillic P (*r*), no. 225
Ж (Latin *x*) for Cyrillic KC (*ks*), nos. 211, 214, 215
H (Byz. *ē*). for Cyrillic И (*i*), nos. 1, 5, 6, 7, 11, 18 *et passim*
N (Latin > Byz.) for Cyrillic H (*n*), nos. 177, 179, 180 *et passim*

There occur some specific forms of Cyrillic letters:
for A = ꙗ (nos. 15, 164, 165, 185, 187, 191); sometimes HA is written in the reversed order: ꙗH (nos. 123, 142)

ꙁ (nos. 159, 160, 162, 166-168, 175)
ꙇ (nos. 118, 126, 132, 137)
ꙉ (nos. 12, 18)
ꙅ (no. 6)
ꙕ (nos. 6, 168, 169)
ꙗ (nos 177, 193)

[1] Concerning the Old Rus' epigraphy, see the paleographic table in Tolstoj, 1893, p. 368. On Byzantine epigraphy, see Grierson, 1973, pp. 183–91. As before, the item numbers refer to the items in the *Korpus* of Sotnikova and Spasskij, 1983.

for Л =	h	nos. 6, 7, 10, 12, 34)
for Є/Ѣ =	+	(nos. 52, 53, 195)
	т	(no. 118)
for K =	⌐⌐	(nos. 179, 181, 183)
	⁓	(no. 180, 181)
	⌐	(no. 196)
	Kf7	(no. 196)
for Г =	⌐	(nos. 55, 135)
	Ի	(no. 141)
	т	(nos. 142, 165, 211, 214, 218)
for ъ =	ծ	(nos. 3, 11)
	Z	(no. 175)
	x	(no. 214)
	z	(no. 180)
for M =	ꟷH	(nos. 196, 211, 214)

Some letters are put upside down: ∀ W ⊥ Ь (nos. 25, 34, 52, 211).

There is an abbreviation (of an Old Bulgarian Slavic type)[2] in two variants for свѧт- (*svjęt-/svjat-*): ст̄ (no. 177) or сꙇ̄ (no. 178).[3]

* *
*

The oldest coins have their texts written in the Semitic way, from the right to the left (nos. 1, 3, 17, 29).

Two languages are used: Greek (seldom), e.g., ΠΕΤΡΟΣ (nos. 206–10), also in barbarized form: e.g. ΘΓΕΩVΓΙΟ (nos. 222–27), ΟΓΕΟΣ (no. 206), and Slavic (in the great majority of cases).

The Slavic is usually Old Church Slavonic with its non-pleophonic forms, e.g., *Vladimirъ* instead of East Slavic *Volodimerъ* (*Volodimirъ*);

2 The abbreviation is already to be found in the inscription of Tsar Samuel from 999. For photoreproduction, see, e.g., Seliščev, *Staroslavjanskij jazyk*, vol. 1 (Moscow, 1951), p. 75.

3 The abbreviation ст̄ has been already correctly explained in Tolstoj, 1893, p. 362. It is unclear why Sotnikova and Spasskij (1983, p. 83) explain ꙇ̄ as the Cyrillic letter т.

slto (no. 5), instead of *zoloto*; *sъrebro* (no. 222) and *srebro* (nos. 56, 223), instead of *serebro* (exceptions in nos. 178–180).

The second part of Svjatopolk's name, **polkъ*, is usually written in Old Church Slavonic fashion: *plъkъ* (nos. 178, 180, 199).

Two name forms seem to be transmitted by Turkic intermediary: *bla[d]mir-* (nos. 1, 6), instead of Slavic *v-*, and *Svjat-mlk-*, where *mlk* is **mulk* (see below).

* *
*

The inscriptional texts are short. They consist of personal names, which are either Slavic princely names (*Vladimir, Jaroslav, Svjatopolk*), or the names of their patron saints (*Basil, George, Peter, Demetrius, Michael, Cyril*). The royal title appears only on the coins of "Jaroslav II" (Izjaslav-Demetrius, d. 1078) in two variants: *rъiga* and *rix/rex* (see below).

Three formulas are attested: *na stolě* ("on the throne; reigning"); *a se ego zlto/srebro* ("and this is his gold/silver") and *serebro svjatogo Vasilija* ("silver of St. Basil").

Three types of sacred legends occur in the Slavicized variants: the name of Jesus Christ (Ісусъ Христосъ, no. 1) and abbreviated forms (ІС̄ ХС̄, no. 25); the votive inscription: *Gospodi pomozi* + name ("may the Lord help . . . "), and the final formula "Amen."

Personal Names

Two types of personal names appear on Old Rus' coins: two princely names and six of the respective princes' patron saints.

Princely Names

The two princely names which appear on the coins are *Volodimer* and *Svjatopolk*. The name *Volodimer* occurs on both gold and silver coins of four types.

"Vladimir I": Gold

The typical feature of the oldest dies is that the inscription reads from right to left; the orthography in the princely name is nearly correct (fig. 7–1).

Fig. 7–1

Ъ ⅂ H M A A d	*V l a [d] m i r ъ*
7 6 5 4 3 2 1 (no. 1)	1 2 3 4 5 6 7
+BΛΔHHMHP (no. 5)	*+Vla[d]iimir*
bh3OHMHPЪ	
bΛ⅂OHMHPЪ	*Vladimirъ*

"Vladimir I": Silver

The name is usually written almost correctly, with some typical features (**h** = **Л**), and orthographical variants (**H** and **I**, and letters sometimes appear upsidedown, etc.; fig. 7–2).

Fig. 7–2

BhΔДHMHPЪ (no. 7)	*Vladimirъ*
+BΛΔДHMHP (no. 11)	*+Vladimirъ*
+BΛΔΛHMIPЪ (no. 18)	*+Vladimir*
BhA H W HP (no. 34)	*Vla[d]imir*
ЧHMHДAΛB (no. 17)	*Vladimir*
8 7 6 5 4 3 2 1	

"Vladimir II"

The princely name on the coins of this type are usually quite distorted, but in most cases still recognizable as "Vladimir." A few examples will suffice (fig. 7–3).

Fig. 7–3

BAΛIIII (no. 52)
MP (no. 53)
BÞΛIIIIMP (no. 55)
ГПГПГ⅂<Þ (no. 65)
BÞΔHMP (no. 99)

"Vladimir III"

In this type the princely name is written correctly, but with various abbreviations (fig. 7–4).

Fig. 7–4	ВΛ**а**ΛНМНРЪ (no. 118)	*Vladimirъ*
	Λ**а**ДНМНР (no. 119)	*Ladimir*
	ВΛАНМІР (no. 123)	*Vla[d]imir*
	ВΛ**а**МᵽЪ (no. 124)	*Vla[d]mrъ*
	ВΛ**а**Д (no. 126)	*Vlad*
	ВΛДНМНР (no. 132)	*Vl[a]dimir*
	ВΛ**а**ДНМІРЪ (no. 145)	*Vladimirъ*

"Vladimir IV"

The princely name is usually written correctly (fig. 7–5).

Fig. 7–5	+ВΛ1ДНМНРЪ (no. 160)	*Vladimirъ*
	ВΛАДНМНРЪ (no. 171)	*Vladimirъ*

The form on the golden coins, probably the oldest of Volodimer's issues, is remarkable not only that it is running in the Semitic way, from the right to the left, but also that it has Byzantine *b* in its initial position. It may be the result of Turkic transmissions of the name (see also *Svjatmlk*, below). The Arabic author Šaraf az-Zamān Ṭāhir al-Marvazī (ca. 1120) writes the name Volodimer with the initial *b*-: *bwl'dmyr/buladmir/*, apparently under the impact of the popular Persian (> Turkic) etymology: Persian *pūlād* 'steal' and *mīr* (Arabic *emīr* 'prince').[4]

Marvazī's story was retold by the Persian author *'Awfī* (1236) in his *Ǧāmi' al-ḥikāyāt*; the known manuscripts of it have three variants of the initial letter: *pūlād*, *būlād*, and *fūlād*.[5]

It may be stressed again that the name is represented on the coins in its Old Bulgarian form *Vladimirъ* rather than in East Slavic pleophonic form *Volodimirъ/Volodimerъ* which is the rule in the *PVL*.

4 Minorsky, 1942, p. *23 (Arabic text) = p. 36 (English translation).

5 Bartol'd, 1963, p. 806.

Svjatopolk

There are two typical features in the writing of this name: the abbreviation of *Svjęt-/Svjat-* in the form cт̄ , cᴉᴉ , and several variants of the final **-къ**: KҒ'ᄀZ, ¯¯Z, (fig.7–6).

Figure 7–6	Cт̄OПКЪ (no. 177)	*Svjatop[lъ]kъ*
	CᴉᴉOПЛ¯¯Z (no. 179)	*Svjatoplъkъ*
	CᴉᴉOПЛКҒ'ᄀZ (no. 180)	*Svjatoplkggъ*
	CᴉᴉOΓЛL¯ (no. 181)	*Svjatoplъkъ*
	CᴉᴉOПЛLTΓꟻ (no. 194)	*Svjatoplъggъ*
	Cт̄OнЛ¯Ъ (no. 196)	*Svjatomlkъ* [*sic*]

This second of the only two princely names occurring on the Old Rus′ coins, has the same two pecularities as the first.

It appears there in its Old Bulgarian (non-pleophonic) form: *-plъkъ*, and has a variant (last on the list above) which indicates that there was also a parallel Turkic transmission at work. The classical Arabic geographer Ibn Rustah (ca. 912) writes this Slavic name in the form *swyyt-mlk*, apparently under the impact of the popular etymology: Arabic (> Turkic) *mulk* ("rule, reign, dominion, kingship, power").[6]

The Names of Patron Saints

St. Demetrius

This name is written vertically: ΔH/ннH⊥dᄀꞆ (no. 211) *Dimitrije*. It occurs on coins of the type "Jaroslav II." It also appears in an abbreviated form ΔP = *D*(*imitrije*) *R*(*ex*).

St. George

The typical feature of coins of the type "Jaroslav III" is the Greek inscription ΘΓΕΩVΓΙΟ, (ὁ ἅγιος) Γεώργιο(ς) (nos. 222, 224).

6 de Goeje, 1892, p. 144.

St. Cyril

The inscription КИРИЛ- occurs in a votive inscription on a unique Old Rus′ brass bracteate (see below).

St. Michael

The votive inscription МИХАИЛ- is found on a group of coins from Tmutorokan′ (see below).

St. Peter

This name appears in Greek, both written out in full, ΠΕΤΡΟC (nos. 207–209) or ΟΓΕΟC ΠΕΤΡΟC, (no. 206), as well as in the abbreviated form ΠΕΤ (nos. 211–215). The first is typical of the coins "Jaroslav I," the second of "Jaroslav II" (or "Petor").

St. Basil

Only one group of coins of the type "Vladimir IV" has this name: СЪВАТОГО ВІСНЛА 'of St. Basil' (no. 175).

The ΠΕΤΡΟΣ *Inscription*

One group of Old Rus′ coins has the inscription ΠΕΤΡΟC, written twice on the obverse, and ΟΓΕΟC ΠΕΤΡΟC (nos. 206–207) on the reverse. A characteristic feature of this group is that the inscription reads from top to bottom, with some palaeographical peculiarities:

(a)

Obverse (no. 206)		Reverse (no. 206)	
Π	)	O	+
E	O	Γ	(
T	1	Є	
O ϥ	⋒	O	)
C	⊔	C	⊔

(b)

Obverse (no. 207)	Reverse (no. 207)
П	O
E	C
◤T [=TP]	П
O	E
C	T

The first word in the inscription on the reverse has been read correctly as the Greek ὁ ἅγιος, 'saint.' If by one of these Peters, Saint Peter, is meant, the two others can be easily explained. The first is the pope, and the second the prince of Rus' who bore this Christian name. These coins were apparently struck to mark the coronation by Pope Gregory VII of Jaropolk-Peter as King of Rus', in 1075,[7] an event which was regarded as important and which is portrayed in the *Codex Gertrudianus* in Cividale (see below, p. 108).

The ПЕTVP *Inscriptions*

Another group of coins (nos. 211–215, 218) has inscriptions which have not been completely deciphered. Concerning the inscriptions on the reverse side of these coins, the authors of the *Korpus* of Old Rus' coinage, Marina P. Sotnikova and Ivan G. Spasskij, said, "Thus, the mutilated state of the legend, which must have rendered it meaningless even in the first dies, grows worse with each new die; and in the end the reading of the legend is not merely subject to dispute, as has long been thought, but simply impossible."[8] Fortunately, the case is not so bad as the learned authors of the *Korpus* assume. It is possible to decipher this "unreadable" inscription.

7 The following can explain the multiple usage of the name "Peter" on the Rus' coin of ca. 1077. In 1077, while sending the crown to the the anti-king of Germany Rudolf of Rheinfelden (d. 1080), the Pope Gregory VII pronounced the famous saying: *Dedit Petra Petro; Petrus diadema Rudolpho*, i.e., "Petra (= St. Peter) gave the crown to Peter (= the Pope) and Petrus (= the Pope) [gave it] to Rudolf."

8 Sotnikova and Spasskij, 1982, p. 120.

The inscription on the obverse side consists of two columns, the first of which reads upwards, the second, downwards (cf. nos. 211–215):

I	+
T	П
H	Э
P	T

The letter T stands for Г (*g*); and the letter I for A, as it does in the coins of Svjatopolk: HI for HA, *na* ('on').[9] The word in question is РНГА, *riga*, a Byzantine borrowing in Old Rus' (from Latin *rex* > ῥῆγας),[10] 'king,' which was used to render the Western (Catholic) king; it had also the "suffixal" form *-riks*, e.g., the King of Hungary in the Hypatian Chronicle s.a. 6737/1229: *iziide že Běla-riksъ rekъmyi korolь ugorьskyi,* "Bela *riks* (*rix*), that is the Hungarian king, set off."[11] See also below.

The two titles of the ruler of Old Rus' were non-Slavonic and non-Christian in origin: *kъnęz-* was the Old Scandinavian designation (*konung-*) for every member of the ruling dynasty, while *kagan* was the Khazarian imperial title. In 1075, Izjaslav (Dimitrije) and his son Jaropolk (Peter) became kings of the Western type. It is easy to understand why both Izjaslav and Jaropolk adopted the Western title in the form of *riga* (var. *rъiga*) or *riks*.

The second column of the inscription consists of two words in abbreviation: ПЕТ stands for ПЕТРОС, *Petros*, meaning the pope of Rome, who had crowned the Rus' princes; ΔР is D(imitrije) R(ex) [see below], i.e., Demetrius, the Christian name of King Izjaslav Jaroslavič (1054–1078), with the "suffixed" form of the Catholic title for ruler.

The inscription on the reverse also consists of two columns, the text of which reads circularly beginning with the first two letters in the second column. Four letters which have made the inscription unreadable

9 Ibid., 1983, nos. 179–187, 191; cf. IH (= HA) on coins of "Vladimir III" (no. 123).

10 M. Vasmer, 1953-58, vol. 2 (1955), p. 521. This is the 'independent' form of the title. In one die (no. 215) the sign + stands for the letter ъ in the word, *rъiga*; cf. the signature of Anna Jaroslavna from ca. 1060, гъуна, *rъina*, 'queen' (< *regina*). The suffix form was *-riks* (written also with *-x* in final position).

11 *Ipat'evskaja letopis'*, 1908, ed. 760; English translation: Perfecky, 1973, p. 37.

are: ꙊН (nos. 212, 213), the variant of ҺН (nos. 211, 214) which certainly stands for M; X is Ъ; Ѥ is *je/e*; and Ж is simple X.[12] The inscription runs as follows:

Text				Transcription			
no. 211		*no. 212*		*no. 211*		*no. 212*	
3	ҺН	2	Н	3	*m*	2	*i*
4	Н	1	О	4	*i*	1	*d*
5	⊥	9	ꟼ	5	*t*	9	*r*
6	d	10	Ѥ	6	*r*	10	*e*
7	7	11	Ж	7	*i*	11	*ks*
8	ҍ			8	*je*		

i.e., *Dimitrije*[13] *rex*, 'Demetrius the King.' The last word appears also in two other variants:

no. 211		*no. 214*	
7	*r*	9	*r*
Н	*i*	X	ъ
Ж	*ks*	⋒	*e*
		Ж	*ks*

i.e., *riks*, and *rъeks* (cf. *rъiga, rъina*).

The Formula na stolě

This formula occurs on the obverse side of coins of the type "Vladimir I (but see above p. 92), II, III, IV", and "Svjatopolk." The locative ending has three variants (*-ě, -e, -u*); *t* sometimes appears as ⊥; and *l* as h:

на столє (nos. 117, 126, 174)
на столѣ (nos. 128, 129, 144, 167, 170)
на стоhє (no. 18)

[12] The Latin *X*, especially in the word *rex*, often appears on Byzantine coins, e.g., Whitting, 1973, p. 33.

[13] See the inscription on the famous icon of St. Demetrius from Dmitrov (Rostov-Suzdal').

на сꙮолє	(no. 25)
на стоLъ	(no. 19)
на столꙋ	(nos. 8, 14, 15)
на стоhꙋ	(nos. 7)

The oldest variants of the formula are written like Semitic script, from right to left.[14] Some coins of the type "Vladimir IV" (nos. 167-170) and almost all of those of "Svjatopolk" have either I, 1, or Г for A.

The sentence *na stolě* (*-e*, *-u*) means 'on the throne,' and is unique in medieval European numismatics. Unfortunately, it has not yet been the subject of any investigation.[15] It seems to me that one must look for its origin in Turkic (Khazar-Turkic) royal ideology. The data of the Orkhon inscriptions (A.D. 731, 732) show that the concept of "royal rule" was expressed there by the formula *qaγan oltur-* (< '*oldur-*), 'to sit as *kagan*.'

The Formula "And This is His [i.e., the Ruler's] Gold/Silver"

This formula has two variants:

1) The pronominal variant:
   А СЕ ЕГО ЗЛАТО (nos. 5, 6), 'and this is his gold'
   А СЕ ЕГО СРЕБРО (nos. 19, 52, 55, 56), 'and this is his silver'

2) The nominal variant:
   ЊАРОСЛАВЛЕ СРЕБРО (nos. 222–225), 'Jaroslav's silver'
   ВЛАДИМИРЕ СЕРЕБРО (no. 175), 'Volodimer's silver'

Unknown in Byzantium, medieval Europe, and the Islamic world, this formula is attested in West Turkic Türgiš coinage, written in the Uighur script: Bγy twrkyš γγn pny,[16] i.e., *teñri türgiš qaγan beni*, 'the

[14] Some peculiarities and errors occur, e.g., А for Л; Ь for Ѣ; Ї for Т; +dAOЇ)AHЪ¬IHMAAd for **ВЛА[Д]НМНРЪ НА СТОЛ**, see nos. 1–3; cf. nos. 17, 29.

[15] Stanisław Suchodolski remarks only on the formula's manifest purpose of stressing the importance of the ruler. Suchodolski, 1971, p. 137.

[16] Smirnova, 1963, pp. 265–72.

bronze coin (*ben* < Chinese *fen*) of the divine Türgiš *kagan*.' The coin in question (*pn*-) is the type *t'ung-pao*, which was minted in the era *k'ai-yüan* (713–742). Compare with the formula *na stolě* and the "Trident."

The Formula "Silver of [the Patron] Saint [N.]"

This formula is attested only once on a coin of the type "Vladimir IV." The Prince Volodimer in question apparently bore the Christian name of Vasilij (Basil):

ВЛАДНМНРЕ СЕРЕБРО СЪВѦТОГО ВАСНЛѦ i.e., 'Volodimer's silver of St. Basil' (no. 175).

The inscription presents some palaeographic peculiarities: it is written in a unique script resembling literary cursive, and hence it cannot be dated before the flourishing of literary activity in the second half of the eleventh century.

Sacred Legends

There are three types of sacred legends on Old Rus' coins: 1) the name of Jesus Christ; 2) the votive invocation; 3) the formula 'Amen.'

The Name of Jesus Christ

This sacred legend has two variants, both borrowed from Byzantine usage on the obverse of coins:

a) The full formula ҺС ЧСЪ ХРНСТ ЧС(Ъ) 'Jesus Christ'
b) The abbreviated formula: І҃С/И҃С Х҃С.

Both variants of the formula appear with the bust of the Pantocrator, and only on the reverse (not obverse!) sides of the coins of the type "Vladimir I." The full formula is typical of the subtypes 1–2, and the abbreviated formula of subtypes 3–4.

The oldest variants of the full formula are written from right to left (Semitic order), e.g., nos. 1, 2, 17. The same script order appears sporadically in the abbreviated formula: ϴХ ϴІ (nos. 37, 38).

Votive Invocations

1. Coins of the type "Michael" (= Oleg of Tmutorokan′) have the following inscriptions:

Obverse: МХ for МНХАНЛ (Slavonic)
or МІХАНΛ (Greek)

meaning "the [Archangel] Michael," whose portrait appears on the coins.

Reverse: ГН ПО
МОЗН
МНХА
НЛ

i.e., ГОСПОДИ ПОМОЗИ МИХАИЛ[У], "God, help Michael."[17]

This formula is of Byzantine origin, and was in use there especially on seals. The Greek text of it was:

Κύριε/Θεοτόκε	"May the Lord God/the Mother of God
Βοήθει τῷ σῷ δούλῳ	help His/Her servant."

[17] Michael's silver coins are not included in the *Korpus* of Sotnikova and Spasskij. Only four copies of them have survived. The circumstances of the discoveries of three of them are unknown (*pers. com.* from Sotnikova to me, dated 14 June, 1977).

The available information on each of them is as follows. All three coins were found in Taman′ (Old Tmutorokan′; Temrjuk *rajon*, Krasnodarskij *kraj*, Russia). The first coin of Michael (2.08 g; diameter 21 mm.) was found in 1869, and soon purchased from a peasant A. Švedov by Efim E. Ljucenko, who later sold it to Ivan I. Tolstoj. Since 1917 the coin has been in St. Petersburg's Hermitage Museum (no. 141). *See* Ljucenko, 1871; *id.*, 1878; Il'in, 1924; Repnikov, 1928, pp. 437–38, 444, кн. 13; N. P. Lixačev, 1928, pp. 144–45, fig. 67.

In 1909 another silver coin of Michael (1.81 g; diameter 20 mm) was found in Taman′ and purchased by the local doctor Terleckij, who gave it in 1910 to the Hermitage (no. 142). *See* Markov, 1913, pp. 100–101; Repnikov, 1928, p. 440n13.

The third coin of Michael (1.3 g) was found in Taman′ in 1911, and again was purchased by Terleckij and given by him to N. I. Bulyčev's collection. It is (since 1926) kept in Moscow's GIM (no. 582273). It is said to be the best preserved of all known copies. *See* Orešnikov, 1915, pp. 302–303; Repnikov, 1928, p. 440n13.

Recently the a fourth coin of Michael was found, this time in the church of St. John the Baptist in the old city of Kerč (Korčev) on the left (Crimean) bank of the Strait of Kerč (the old Bosporus). *See* Kropotkin and Makarova, 1973.

The Slavonic translation used in Rus', runs as follows:

ГН (= ГЪСПОДИ) ПОМОЗИ МИ/РАБУ "May the Lord God help me/the servant."

In Byzantine numismatics the formula appears first in the 10th century. Romanos I Lecapenus (920–944) used it on his *solidi* in 921: Κύριε βοήθει [Greek].[18] Nicephorus II (963–969) replaced "Lord God" with the "Mother of God," variant, θεοτόκος (. . .).[19]

In the 11th century the formula became very popular in Byzantine numismatics, after Constantine VIII (1025–1028) reintroduced the "Mother of God" variant,[20] and Isaac I Comnenus (1057–1059) that of the "Lord God."[21]

The formula βοήδει appears in Rus' first on seals in the 11th century. Those of the metropolitan of Rus' Theopemptus (1037–ca. 1043) naturally are in Greek;[22] those of Prince Volodimer II Monomax (b. 1053–d. 1125), whose mother was Byzantine, are in Slavic.[23]

The formula was also found among the graffiti of the Cathedral of St. Sophia in Kyiv, authored by the members of the ruling dynasty in the 1060s; examples of it are in Slavic.[24]

The patron who struck the Rus' coins with the inscription "Michael" has been identified as Michael-Oleg Svjatoslavič (d. 1115),[25] who, having been robbed of his patrimony by his uncle Vsevolod Jaroslavič (1078–1093), spent some years in Byzantium (1078–1083), became then the ruler of Tmutorokan' (1083–1094) and finally regained Černihiv after a successful war with Volodimer Monomax (1094), whose enemy he had remained until his death.

The "Michael" issues were struck while Oleg ruled in Tmutorokan'. There have been found Greek seals of Michael and of his wife, Theophano

18 Grierson, 1973, pp. 544–45.

19 Ibid., 1973, p. 583.

20 Morrisson, 1970, vol. 2, p. 265.

21 Grierson, 1973, p. 763.

22 Janin, 1970, p. 174, no. 41.

23 Ibid., p. 187, no. 97.

24 Rybakov, 1964, p. 16, nos. 3, 4.

25 Soloviev, 1979, no. VII, p. 578.

Muzalonissa, both with the formula. Naturally both are from their Tmutorokan′ period, i.e., 1083–1094. The text of Michael's seal reads: + K[ύρι]ε β[οή]θ[ει] Μιχαὴλ ἄρχοντ[ι] Ματράχ[ων] Ζιχίας + πάσης [X]αζαρί[ας], [26] i.e., "God, have mercy on Michael, the archont (= prince) of Matracha (= Tmutorokan′), Zichia (= Circassia) and all of Khazaria". The inscription of Theophano is as follows: +K[ύρι]ε β[οή]θ[ει] τῇ σῇ δούλῃ Θεοφάνου αρχόντησ[σ]ῃ 'Ρωσίας τῃ Μουζαλωνήσ[σ]ῃ, [27] i.e., "God, help Thy servant Theophano, the archontissa (= princess) of Rhōsia, the Muzalonissa."

Of all Old Rus′ principalities, Tmutorokan′ (τὸ Ταμάταρχα) was closest to the Byzantine cultural sphere.

2. The only known Old Rus′ bracteate was found in Taman′ sometime in the first quarter of this century.[28] Somebody sent it to Aleksej V. Orešnikov (1855–1933), who delivered it to the State Historical Museum (GIM) in Moscow.

The silver-plated brass bracteate was recognized as an issue of Prince Cyril-Vsevolod Ol′govič, the son of Michael-Oleg Svjatoslavič, while he was ruling in Tmutorokan′ (and Černihiv, to 1139; d. 1146).[29]

The inscription contains the Slavic version of the formula: помозн мн г[о]с[по]дн кирнл[у], i.e., "Lord, help me, Cyril."[30]

Typical for the Rus′ version of the βοήθει formula is the absence of royal titles. Only the Christian given names appear.

The formula "Amen"

This formula occurs only on the reverse of the large 'Jaroslav silver,' where it is written outside the inner margin. It is read circularly, from right to left:

26 Ibid., pp. 569–80; Janin, 1970, pp. 26–30; 171, no. 29.

27 Janin, 1970, pp. 24–26; 171, no. 30. But see Každan, 1963.

28 The circumstances of the discovery have remained unknown (Sotnikova's letter to me, 14 June, 1977). Cyril's bracteate is not included in Sotnikova and Spasskij's, *Korpus* of 1983.

29 Orešnikov, 1936, p. 85, pl. 1, fig. 17.

30 I follow the reading of Engovatov, 1963. There are seals of Vsevolod-Cyril and his wife Maria, both with the Slavic βοήθει formula; see Janin, 1970, pp. 189–90, nos. 114–116.

A
H M
N

*Amin*ь, 'Amen.'

The obverse of these coins has four groups of circularly arranged pellets instead of letters.

As Ivan I. Tolstoj stressed, the appearance of the formula AMHN on "Jaroslav's silver" is a hapax in European numismatics. He rightly suggested that this formula, like the effigy of the patron saint, were taken by Jaroslav's die sinkers from his seal. Byzantine sphragistics has many cases where the formula AMHN follows the name of the seal owner; often, the formula βοήθει also occurs.[31]

This was also found by Arist Kunik on one Old Rus' princely seal: +ГИ ПОМОЗН РАБОУ СВОЕМУ ВАСНЛНѪЖ АМНN.[32]

Old Rus' Numismatic Abbreviations

What follows is an alphabetized list of the abbreviations utilized in the present chapter:

ГН	ГОСПОДН
Д	ДНМНТРІ
І$\widetilde{\text{С}}$/И$\widetilde{\text{С}}$ Х$\widetilde{\text{С}}$	ІСУСЪ ХРИСТОСЪ
МХ	МНХАНЛ/МІХАНЛ
О	ОГЕОС (ἅγιος)
ПЕТ	ПЕТРОС
Р	РЪЕКС (REX)

Compare these to abbreviations of the Byzantine period:

ΒΔ	ὁ βασιλεύς δεσποτής
ΜΒ	Μιχαήλ Βασίλειος[33]

31 Tolstoj, 1890, p. 80, fn. 2.

32 Kunik, 1860, p. 92.

33 Grierson 1973, pp. 1, 486, 875.

CHAPTER 8

A New Classification of the Old Rus' Coins

Historical Commentary to the Datings

Three Old Rus' rulers are depicted on their coins holding the same type of "Trident," being in fact a "Bident." These are "Svjatopolk," "Petros," and "PET DR" (= Demetrius). "Petros" and "Demetrius" also share the same type of iconography (obverse:obverse) as "Jaroslav III," while Svjatopolk follows the type "Vladimir IV."

In their *Korpus*, Marina P. Sotnikova and Ivan G. Spasskij decided that all three of the types in question belong to three different series of coins issued by Svjatopolk I (1015–1018), who—according to them—might have borne the Christian name Peter.[1] Their insistence on Svjatopolk is based on two premises: the classification of Ivan I. Tolstoj in 1882, and, allegedly, on the chronology of the hoards. In several chapters of this book it has been shown that in fact there were no real datable hoards with the Rus' coins, and therefore in the absence of such help it is impossible to date the coins just from scattered finds. Svjatopolk in this case must be identified with Svjatopolk II (1093–1113).

Demetrius-Izjaslav of Kyiv (1054–1088) was survived by two sons: Peter-Jaropolk and Svjatopolk. His relationship with them was different. When in 1073 he was forced by a coup to seek refuge abroad, he was accompanied only by Peter-Jaropolk, and not by Svjatopolk.[2]

Izjaslav's seniorial rule in Kyiv was interrupted twice: first by the revolution of the Kyivan burghers (1068–1069), sponsored by the Greek

1 Sotnikova and Spasskij, 1983, pp. 81–96.

merchants[3] and St. Anthony of the Caves Monastery),[4] and secondly by the coup just mentioned, a conspiracy against Izjaslav on the part of his two younger brothers, Svjatoslav of Černihiv (1073–1076) and Vsevolod of Perejaslav (1076–1077).[5]

The expelled ruler sought and found help in 1069 from his relative (by marriage) Bolesław II of Poland (1058–1079). In 1073 Izjaslav again fled to Poland, but this time he did not receive the support he expected. He was forced to travel further west, first to the King of Germany Henry IV (1056–1106), and then to the latter's adversary, the famous Pope Gregory VII Hildebrand (1073–1085). Izjaslav's second exile, in which Svjatopolk did not have a part, is therefore of great historical consequence and I shall dwell on it here in greater detail.

As is well known, Gregory VII developed a hierocratic ideology ("Dictatus papae Gregorii VII") claiming that the pope, as the successor of the "universal government" (*regimen universale*), "alone may use the imperial insignia," and "depose emperors." The king (*rex*) as a representative of the temporal "sword" had to receive his *regnum* as a fief from the hands of St. Peter, i.e., from the pope.[6]

In the spring of 1075, Izjaslav sent a special mission consisting of his son Peter-Jaropolk, his own wife Gertrude, and Peter-Jaropolk's wife, Kunigunde-Irene to Rome. Gertrude and Izjaslav were married in 1043, eleven years before the schism (1054). She was the daughter of the Polish Prince Mieszko II Lambert (1025–1034)[7] and he had remained a devout Catholic after 1054. In the same year (1043) her brother Kazimierz I Karol of Poland (1039–1058) took for his wife Izjaslav's aunt Dobronega (b. 1012, d. 1087), the youngest daughter of Volodimer I the Great

2 Welykyj, 1968, pp. 216–18.

3 *See PVL*, vol. 1 (1950), pp. 115–16: Заутра же видѣвше людье князя бѣжавша, възвратишася Кыеву, и створиша вѣче, и послашася къ Святославу и къ Всеволоду, глаголюще: "Мы уже зло створили есмы, князя своего прогнавше, а се ведеть на ны Лядьскую землю, а поидѣта в градъ отца своего; аще ли не хочета, то вам неволя: зажегше град свой, ступим бъ Гречьску землю."

4 Abramovyč (ed.), 1930, reprinted in Čyževs'kyj, 1964, p. 186: "и нача гнѣватися Изяславъ на Антонiа про Князя Всеслава. И присла Святославъ ис Чернигова въ ноши по святаво Антонiа . . ."

5 *PVL*, vol. 1, pp. 121–22.

6 *See* Ullman, 1965, pp. 100–15; Emerton, 1969.

7 Wędzki, 1964.

(980–1015).[8] Peter-Jaropolk married (ca. 1073) a German Catholic princess Kunigunde-Irene (d. 1117), the daughter of Otto of Orlamünde, the Margrave of Meissen in Saxony (1062–1087).[9]

There is a most reliable coeval source dealing with Gertrude's and her son's Catholicism. It is the so-called *Codex Gertrudianus*,[10] an eleventh-century addition to the Psalter once owned by Archbishop Egbert of Trier (977–993), which, since 1229 has been preserved in Cividale del Friuli, the former official see of the patriarch of Aquileia. The *Codex Gertrudianus* consists of five miniatures executed, according to art specialists, ca. 1078 and 1086 in Byzantine Rus' style,[11] and of 92 Catholic prayers written in Latin by Gertrude herself. Two of the miniatures are historical while the remaining three are religious illustrations. The initial miniature (fol. 5v.) represents a large seated figure of St. Peter (O AΓIOC ΠETPOC); at his feet there is a small portrait of an older princess styled as Jaropolk's mother (M[HTH]P) ЯРОПЪЛ[ЧА], and to his left a standing royal couple is depicted in a praying gesture with the inscription O ΔIKAIO [12] ЯРОПЪЛК.

The second miniature (fol. 10v) portrays the ceremony of the coronation of the royal couple performed by Christ the Pantocrator (X[PИCTO]C), seated on a square-backed throne. Jaropolk is standing on Christ's right side, while Irene-Kunigunde is on his left. The couple are watched over by their patron saints, St. Peter and St. Irene (H AΓIA IPИHA).

There can be no doubt concerning Gertrude's Roman Catholicism. While the Egbert part represents the Christian confession of faith of the pre-1054 stage, Gertrude adds there (no. 13) the *Filioque*, in accordance with the new Roman practice.

Gertrude's prayers are directed to St. Peter, the Virgin Mary, and St. Helen, the mother of the Emperor Constantine I (306–337). She asks for assistance, health, and support against enemies for "her only son," Peter-Jaropolk: *pro unico filio meo Petro; pro omni exercitu unici filii mei.* Svjatopolk apparently did not count here as Gertrude's son.

8 Pašuto, 1968, pp. 39–40.

9 Dworzaczek, 1959, pl. 65; Pašuto, 1968, pp. 43–44.

10 Kozłowska-Budkowa and Molé, 1964. The basic edition: Sauerland and Haseloff, 1901; Kondakov, 1906.

11 *See* Sauerland and Haseloff, 1901.

12 *See* Janin, 1963, pp. 150–53.

Interestingly enough, Gertrude appears also in the *Pověst' vremennyx lět* (PVL) as "the mother of Jaropolk" (*materь Jaropolčjù*).[13]

Svjatopolk's mother—who is mentioned in the same source as *Svjatopolča mati*,[14] and in a Kyivan graffito (St. Sophia's) as *Olisavě Stoplъči materi*—was certainly (*contra* Valentin L. Janin) not identical with Gertrude, who speaks only about her "only son" Peter, and who for this reason could not have been the mother of Izjaslav's other son, Svjatopolk.[15]

Peter-Jaropolk was received personally by Gregory VII who, apparently after the coronation was performed, handed over to Jaropolk a letter addressed to Jaropolk's father, Demetrius, King of the Rus' (*Demetrio regi Russorum*) and his queen (Gertrude) (*see illus.*, p. 138). This letter "[granted] the kingdom to their son Jaropolk."[16] In this document, issued on April 17, 1075, the pope wrote:

> Your son, visiting the shrine of the Apostles, came to us and, desiring to obtain that kingdom by a grant from St. Peter through our hands (*et quod regnum illud dono sancti Petri per manus nostras velle obtinere*), and having given proof of his devoted loyalty to that same Peter, chief of the Apostles, made his demand with prayerful submission. He declared without reserve that his petition would be ratified and confirmed by your consent if it should be granted under the favoring protection of the apostolic authority:
>
> To his promises and his petition, because they seemed to be authenticated by your consent and by the devotion of the petitioner, we finally gave our assent and in the name of St. Peter transferred the government of your kingdom to him. We have done this, however, with the intention and desire that the blessed Peter, by his intercession before God, may guard you and your kingdom and all your possessions and may permit you to hold your kingship in all peace, honor and glory to the end of your lives . . . [17]

13 *PVL*, vol. 1, p. 136 (s. a. 1085).

14 Ibid., p. 187 (s. a. 1107).

15 Vysoc'kyj, 1962, pp. 154–56, 176–77. *See* Janin, 1963.

16 Ziegler, 1947, pp. 387–411. See Demetrius-Izjaslav's inscription on a pallium of Catholic provenance: "Oracionibus sancti Demetrii concedas omnipotens multos annos seruo tuo Izaslaw duci Russie ob remissionem peccaminum et Regni celestis Imperium amen. Fiat domine in nomine tuo," in Lewicki, 1893, p. 447.

17 Latin text in Welykyj, 1953, pp. 5–6 [= English translation in Emerton 1969, pp. 78–79].

On December 27, 1076, the usurper Svjatoslav II Jaroslavič died, and Izjaslav and Peter returned to Kyiv, forcing another usurper, Vsevolod Jaroslavič to step down (June 15, 1077). There was apparently no coin production in Kyiv after the death of Jaroslav. Now it was certainly to manifest his and his son's new title of king (*riga*, discussed above), and their preeminence that Izjaslav struck the type of coins called by scholars either "Jaroslav II," or "ΠΕΤVΡ." These coins should be dated ca. 1077. Izjaslav retained his father's arrangement: the effigy of the patron saint (Demetrius) was put on the obverse, and the trident (Izjaslav's variant was a bident) on the reverse.

The next year, on October 3, 1078, Izjaslav perished in a disastrous battle with his recalcitrant nephews at the Nežatina Field near Černihiv, defending Vsevolod's interests. His son Jaropolk rightly complained: "Father, you destroyed not your brother in battle, but you lost your head for your brother."[18]

As was the case with his father Jaroslav the Wise, members of the Orthodox Church hierarchy of Kyiv are not mentioned as participants at the funeral ceremony.

Vsevolod now usurped the Kyivan throne for the second time. Our primary Rusʹ source, the *Pověstʹ vremennyx lět*, presents this event in a straightforward manner: Vsevolod sat in Kyiv on the throne of his father and brother, receiving all Rusʹ power (*priimъ vlastʹ rusʹskuju vsju*).[19] But both versions of the *PVL* are tendentious, since they reflect the political views of the chroniclers of the dynasty of Monomax: the *Laurentian* text was written for the younger branch of the Monomaxoviči, while the *Hypatian* text was edited at the court of the older branch of the ruling clan.[20]

However, Jan Długosz, who in writing his *Annales seu Cronicae incliti regni Poloniae* used another, now non-extant Rusʹ source (apparently the Przemyśl Chronicle of the Rostislaviči, the adversaries of the Monomax clan) states that Vsevolod's accession to the Kyivan throne was actively apposed by the legal successor of Izjaslav, his oldest son King Peter-Jaropolk. The text reads s.a. 1078 as follows:

18 *PVL*, Lixačev, vol. 1, p. 133.

19 Ibid., p. 135.

20 Pritsak, 1990, pp. XVIII–XIX.

> The Prince (*dux*) Jaropolk, son of the former Prince of Kyiv Izjaslav, regarding it as a great injustice to him that after the death of his father Izjaslav, his (Jaropolk's uncle), Prince Vsevolod, succeeded to the principality of Kyiv, gathered together an army in order to attack Vsevolod and depose him from the Kyivan throne.[21]

The ensuing battles were not waged between Jaropolk and Vsevolod, but, following the advice of one of his councilors, the latter empowered his son Volodimer (Monomax) to act alone. The reason for this is clear: Vsevolod was a usurper, but his son Volodimer, being the grandson of the Byzantine Emperor Constantine IX Monomachos (1042–1055) had charisma in Kyiv equal to that of Peter-Jaropolk, crowned by Pope Gregory VII.

In the course of these military actions victory changed sides.[22] It was certainly at this time that each of the fighting parties was also waging an ideological war ("Byzantium versus Rome"), and struck his coins. Jaropolk's coins ("Jaroslav I") follow the structure of his father's: the obverse displays the effigy of Jaropolk's patron saint. This was, symbolically enough, St. Peter, the font of the pope's charisma, with the conscious repetition of the name ΠΕΤΡΟC, symbolizing both St. Peter and the pope on the one side, with Peter-Jaropolk on the other. King Peter-Jaropolk's struggle for the Kyivan throne ended with a political assassination. Jaropolk was treacherously killed by a hired professional killer on November 22, 1086. His funeral became a meetingplace for everybody who was anybody in Kyiv. The usurper Vsevolod and his son Volodimer Monomax led the mourners. Even the Orthodox Kyivan metropolitan, the skilled Greek diplomat and writer John II Prodromos (ca. 1077–1089) was there.[23] But, as George P. Fedotov writes, "although the Chronicle calls Jaropolk blessed and sure of his heavenly reward, this prince, a victim of an unknown enemy, was never canonized by the Orthodox Church."[24] Modern Russian numismatists chose to ignore him.

21 Długosz, 1970, pp. 130–32.

22 At the beginning Volodimer II Monomax conquered Luc'k, the Volhynian center of Jaropolk's possessions, and took his family prisoner. It is significant that among them was "Jaropolk's mother" (*PVL*, vol. 1, p. 136).

23 *PVL*, vol. 1, p. 136.

24 Fedotov, 1946, p. 106.

Volodimer II Monomax—then residing in Černihiv (1078–1094)—on his part restored the coinage structure of Volodimer I the Great, reintroducing the ruler's portrait on the obverse. He was to be represented in military dress, as his grandfather Constantine IX Monomachos had been on some of his ceremonial issues ("Vladimir II"). Apparently to stress his Orthodox imperial ties, Volodimer Monomax had the die sinkers represent him as nimbate. But they were unsuccessful in two ways: first—and here they shared their lack of artistic ability with the die sinkers of "Vladimir I"—they still did not know how to represent the ruler as "sitting on the throne;" secondly, they were illiterate in Rus' Slavic script, and simply produced almost incongruent imitations of the latter.

In the year 1078, according to the *PVL*, Oleg, the son of the first usurper, Svjatoslav II, took control of the strategically located city of Tmutorokan'.[25] He also struck coins, combining the obverse of Jaroslav's coins with the fashionable Byzantine epigraphic reverse.

After the death of Vsevolod (1093), there was a joint rule in Rus': Volodimer Monomax, after some consideration, invited Svjatopolk, the Orthodox son of Izjaslav, to the Kyivan seat, while he himself stayed in Černihiv and (after 1094) in Perejaslav. During this period (1093–1113) the two rulers minted their own coinage; Svjatopolk followed the pattern established by Volodimer II Monomax; his portrait is nimbate and he sits on a backless throne ("Svjatopolk"). Since he was at this time only co-ruler, Volodimer Monomax does not have a nimbus. He sits on a lyre-backed throne ("Vladimir III").

The type "Vladimir IV," in which Volodimer Monomax is nimbate and sits on a backless throne, came into being after the death of Svjatopolk. At that time Volodimer II Monomax (d. 1125) became the sole ruler of Rus'.

A comparative analysis of the iconography of Rus' and Byzantine coins has enabled us to demonstrate that the Rus' coinage can be used as an important historical source for the crucial period of the tenth to twelfth centuries, especially concerning the ideological crisis after 1054.

25 *PVL*, vol. 1, p. 132.

A New Classification

I. Arist A. Kunik (Ernst Kunick, 1814–1899) and especially Count Ivan Ivanovič Tolstoj (1858–1916), showed the right path for specialists in Old Rusʹ numismatics when they compared some types of Rusʹ numismatic elements with data from Byzantine numismatics, iconography and sphragistics. Also, Aleksej A. Ilʹin's structural-compositional comparison of the elements of the "Jaroslav's silver" with those of the Sassanian *dirhams* (mentioned above) still deserves our attention. Nonetheless, a thorough comparative analysis of all elements which can be detected in Old Rusʹ coinage is being undertaken in this book for the first time.

The dependence of Old Rusʹ numismatic elements on Byzantine prototypes is to be expected, since Old Rusʹ accepted Byzantine Christian symbolism and its pictorial and literary expressions when it accepted Eastern Christianity. This dependence is exceptionally valuable for the purpose of dating the coins, since, as has been established in this book, the diesinkers working in Old Rusʹ were normally using fashionable Byzantine numismatic models, which were coeval to the Old Rusʹ coins.

Of course, the Rusʹ *kagans*/kings were not—and never claimed to be—Byzantine emperors, hence their coinage was organized somewhat differently from the Byzantine models. As it happened, the choices made by those who were responsible for minting coinage in Old Rusʹ were well considered, and assured the special national character of that coinage.

II. The number of known Old Rusʹ coins is small, totaling approximately 308pieces.[26] Only 68 of these have been found outside of two large concentrations. These hoard sites, at Nižyn (ca. 200 copies, 179 of which have been preserved) and Kyiv (ca. 120 coins, with only 54 extant), were plundered in 1852 and 1876 respectively by amateurs before the sites and the coins could be studied by professional researchers.[27]

26 All data are taken from the *Korpus* of Sotnikova and Spasskij, 1983; *see also*, fn. 1, p. 69 above.

27 A third hoard at Mitʹkovka (with 13 coins) proved to be spurious (see below).

There are ten types of the Old Rus′ coins. Nine types are coins proper and one is a bracteate. Only one type ("Vladimir I") was struck both in gold and silver; the rest are silver and/or billon.

A list of the ten types (nos. 1–8 according to the classification of Ivan I. Tolstoj), with both the total number of coins of the type, and (where applicable) the amount of them in the Nižyn or Kyiv (1876) finds is provided below:

1a.	Vladimir I	—	gold; 11 coins
1b.	Vladimir I	—	silver; 69 coins; 54 of them from Kyiv (1876)
2.	Vladimir II	—	idem.; 74 coins; 63 from Nižyn
3.	Vladimir III	—	idem.; 50 coins; 41 from Nižyn
4.	Vladimir IV	—	idem.; 24 coins; 21 from Nižyn
5.	Svjatopolk	—	idem.; 46 coins; 42 from Nižyn
6.	Jaroslav I	—	idem.; 4 coins; 3 from Nižyn
7.	Jaroslav II	—	idem.; 10 coins; 9 from Nižyn
8.	Jaroslav III	—	idem.; 10 coins
9.	Michael	—	idem.; 4 coins
10.	Cyril	—	1 bracteate

It is worth mentioning that the finds establish a relative chronology of the types, because some types never mix with others. So, e.g., "Vladimir I" and "Jaroslav III" have not been found together with each other or any other Old Rus′ coin.

"Michael" and "Cyril" are limited to the confines of the Tmutorokan′ principality.

The relative chronology and coevality of the types is as follows:

1. Vladimir I
2. Jaroslav III
3. Vladimir II
   Vladimir III
   Vladimir IV
   Svjatopolk
   Jaroslav I
   Jaroslav II
4. Michael
   Cyril

Some further observations: The finds of the golden "Vladimir I" are limited to the well-known route known as "From the Varangians to the Greeks": Pinsk (6 copies), Kinburns'ka kosa (at the mouth of the Dnieper,—3 copies). "Vladimir I" (silver) was also discovered in Gotland. No copy of "Jaroslav's Silver" was obtained from the territory of Kyivan Rus'. All known coins are either from Poland (2 copies), Estonia (3 copies), or Scandinavia (Gotland—2 copies; Sweden—1 copy; Norway—1 copy). "Vladimir II" has been found in Poland (Łęczyca—1 copy) and Germany (Schwaan—1 copy). "Vladimir III" and "Vladimir IV", 1 copy of each, were discovered in the Polovtsian territory (Cimljanskaja). Of all finds the most frequent coin is that of the type "Vladimir II": 74 out of 301, accounting for one-fourth of all finds. Some of them have a fineness of 960° (no. 58–1) ~ 900° (no. 86–1). This popular coin was minted apparently by diesinkers who were completely illiterate, and not in Kyiv, but somewhere in the Černihiv Land, which was first ruled by Vsevolod Jaroslavič (1076–1078) and after him by his son, Volodimer II Monomax (1078–1094). The majority of these coins were found in Nižyn.

There are some cases of recoinage (among the Nižyn coins) which also can help in the matters of the relative chronology.

No. 103 ("Vladimir II") was overstruck on "Vladimir I," which shows that the type "Vladimir II" is younger than "Vladimir I." Some copies of "Vladimir III" (no. 128-1) and Svjatopolk (nos. 184–2; 194–2) were overstruck on the type "Vladimir II." From this we learn two things: first, that the type "Vladimir II" was older than both "Vladimir III" and "Svjatopolk;" and secondly, that the rulers who minted the types "Vladimir III" and "Svjatopolk" were coeval. In one of the previous chapters I suggested that the joint rulers in question were Svjatopolk II of Kyiv (1093–1113) and Volodimer II Monomax of Perejaslav (1094–1113).

III. From a structural point of view the Old Rus' coins can be divided into the following four groups (and a fifth, if the "Cyril" bracteate is taken into consideration):

Table 8-1. Categorization of Old Rus' Coins

	Obverse	*Reverse*	*Type*
I.	ruler facing, seated with symbol of royal victory on his right side	Pantocrator's bust	"Vladimir I"
II.	ruler facing, seated	symbol of royal victory	"Vladimir II" "Vladimir III" "Vladimir IV" "Svjatopolk"
III.	patron saint's effigy	symbol of royal victory	"Jaroslav I" "Jaroslav II" "Jaroslav III"
IV.	patron saint's effigy	formula in Slavic	Michael
[V.]		a. symbol of royal victory	"Cyril"
		b. formula in Slavic	[bracteate]

I use here the term "symbol of royal victory" for a figure which occurs either as a "Trident" or as a "Bident." Its function was, as stated above, identical to both the Iranian fire-altar raised on three steps with an attendant priest (*mōbedh*) facing, on either side, or, with the Byzantine symbols, Cross potent on base and three steps, or even "Victory of the Emperor/an Angel," holding *orb Cruciger.*

Like the Cross potent on steps or *orb Cruciger*, the "Trident"/"Bident" was used either as the secondary element of the obverse, or as the main figure of the reverse. From the table, discussed here, one can observe that some equations were obvious in the mind of Old Rus' masters, namely: ruler facing, seated = patron saint's effigy; symbol of royal victory = Pantocrator's bust = formula.

IV. There are several non-Byzantine usages in the Old Rus' coins. There are three elements of Khazarian (Turkic) origin: 1) the idea that the ruler must be seated on the throne; 2) the formula "and this is his gold/silver;" and, 3) the symbol of royal victory ("Trident," "Bident"), which substitutes for the corresponding Byzantine figures.

The composition of the figures and space in the coins of the type "Jaroslav III" is Sassanian.

The free transposition of sphragistic figures to numismatic use, e.g. the figure of St. George from the ruler's seal was utilized for his coins ("Jaroslav III"), is non-Byzantine, but probably of local usage. One is reminded of the usage in Old Rjazan' (14th century), where the princely coinage was called *pečat' knjazja* ("the prince's seal"). Under the impact of that Rus' usage, the Lithuanian Grand PrinceVytautas (d. 1430) had on his coins the Cyrillic inscription *pečat'* ("seal").[28]

V. The majority of iconographic and epigraphic elements on the Old Rus' coins are of Byzantine Christian origin. They often are exactly datable, so that they can serve as a guide in establishing the chronology of the Old Rus' issues.

Table 8-2 on the following two pages brings a comparative analysis of the datable Byzantine distinctive numismatic features and their application to Rus' coin design.

The data in the table leave no doubt that the coins "Vladimir I" were struck by Volodimer the Great, probably around 1000. The other "Vladimir" coins (II, III, IV) must be assigned to Volodimer II Monomax (d. 1125). Also, the Svjatopolk coinage belongs definitively to Svjatopolk II (1093–1113).

The problems of "Jaroslav I" (=ΠΕΤΡΟC) and "Jaroslav II" (ΠΕΤ∇P) have been settled in the historical commentary section above.

28 *See* Darkevič and Soboleva, 1973.

Table 8-2. Comparative Analysis of the Byzantine Distinctive Features in Old Rus' Coinage.

Byzantine coins		*Old Rus' coins*	
Emperor	Distinctive feature	Distinctive feature	Type (according to Tolstoj)
"Nicephorus II" (963–969)	Emperor's portrait on the obverse	ruler's portrait on the obverse	"Vladimir I," "Vladimir II," "Vladimir III," "Vladimir IV," "Svjatopolk"
"Basil II" (976–1025)	Pantocrator's nimbus, class IV (Grierson) ca. 989–1005	Pantocrator's nimbus, class IV	"Vladimir I," silver; subclasses 2–4
Basil II (976–1025)	Pantocrator's pelletless nimbus, Class VI	Pantocrator's pelletless nimbus (Grierson) ca. 1005–1025	"Vladimir I," gold; silver;
[Between 945 and 1028 no depiction of throne on the Byzantine coins]		artificial legs to represent "ruler seated on the throne"	"Vladimir," "Vladimir II"
Basil II (976–1025)	"Cross on steps" (on miliarēsia's reverse)	"Trident"/"Bident" on reverse	"Vladimir II," "Vladimir III," "Vladimir IV," "Svjatopolk," "Jaroslav I," "Jaroslav II," "Jaroslav III."
"Michael IV" (1034–1041)	patron saint's effigy (reverse)	patron saint's effigy (obverse)	"Jaroslav I," "Jaroslav II," "Jaroslav III."

Table 8-2. Comparative Analysis of the Byzantine Distinctive Features in Old Rus' Coinage (con't).

Byzantine coins		*Old Rus' coins*	
Emperor	Distinctive feature	Distinctive feature	Type (according to Tolstoj)
Constantine IX Monomachus (1042–1055)	military dress	military dress	"Vladimir II"
Constantine IX Monomachus (1042–1055); Constantine X Ducas (1059–1067)	lyre-back throne	lyre-back throne	"Vladimir III"
Nicephorus III (1078–1081), "Alexius I" (1081–1118)	backless throne	backless throne	"Vladimir IV," "Svjatopolk"
Michael VII (1071–1078)	K[ύρι]ε Βοήθει formula	г[оспод]и помози formula	"Michael," "Cyril"

APPENDIX

The Pseudo-Hoard of Mit'kovka

In May 1852, in a suburb of the Ukrainian town of Nižyn (in the Old Rus' *Kyivan Chronicle* s.a. 1147: Uneněž), a vessel, broken by ploughing, was found, containing about 200 Old Rus' silver coins. It was the greatest single find ever of Old Rus' coins. Of the 200 coins 179 were given to several museums and survive today.[1] The second greatest hoard of Old Rus' coins (a total of 120 pieces, of which 54 have survived) was unearthed in 1876 in the Old Kyiv quarter on the slope of the Voznesinnja Hill, by cutting away an elevation in the black-earth stratum at a depth of about five feet.[2]

Since both finds were made without the assistance of an archaeologist, no expert dating of the sites is available. This circumstance is important in dating the groups of single types of Old Rus' coins. While the Kyivan find consisted of only one type, namely "Vladimir I," the Nižyn hoard represents six types ("Vladimir II–IV," "Svjatopolk" and "Jaroslav I–II"), but, interestingly enough, none of the type "Vladimir I" found in Kyiv (and none of the "Jaroslav III" type!).

The Mit'kovka "hoard," announced in a 1960 publication by the late Nonna D. Mec,[3] has been universally interpreted in the Soviet scholarly literature as the hoped-for bridge between the coins of the Kyivan hoard ("Vladimir I") and those of the Nižyn hoard. Apart from five coins of "Vladimir II," four of "Svjatopolk" and one of "Jaroslav I" ("Petros"), three coins of the "Vladimir I" type were registered as the component parts of the Mit'kovka hoard. But unfortunately the "*one* Mit'kovka

1 Sotnikova, 1971.

2 Sotnikova, 1968.

3 Mec, 1960.

hoard of Old Rus' coins from the first half of the eleventh century" is nothing but patchwork.

Mit'kovka, in the Klimovo *raion* of Brjansk Oblast' of the Russian Federation, is located within the territory of the Old Rus' "Snov Thousand" (later the principality of Novhorod-Sivers'kyj), between the headwaters of the river Snov and the river Trubež. During the early years of the 1950s, some enterprising students of the local school were engaged in unwarranted amateurish excavations of the local *tumuli* (kurgans). Finally in 1955, some of the finds collected by them (unfortunately, without sufficient documentation), including many beads, bracelets, rings, eight Oriental coins, and thirteen Old Rus' silver coins, were obtained by the local clubhouse manager, who sent these objects to Moscow's State Historical Museum (GIM).

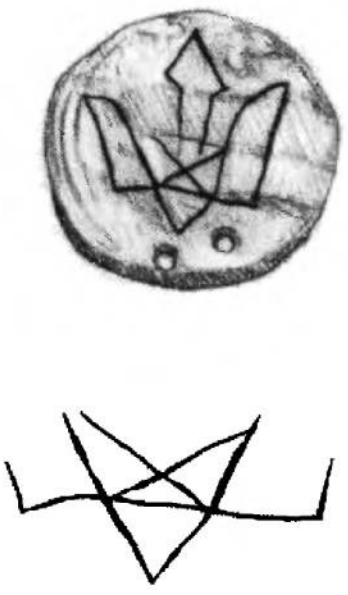
An archaeological expedition (headed by Nonna D. Mec) was dispatched the following year to Mit'kovka, but, because the local population had already looted what was left in the tumuli, the expedition was only able to collect additional details about the burial rites in several robbed *tumuli* ("mounds"). Important as they were, these data remained insufficient because they could not provide the exact information whether all the thirteen Mit'kovka Old Rus' coins were found together in one site, or in several burials of similar type.[4]

At this time we should stop regarding the Mit'kovka coins as belonging to one clearly datable hoard and identify them as chance, individual finds. This is all the more necessary as the pseudo-hoard is being utilized as the main stronghold of the doctrinaire and anti-historical classification of Old Rus' coins that dates from 1882.

4 Nonna Mec (1960, p. 205), clearly states that all items "excavated" by the students were mixed before they were delivered to the museum: "Все эти предметы когда-то составляли комплексы погребальных радимических украшений, но к моменту поступления в Гос. Исторический музей были перемешаны и потеряли паспорта находок. Курганы, из которых они происходят, расположены близ с. Митьковка Климовского района Брянской области." *See also* Sotnikova and Spasskij, 1983, pp. 51–52, 73.

Illustrative Tables

Table I-1. The "Tridents" of the "Vladimir" Coins*



Volodimer's "Trident"—Grafitto on an 'Abbasid dirhem (813–833), which was buried ca. 1015–1020. (*See* Dobrovol'skij et al. 1991, pp. 71–74 and no. 103, p. 141.)

28-1
"Vladimir I"

66-1
"Vladimir II"

117-1
"Vladimir III"

162-1
"Vladimir IV"

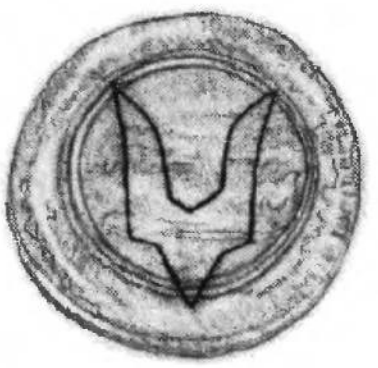
* In this and all subsequent tables, the numeration of Rus' coins refers to the closest stamping representative in the *Korpus* in Sotnikova and Spasskij 1983. All non-photographic illustrations in tables I-1 through I-11 were drawn by Alexandra Isaievych Mason. Reproduction size (relative to the original) is indicated in brackets in italics at the bottom of the page. All coins in the illustrative tables are reproduced at 80% of original size.

Table I-2. The "Tridents" on "Jaroslav's Silver" Coins

223-2

222-1

Table I-3. The "Bidents"



Svjatoslav's "Bident"—Grafitto on a Samanid coin (913/914). (*See* Dobrovol'skij et al. 1991, pp. 69–70 and no. 149, p. 144.)

218-1
"ПЕТVР"

207-1
"ПЕТРОС"

179-1
"Svjatopolk"

Bracteate
"Vsevolod-Cyril"

Table I-4. Sitting on the Throne

	Artificial Legs	*Lyreback Throne*	*Backless Throne*
Byzantine*			
	No Byzantine Prototype	Constantine IX Monomachus 1042–1055 1(b)	Nycephorus III 1078–1081 3.b.7
Rus′			
	28-1 "Vladimir I"	117-1 "Vladimir III"	179-1 "Vladimir IV"
			
	66-1 "Vladimir II"	137-1 "Vladimir III"	117-1 "Vladimir IV"

* The Byzantine data and classifications are taken from Grierson and Bellinger 1973, pt. 2, plates LVIII and LXIX.

Table I-5. Royal Dress

	Chlamys	*Military Dress*
Byzantine*		
	Basil II and Constantine VIII (976– 1028) 4C	Constantine IX Monomachus (1042–1055) AE 7a.1
Rus'		
	28-1 "Vladimir I"	66-1 "Vladimir II"

* The Byzantine data and classifications are taken from Grierson and Bellinger 1973, pt. 2, plates XLIV and LIX.

Table I-6. The Pantocrator's Nimbus

Byzantine*

Basil II
(976–1025) 3H

Basil II
4C

Rus′ (gold)

1-1
"Vladimir I"

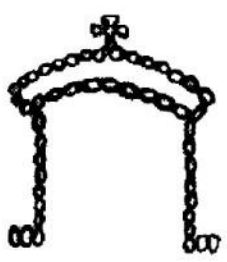
Rus′ (silver)

7-1
"Vladimir I"

19-1
"Vladimir I"

* The Byzantine data and classifications are taken from Grierson and Bellinger 1973, pt. 2, plate XLIV.

Table I-7. Crown Surmounted by a Cross of Five Pellets with Pendilia

Byzantine*		Rus′
		
Basil II (976–1025) Constantine VIII (1025–28) 3b.1		Volodimer the Great (980–1015) 1-1 "Vladimir I"

* The Byzantine data and classifications are taken from Grierson and Bellinger 1973, pt. 2, plate XLIII.

Table I-8. Symbols of the Ruler's Power

Byzantine*

Cross Potent on Base with Three Steps
Basil II
16

Cross Potent with Two Emperors
Basil II and Constantine VIII
20a

Rus′

"Trident"
66-1
"Vladimir II"

Ruler with "Trident"
1-1
"Vladimir I"

* The Byzantine data and classifications are taken from Grierson and Bellinger 1973, pt. 2, plates XLVI and XLVII.

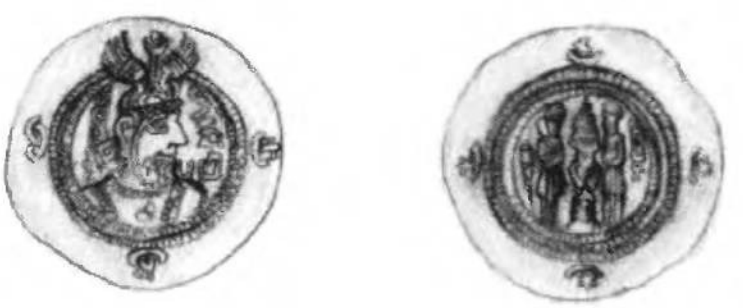
Table I-9. The Plain Cross Scepter

Byzantine*		**Rus′**
		
AE 7.2	A	I-1 "Vladimir I"

* The Byzantine data and classifications are taken from Grierson and Bellinger 1973, pt. 2, plate XLI, and 1973 pt. 1, p. 141 (Table XV).

Table I-10. Comparison of the Structure of Sassanian Coins with "Jaroslav's Silver"

Sassanian*



Rus'

222-1
"Jaroslav I"

* The Sassanian coin is taken from Walker, 1967, plate 1.

Table I-11. Typology of Old Rus′ Coins*

1. Volodimer the Great ("Vladimir I") gold [1-1]

2. Volodimer the Great ("Vladimir I") silver [7-1]

3. Jaroslav I ("Jaroslav III") "large" [222-1]

4. Jaroslav I ("Jaroslav III") "small" [223-2]

5. Izjaslav I-Dimitrij ("Jaroslav II") [211-2]

* Reduced to 75 percent of actual size. Names in parentheses and quotations refer to Ivan I. Tolstoy's types. Photographs courtesy of Marina Petrovna Sotnikova and the Hermitage Museum, St. Petersburg, Russian Federation.

Table I-11. Typology of Old Rus' Coins (con't)

6. Peter-Jaropolk II, 1078–1094 ("Jaroslav I") [207-1]

7. Volodimer Monomax in Černihiv, 1078–1094 ("Vladimir II") [66-1]

8. Sviatopolk II Izjaslavič ("Svjatopolk I Vladimirovič") [177-1]

9. Volodimer Monomax in Perejaslav, 1094–1113 ("Vladimir III") [117–1]

10. Volodimer Monomax in Kyiv, 1113–1125 ("Vladimir IV") [160-1]

Table I-11. Typology of Old Rus' Coins (con't)

11. Oleg-Michael

12. Vsevolod-Cyril (bracteate)

Table J. Images From the *Codex Gertrudianus* of Cividale

From Sauerland and Haseloff 1901, facsimile plates. *Top:* Table 42—Saint Peter with the royal family (Peter-Jaropolk and Irene). *Bottom:* Table 45—Christ coronating Peter-Jaropolk and Irene. Reduction is sixty percent of original plate size.

Works Cited

Special Abbreviations

AEMA	*Archivum Eurasiae Medii Aevi.* Lisse-Wiesbaden.
EHR	*The Economic History Review.* Oxford.
EI²	*The Encyclopaedia of Islam. New Edition, prepared by a Number of Leading Orientalists.* Ed. Hamilton A. R. Gibb et al. Leiden-London, 1960–.
Ipat let	*Ipat'evskaja letopis'.* Ed. Aleksej Aleksandrovič Šaxmatov. St. Petersburg, 1908 [= *Polnoe sobranie russkix letopisej,* 2nd ed., vol. 2].
JESHO	*Journal of the Economic and Social History of the Orient.* Leiden.
KHL	*Kulturhistorisk Leksikon før Nordisk Medeltid,* 22 vols. Copenhagen, 1956–1978.
NIL	*Novgorodskaja pervaja letopis' staršego i mladšego izvodov.* Ed. Arsenij N. Nasonov. Moscow-Leningrad, 1950.
Nov Gram Ber	*Novgorodskie gramoty na bereste.* 1951– :
	[pt. 1] *Iz raskopok 1951 g.* Ed. Artemij Vladimirovič Arcixovskij and Mixail N. Tixomirov. Moscow, 1953.
	[pt. 2] *Iz raskopok 1952 g.* Ed. A. V. Arcixovskij. Moscow, 1954.
	[pt. 3] *Iz raskopok 1953–1954 gg.* Ed. A. V. Arcixovskij and Viktor Ivanovič Borkovskij. Moscow, 1958.
	[pt. 4] *Iz raskopok 1955 g.* Ed. A. V. Arcixovskij and Viktor Ivanovič Borkovskij. Moscow, 1958.
	[pt. 5] *Iz raskopok 1956–1957 gg.* Ed. A. V. Arcixovskij and Viktor Ivanovič Borkovskij. Moscow, 1963.
	[pt. 6] *Iz raskopok 1958–1961 gg.* Ed. A. V. Arcixovskij. Moscow, 1963.
	[pt. 7] *Iz raskopok 1962–1976 gg.* Ed. A. V. Arcixovskij and Valentin Lavrent'evič Janin. Moscow, 1978.
	[pt. 8] *Iz raskopok 1977–1983 gg.* Ed. Valentin Lavrent'evič Janin and Andrej Anatol'evič Zaliznjak. Moscow, 1986.

Praha Lexicon	*Lexicon linguae palaeoslovenicae.* Ed. Josef Kurz, et al. Prague, 1966– .
PVL	*Pověst' vremennyx lět.* Ed. Dmitrij Sergeevič Lixačev, 2 vols. Moscow-Leningrad, 1950.
Smolen Gram	*Smolenskie gramoty XIII–XIV vekov.* Ed. Tatiana Alekseevna Sumnikova and Vladimir Vladimirovič Lopatin. Moscow, 1963.
SSS	*Słownik starożytności słowiańskich*, 7 vols. Ed. Władysław Kowalenko, Gerard Labuda et al. Wrocław-Warsaw, 1961–1986.
Xrest Ist	*Xrestomatija po istorii SSSR*, vol. 1. Ed. Vladimir Ivanovič Lebedev, Mixail Nikolaevič Tixomirov, V. E. Syroečkovskij. Moscow, 1949.

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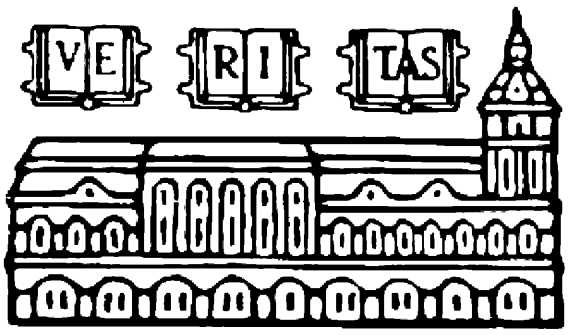

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