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THE "PRAGUE TYPE": A CRITICAL APPROACH TO POTTERY
CLASSIFICATION

Our present knowledge of the origin of the Slavs is, to a large extent, a legacy of the nineteenth century. Today, the history of the Slavs is written mainly by historians and archaeologists, but fifty or sixty years ago the authoritative discourse was still that of scholars trained in comparative linguistics. In this paper, I will focus on a particular aspect of the archaeological discourse about the "Slavic culture" of the Dark Ages. My intention is not only to elucidate the political and cultural circumstances in which this discourse emerged, but also to raise the question of whether or not the ceramic evidence manipulated by this discourse can stand critical analysis. My paper focuses on the so-called "Prague type", a ceramic category which many archaeologists in Eastern Europe view as a hallmark of Slavic ethnicity. At any time and place, finds of this pottery type are believed to indicate the existence of an early, sixth-century phase of Slavic habitation. This pervasive culture-historical approach to the archaeology of the Dark Ages raises two major problems. One is that of ethnic interpretation, which I discussed in *extenso* elsewhere¹. The other is the ceramic classification itself, which is now used as the basis for historical reconstruction. I will examine this latter problem in the light of recent studies of ceramics and pottery production. Drawing on statistical evidence and experimental archaeology, I will argue that instead of being an ethnic badge, the hand-made pottery called by Czech and Soviet archaeologists the "Prague-Korchak" type reflects "prototypic shapes" determined by vessel use, not by "ethnic traditions".

The rise of the Slavic archaeology is often associated with the name of Lubor Niederle (1865-1944). A professor of history at the Charles University in Prague²,

1. See my dissertation, *Making an Early Medieval Ethnie: the Case of the Early Slavs (Sixth to Seventh Century A.D.)*, Western Michigan University, Kalamazoo, 1998, 30-45.

2. For Niederle's life and work, see J. Eisner, *Lubor Niederle. Napsal*, Prague, 1948; Bohumila Zášterová, Lubor Niederle historik, *Archeologické rozhledy* 19 (1967), 153-165.

Niederle viewed himself as continuing the work of Šafářik³. His multi-volume work, significantly entitled, like that of Šafářik, *Slovanské starožitnosti (The Antiquities of the Slavs)*, had a considerable importance for the study early Slavs. For the first time, Niederle introduced a new type of evidence into the scholarly discourse, that of archaeology. Inspired by Buckle's theories, he argued that besides shaping the robust character of the Slavs, the nature of their original homeland forced them into a rather poor level of civilization, for, like the ancient Germans and Celts, the Slavs were *enfants de la nature*⁴. Only the contact with the more advanced Roman civilization made it possible for the Slavs to give up their original culture based entirely on wood and to start producing their own pottery.

Niederle's emphasis on material culture pointed to a new direction in the development of Slavic studies. The foundations of a mature Slavic archaeology were primarily the work of Czech archaeologists. It was a new type of pottery identified in 1870 by the German prehistorian Rudolf Virchow (1821-1902), which caused the greatest shifts of emphasis in the early years of the twentieth century. Emanuel Šimek, the would-be professor of prehistory at Brno, put forward the suggestion that between Virchow's *Burgwallkeramik* and the Roman pottery, there must have been an intermediary stage. He labeled this pottery the "Valeslavín type", on the basis of finds from a residential area of Prague⁵. Unlike Šimek, who believed this type to have imitated the early Germanic pottery, Josef Schranil, who succeeded Niederle as professor of prehistory at the Charles University in Prague, argued that the ancient Slavic pottery derived from the local Iron Age pottery⁶. A similar idea was at the core of Ivan Borkovský's book, *The Ancient Slavic Pottery in Central Europe*. If the Slavs adopted so easily the decorative patterns of the Roman pottery, Borkovský argued, it was because their original pottery was typologically so close to that of the Romans⁷. When they came to Bohemia and Moravia, the Slavs found remnants of the Celtic population still living in the area and borrowed their techniques of pottery production based on Iron Age traditions. The Slavs made this pottery their own, thus creating what Borkovský called the "Prague type", a national, exclusively Slavic type⁸. According to him, the Prague-type was a hand-

3. L. Niederle, *Manuel de l'antiquité slave. L'histoire*, vol. 1, Paris 1923, vi; see also V. Tomáš, *Česká historiografie a pozitivismus. Svetonázorové a metodologické aspekty*, Prague 1984, 39.

4. Niederle, *Manuel*, 1-2 and 5.

5. E. Šimek, *Čechy a Morava za doby římské*, Prague 1923.

6. For a critique of Schranil's ideas, see H. Preidel, *Die Anfänge der slawischen Bevölkerung Böhmens und Mährens*, vol. 1, Gräfelfing 1954, 56.

7. I. Borkovský, *Staroslovanská keramika v střední Evropě. Studie k počátkům slovanské kultury*, Prague 1940, 34.

8. "... jako národní keramika výhradně slovanská": Borkovský, *Staroslovanská keramika*, 35.

made, mica-tempered pottery with no decoration. Borkovský viewed the Prague type as the earliest Slavic pottery, the forms and rims of which began to change under the influence of the Roman pottery.

Borkovský published his book in 1940, a few weeks after the first wave of massive arrests and the closure of universities in the protectorate of Bohemia and Moravia, which followed the anti-German demonstrations of October 1939. In his book, he boldly argued that the earliest Slavic pottery derived from local Iron Age traditions, not from the Germanic pottery. This was quickly interpreted as an attempt to claim that the Czechs (and not the Germans) were natives to Bohemia and Moravia. As a consequence, the book was immediately withdrawn from bookstores and Borkovský became a sort of local hero of the Czech archaeology, whose ideas, including the very influential suggestion that the Prague type represented the oldest Slavic pottery, would be followed and developed after the war. Borkovský's book may be viewed as a reaction to Nazi claims that the Slavs were racially and culturally inferior⁹.

The association between Slavic studies and the rise of the Nazi ideology is also evident in the case of the Soviet Union. Until the mid-1930s, Slavic studies were viewed as anti-Marxist¹⁰. However, as Soviet war propaganda was searching for the means to mobilize Soviet society against the Nazi aggressor, the Slavic ethnogenesis, now the major, if not the only, research topic of Soviet archaeology and historiography, gradually turned into a symbol of national identity. Soviet archaeologists unanimously embraced Niederle's influential suggestion that the Slavic *Urheimat* was located along the upper Dnieper river. As the Red Army was launching a massive offensive along the Vistula, reaching the heart of the Third Reich, they favored the idea of an enormous Slavic homeland stretching from the Oka and the Volga rivers, to the east, to the Elbe and the Saale rivers to the west, and from the Aegean and Black seas to the south to the Baltic sea to the north¹¹.

9. K. Sklenář, *Archaeology in Central Europe: the First 500 Years*, transl. by Iris Lewitova, Leicester-New York 1983, 162-163. For Nazi claims to Slavic inferiority, see V. Mastny, *The Czechs under Nazi Rule. The Failure of National Resistance, 1939-1942*, New York-London 1971, 130-131. For Nazi archaeology, see Bettina Arnold, *The past as propaganda: totalitarian archaeology in Nazi Germany*, *Antiquity* 64 (1990), 464-478.

10. A. N. Gortainov, *Slavianovedy - zhertvy repressii 1920-1940 - kh godov. Nekotorye neizvestnye stranicy iz istorii sovetskoi nauki*, *Sovetskoe slavianovedenie* 2 (1990), 78-89.

11. E.g., N. S. Derzhavin, *Proiskhozhdenie russkogo naroda*, Moscow 1944, 46. Being a representative of "bourgeois science", Niederle's name was, of course, never cited, until *Slovanské starožitnosti* was finally translated into Russian and published in 1956. For Derzhavin's ideas, see also V. A. Shnirelman, *From internationalism to nationalism: forgotten pages of Soviet archaeology in the 1930s and 1940s*, in *Nationalism, Politics, and the Practice of Archaeology*, ed. P. Kohl - Clare Fawcett, Cambridge 1995, 133.

The afterwar years witnessed massive state investments in archaeology and many large-scale horizontal excavations of settlements and cemeteries were carried in Ukraine and Moldova¹². Initially just a local variant of Borkovsky's Prague type, the pottery found on these sites became the ceramic archetype of all Slavic cultures. Ukrainian sites now replaced those of central Bohemia as the earliest phase of the Slavic culture, and Soviet archaeologists made all possible efforts to demonstrate that the pottery found at Korchak and other sites in the Teterev valley, east of Zhitomir, was based on local traditions going back to the early Iron Age¹³. The "Prague-Korchak" type, as this pottery came to be known, was now the main and only indicator of Slavic ethnicity in material culture terms¹⁴. The use of Prague-Korchak pottery as a diagnostic type became the norm in all countries in Eastern Europe with Communist-dominated governments under Moscow's protection. This often involved visual, intuitive comparison of vessel shape or rims with those found at Korchak and used by Soviet archaeologists in their work on the early Slavic culture¹⁵.

12. See Irina P. Rusanova, *Slavianskie drevnosti VI-IX vv. mezhdn Dneprom i zapadnym Bugom*, Moscow 1973; Irina P. Timoshchuk – B. O. Timoshchuk, *Kodyn, slavianskie poseleniia V-VIII vv. na r. Prut*, Moscow 1984; L. V. Vakulenko – O. M. Prikhodniuk, *Slavianskie poseleniia I tys. n.e. us. Sokol na Srednem Dnestre*, Kiev 1984; V. D. Baran, *Prazhskaia kul'tura Podnestrov'ia po materialam poseleii us. Rashkov*, Kiev 1988.

13. Iu. V. Kukhareno, *Slavianskie drevnosti V-IX vekov na territorii Pripiatskogo Poles'ia*, *Kratkie soobshcheniia Instituta Arkheologii AN SSSR* 57 (1955), 36-38; Irina P. Rusanova, *Arkheologicheskie pamiatniki vtoroi poloviny I tysiacheletii n.e. na territorii drevlian*, *Sovetskaia arkheologija* 4 (1958), 33-46; Iu. V. Kukhareno, *Pamiatniki prazhskogo tipa na territorii Pridneprov'ia*, *Slavia antiqua* 7 (1960), 112; V. P. Petrov, *Pamiatniki Korchaskogo tipa (po materialam raskopok S. S. Gamchenko)*, in *Slaviane nakanune obrazovanija Kievskoi Rusi*, ed. B. A. Rybakov, Moscow 1963, 38; Irina P. Rusanova, *Karta rasprostraneniia pamiatnikov tipa Korchak (VI-VII vv. n.e.)*, in *Drevnie slaviane i ikh sosedi*, ed. Iu. V. Kukhareno, Moscow 1970, 93; J. Herrmann, *Probleme der Herausbildung der archäologischen Kulturen slawischer Stämme des 6. -9. Jhs.*, in *Rapports du IIIe Congrès international d'archéologie slave. Bratislava, 7-14 septembre 1975*, ed. B. Chropovský, vol. 1, Bratislava 1979, 49.

14. Irina P. Rusanova, *Slavianskie drevnosti VI-VII vv. Kultura prazhskogo tipa*, Moscow 1976, 123; Eadem, *Klassifikacia keramiki tipa Korchak*, *Slavia antiqua* 30 (1984-1987), 94. See also Zb. Kobylirski, *An ethnic change or a socio-economic one? The 5th and 6th centuries AD in the Polish lands*, in *Archaeological Approaches to Cultural Identity*, ed. St. Shennan, London-Boston-Sydney 1989, 307.

15. Zdenek Klanica, *Pocátky slovanského osídlení našich zemí*, Prague 1986, esp. 11; Jerzy Hasegawa, *Chronologia i rozprzestrzenienie ceramiki typu praskiego w Europie środkowej*, *Łódź* 1975; Zofia Kurnatowska, *Próba uchwycenia zróżnicowania kulturowego ziem polskich w VI-VII w.*, *Archeologia polski* 29 (1984), 371-398; Zhivka Vážharova, *Rannoslavianskaia keramika iz sela Popina*, *Kratkie soobshcheniia Instituta material'noi kul'tury AN SSSR* 63 (1956), 142-149; Zhivka Vážharova, *Rannoslaviansko i slavianobălgarsko selishte v m. Stareca kraj s. Garvăn, Silistrensko*, *Arkheologija* 8/2 (1966), 21-31.

Such ideas were further developed by Polish and Slovak archaeologists, who focused on rim sherds, since whole vessels rarely came out of excavated settlements. Rim attributes are now a favorite trait for any analysis of Slavic ceramics. In Poland, Romania, and Bulgaria, newly discovered sites are dated on the basis of the presence or absence of certain lip forms in the ceramic assemblage. To the Soviet archaeologist Irina Rusanova, who first used statistical identification of combinations of attributes, the "Prague-Korchak" type was not just in the mind of the classifier; it was a nominal category recognized by manufacturers and users in the past. More recently, Michał Parczewski (in Poland), Gabriel Fusek (in Slovakia), and Gheorghe Postică (in Moldova), extended this interpretation to rim and lip forms, without acknowledging that sherds represent only random and arbitrary subdivisions of the vessel shapes and are not discrete units of cultural behavior¹⁶. Variability in primary forms, such as shapes, usually in gross functional terms, is more likely than secondary variables (lip, base, or appendages) to inform about change in function, activities and production. Ethnoarchaeological studies on modern communities of potters show that significant differences in rim form and size may appear even within a singlesize class of vessels produced by specialist potters¹⁷. Other studies show that effective capacity (maximum volume of material that is normally placed in a vessel)

16. M. Parczewski, *Die Anfänge der frühslawischen Kultur in Polen*, Vienna 1993; G. Fusek, *Analyse der Formen des handgemachten Keramikgeschirrs als Beitrag zur relativen Chronologie, in Slawische Keramik in Mitteleuropa vom 8. bis zum 11. Jahrhundert. Internationale Tagungen in Mikulčice, 25. -27. Mai 1993*, ed. Čenek Stána, vol. 2, Brno 1993, 19-27; Idem, *Formanalyse vollständiger Gefäße oder ein weiterer Versuch, frühmittelalterliche Keramikgefäße aus der Slowakei zu klassifizieren*, in *Slawische Keramik in Mitteleuropa vom 8. bis zum 11. Jahrhundert. Terminologie und Beschreibung. Internationale Tagung in Mikulčice, 24. -26. Mai 1994*, ed. L. Polacek, vol. 2, Brno 1995, 15-33. See also E. S. Teodor, *Sistemul Compas. Studiu de morfologie analitică numerică aplicat ceramicii uzuale din perioada de migrație a slavilor*, Bucharest 1996. For sites dated on the basis of lip forms, see Joanna Podgórska-Czopek, *Materiały z wczesnosłowiańskiej osady w Grodzisku Dolnym, stan. 3., woj. Rzeszów*, *Archaeoslavica* 1 (1991), 9-60; Gheorghe Postică, *România din codrii Moldovei în Evul Mediu timpuriu. Studiu arheologic pe baza ceramicii din așezarea de la Hansca*, Chișinău 1994. For pottery classification and nominal categories of the past, see H. W. W. Tschauner, *La tipología: herramienta u obstáculo? La clasificación de artefactos en arqueología*, *Boletín de antropología americana* 12 (1985), 40-53; Prudence M. Rice, *Pottery Analysis. A Sourcebook*, Chicago-London 1987, 283; G. L. Cowgill, *Artifact classification and archaeological purposes*, in *Mathematics and Information Science in Archaeology: a Flexible Framework*, ed. A. Voorrips, Bonn 1990, 67-74. For sherds as arbitrary subdivisions, see J. M. Skibo – M. B. Schiffer – Nancy Kowalski, *Ceramic style analysis in archaeology and ethnoarchaeology: bridging the analytical gap*, *Journal of Anthropological Archaeology* 8 (1989), 401.

17. Prudence M. Rice, *Ceramic diversity, production, and use*, in *Quantifying Diversity in Archaeology*, eds. R. D. Leonard – G. T. Jones, Cambridge-London 1989, 113. See also J. D. Richards, *Anglo-Saxon pot shapes: cognitive investigations*, *Science and Archaeology* 24 (1982), 40.

and use are strongly correlated with orifice diameter in all shape classes. For example, liquid separation is made possible by outflaring rims, but not by vertical or insloping rims, which suggests that rim variation is primarily functional, not stylistic¹⁸.

A special emphasis on ceramic attributes, however, was the direct result of the fact that in Ukraine, Poland, and Slovakia, "Slavic" settlements produced very few (if any) metal artifacts to be used for building relative chronologies and dating the sites. Rusanova dated the handmade urns found in cremation burials in eastern Volhynia by visual comparison with pots found in Czechoslovakia and believed by Borkovský to be "very old". There is, however, an additional problem with Rusanova's "Prague-Korchak" type. For dating the ceramic assemblages from Korchak, she relied upon information from the nearby hillfort of Khotomel, a heavily stratified site, which was divided into standard sized units and excavated in arbitrary, horizontal levels. A culture-historical archaeologist, Rusanova considered archaeological layers as containing objects peculiar to each stratum ("index-fossils") which could be used to identify deposits of the same date in other localities. In her eyes, the percentage of cultural remains which were comparable with more recent forms of objects decreased as the lower and earlier deposits were examined. In the late 1950s, Rusanova devised a rudimentary form of seriation, very similar to the "battleship curves" used by contemporary American archaeologists, in order to convert percent frequencies of pottery categories into a relative order. She then developed an evolutionary scheme for the handmade pottery, assuming that simple vessel shapes were earlier than complex ones. Vessel categories established in this way were then dated by means of metal objects, in association with which they were found in each arbitrarily excavated level. Judging from a few metal artifacts, the earliest level at Khotomel' dates from the late seventh and early eighth century. Rusanova decided, however, that the earliest pottery found at Khotomel' must be of the sixth century, because it displayed ceramic profiles similar to those of pots found on fourth-century sites in that region¹⁹. In addition, Rusanova's approach is

18. G. Shapiro, Ceramic vessels, site permanence and group size: a Mississippian example, *American Antiquity* 49/4 (1984), 696; D. Hally, The identification of vessel function: a case study from northwest Georgia, *American Antiquity* 51/2 (1986), 279-280.

19. Rusanova, *Arkheologicheskie pamiatniki*, 44-45; Eadem, Pogrebal'nye pamiatniki vtoroi poloviny I tysiacheletia n.e. na territorii Severo-Zapadnoi Ukrainy, *Kratkie soobshcheniia Instituta Arkheologii AN SSSR* 135 (1973), 3-9; Eadem, *Slavianskie drevnosti*, 21. For a critique of the arbitrary excavation method, see A. Praetzelis, The limits of arbitrary excavation, in *Principles of Archaeological Stratigraphy*, ed. E. C. Harris, London-San Diego 1993, 68-86. For metal artifacts from the earliest layers at Khotomel, see V. V. Sedov, *Vostochnye slaviane v VI-XIII vv.*, Moscow 1982, 198, pl. XXIV/4-8, 10-29.

methodologically flawed, because it is based on the implicit assumption of strong covariation of all attributes through the life of a ceramic type. In reality, no evidence exists of the actual degree of covariation. Moreover, in the absence of alternative methods of dating, such as dendrochronology, no exact date can be assigned to any one of the settlements excavated at Korchak. The pottery found there, which was classified as Prague-Korchak, has no chronological value in itself. In other words, there is no indication that this pottery represents the earliest phase in the development of the Prague-Korchak type. It cannot be considered as the earliest evidence of Slavic settlements. Moreover, Rusanova was not capable of recognizing much earlier materials excavated at Korchak, which were taken to be of the sixth century. In fact, her monograph on sixth- to ninth-century "Slavic antiquities" in eastern Volhynia often lists ceramic assemblages, which are likely to be of a much earlier date. For example, the decoration with notches on a clay band applied to the vessel's shoulder, such as found in features 4 and 8 at Korchak I, and in features 7, 8, and 13 at Korchak VIII, is typical for ceramic assemblages of the Wielbark culture, dated to the first three centuries A.D.²⁰. No such decoration was found on any site attributed to the Slavs and clearly dated to the sixth or seventh century.

Rusanova's theories, nevertheless, led to many cases of blatant mis-dating of sites. In Bulgaria, Zhivka Văzharova relied upon Rusanova's typology for arguing that the earliest habitation settlement excavated at Garvan, near Silistra, was of the late sixth and early seventh century, despite clear evidence of a much later date, such as ninth- and tenth-century ceramic kettles and pottery with lustrated decoration²¹. The so-called "Slavic ware" found on several sites in Greece was dated without any critical assessment to the late sixth century, despite the fact that many potsherds display incised decoration with combed, vertical lines, which is typical for eighth- and ninth-century burials and settlements in southeast Romania and northeast Bulgaria²². Such a late date should also be assigned to the "Slavic" pottery from the

20. Irina P. Rusanova, Poselenie u s. Korchaka na r. Teterve, in *Slaviane nakanune obrazovaniiia Kievskoi Rusi*, ed. B. A. Rybakov, Moscow 1963, 48-49 and 47 fig. 8; Eadem, *Slavianskie drevnosti*, pls. 5/11, 7/7, and 6/3. For Wielbark parallels, see Jan Jaskanis, *Cecele. Ein Gräberfeld der Wielbark-Kultur in Ostpolen*, Cracow 1996, 108 and pl. IV/22.1; see also R. Wołagiewicz, *Ceramika kultury wielbarskiej między Bałtykiem a Morzem Czarnym*, Szczecin 1993, 149-157. A slightly later date may be assigned to vessels decorated with clay knobs on the shoulder, which are typical for assemblages of the Dytynych-Trishin phase of western Ukraine. See V. D. Baran, Ranneslavianskie poseleniia Podnestrov'ia i Zapadnoi Volyni, *Slavia antiqua* 30 (1984-1987), 81.

21. Zhivka Văzharova, *Srednovekovno selishte s. Garvan, Silistrenski okrăg (VI-XI v.)*, Sofia 1986, 70, 80 and 83 fig. 2.

22. P. Aupert, Céramique slave à Argos (586 ap. J. -C.), in *Études argiennes (= BCH, Suppl. 6)*, Athens 1980, 373-394. See K. Kilian, 'Αρχαιολογικές ενδείξεις για την σλαβική παρουσία στην

cremation cemetery found at Olympia, which many regard as the only "hard" piece of archaeological evidence for the presence of the Slavs in Greece²³. Despite previous caveats by Ion Nestor and Jean-Pierre Sodini, Speros Vryonis recently dated the site to the late sixth and early seventh century on the basis of Vážharova's classification of the early Slavic pottery from Bulgaria, itself inspired by Rusanova's theories. There is clear indication, however, of a much later date. First, six pots published by Vryonis present the same pattern of combed decoration as the pottery found at Argos and in several other places. Moreover, three spindle-shaped glass beads found in burial no. 9 belong to a category known to archaeologists as *Melonenkernperlen*. Such beads are typical for Late Avar assemblages (i.e., ca. 700-800), but often appear in later contexts dated to the early ninth century²⁴.

To many archaeologists working on sites dated to the Dark Ages, however, the crucial question remains whether or not the Prague type represents a Slavic ethnic badge. The Romanian archaeologist Ion Nestor asserted that potsherds exhibiting rilling or, in the case of bases concentric striations caused by removing the vessel while the wheel was still turning, were either "imports" or later developments of the early Slavic culture. Soviet and Bulgarian archaeologists emphasized handmade pottery as a hallmark of Slavic ethnicity. Some even insisted that the Slavic pottery

*Αργολιδοκορινθία, *Πελοποννησιακά* 16 (1985-1986), 295-304; Rodoniki Etzeoglu, La céramique de Karyoupolis, in *Recherches sur la céramique byzantine. Actes du Colloque organisé par l'École Française d'Athènes et l'Université de Strasbourg II*, Centre de Recherches sur l'Europe Centrale et Sud-Orientale, Athènes 8-10 avril 1987, eds. V. Déroche - J. - M. Spieser, Athènes-Paris 1989, (= *BCH*, Suppl. 18), 151-156; T. E. Gregory, An Early Byzantine (dark-age) settlement at Isthmia: preliminary report, in *The Corinthia in the Roman Period Including the Papers Given at a Symposium Held at the Ohio State University on 7-9 March, 1991*, ed. T. E. Gregory, Ann Arbor 1993, 149-160. For a survey of handmade pottery in the Later Roman Empire, see M. Rautman, Handmade pottery and social change: the view from Late Roman Cyprus, *Journal of Mediterranean Archaeology* 11 (1998), 90-95. For the incised decoration, see U. Fiedler, *Studien zu Gräberfeldern des 6. bis 9. Jahrhunderts an der unteren Donau*, Bonn 1992, 153.

23. J. Bouzek, Slovanské pohřebiště v Olympii, *Archeologické rozhledy* 23 (1971), 99-101; Sp. Vryonis Jr., The Slavic Pottery (jars) from Olympia, Greece, in *Byzantine Studies. Essays on the Slavic World and the Eleventh Century*, ed. Sp. Vryonis, New Rochelle-New York 1992, 15-42.

24. Vryonis, Slavic pottery (jars), 23 and 26; figs. 38, 8, 2, 9, 37, and 29. Caveats: Ion Nestor, Les éléments les plus anciens de la culture slave dans les Balkans, in *Simpozijum "Predslavenski etnički elementi na Balkanu u etnogenezi južnih Slovena"*, Održan 24-26. Oktobra 1986 u Mostaru, ed. A. Benac, Sarajevo 1969, 144; Fr. Baratte, Les témoignages archéologiques de la présence slave au sud du Danube, in *Villes et peuplement dans l'Illyricum protobyzantin. Actes du colloque organisé par l'École française de Rome, Rome, 12-14 mai 1982*, Rome 1984, 170 with n. 33. For *Melonenkernperlen*, see Iona Kovrig, *Das awarenzeitliche Gräberfeld von Allatyán*, Budapest 1963, 163-164; Zlata Čilinská, Frauenschmuck aus dem 7. -8. Jahrhundert im Karpatenbecken, *Slovenská Archeológia* 23/1 (1975), 87; Fiedler, *Studien*, 188 and 190.

is characterized by use of specific tempers, such as crushed sherds²⁵. Suzana Dolinescu-Ferche's excavations at Dulceanca I showed that local potters produced both handmade and wheel-made pottery with a variety of tempers. Both ceramic categories, however, were then fired within the same kiln²⁶. There are few studies based on textural or petrological analysis and even fewer in which the focus is the basic technique used for constructing the pot. The potter may have divided the pot conceptually into various parts and use different sequences for building the vessel, such as "opening" the lump of clay by inserting fingers and squeezing the clay (pinching technique) or constructing the vessel from upside down, using one or more slabs of clay (slab modeling). From a cognitive point of view, these are fundamental aspects which link pottery-making to other aspects of culture and permeate very large areas of the activity of any group of people. From a *chaîne opératoire* viewpoint, it is interesting to note that all handmade pots from Rashkov (Ukraine) were made using the coiling technique. More studies are needed, however, for making comparisons which may be relevant for the question of ethnic identity²⁷.

Another possibility is to treat pots as tools, for their shapes and, to a certain extent, their decoration, are constrained by their intended contexts and conditions of use²⁸. Recent studies have shown a strong correlation between volume and shape

25. I. A. Rafalovich, *Slaviane VI-IX vekov v Moldavii*, Kishinev 1972, 137; Rusanova, *Slavianskie drevnosti*, 12.

26. Suzana Dolinescu-Ferch, Cuptorul de ars oale din sec. VI e. n. de la Dulceanca (jud. Teleorman), *Studii și cercetări de istorie veche* 20/1 (1969), 117-124. See also R. Pleiner, Brannversuche in einem nachgebildeten slawischen Töpferofen, *Slovenská Archeológia* 36/2 (1988), 299-308. Elsewhere, handmade pots were fired using the clamp method, i.e., a bed of fuel, then pottery, and finally more fuel on top. See Rafalovich, *Slaviane*, 138.

27. For a classification of medieval pottery into fabric types, using Principal Component Analysis, see Maureen McCorry - D. A. T. Harper, A preliminary multivariate analysis of everted rim pottery from Ulster, *Journal of Irish Archaeology* 2 (1984), 1-5. For the *chaîne opératoire* approach, see Richards, Anglo-Saxon pot shapes, 35; Rice, *Pottery Analysis*, 124-127; E. Guthnick, Zur Terminologie und Technologie der Töpferscheibe, *Ethnographisch-archäologische Zeitschrift* 29 (1988), 91-93; S. E. Van Der Leeuw, Cognitive aspects of <technique>, in *The Ancient Mind. Elements of Cognitive Archaeology*, eds. Colin Renfrew - E. B. W. Zubrow, Cambridge 1994, 135-142. For Rashkov, see Baran, *Pražská kul'tura*, 52.

28. D. P. Braun, Experimental interpretation of ceramic vessel use on the basis of rim and neck formal attributes, in *The Navajo Project. Archaeological Investigations Pages to Phoenix 500 KV Southern Transmission Line*, eds. D. C. Fiero et al., Flagstaff 1980, 171-231; Idem, Pots as tools, in *Archaeological Hammers and Theories*, eds. J. A. Moore - A. S. Keene, New York-London 1983, 107-134; Shapiro, Ceramic vessels, 696-712; Marion F. Smith, Function from whole vessel shape: a method and an application to Anasazi Black Mesa, Arizona, *American Anthropologist* 90 (1988), 912-923. For the relation between form and content in ceramic classification, see also María Nieves Zedeño, La relación forma-contenido en la clasificación cerámica, *Boletín de antropología americana* 11 (1985), 19-26.

of vessels found on early medieval sites in Slovakia. An experiment stemming from excavations on the early medieval site at Březno, near Prague, demonstrated that 3-liter pots were the most suitable for cooking soups and porridges, while 1-liter pots served as containers for milk and for manipulation. All cooking operations were performed using a set of eleven pots of different shapes and three vessels of wood. This is also confirmed by ethnographic studies, which reveal that full vessel assemblages in present-day communities typically consist of between eight and twenty morphological vessel types²⁹.

The experiment suggests that early medieval pottery-making may have operated on the basis of "prototypic shapes", mental models of the potter's preference for morphological set attributes, which could be recognized in vessels belonging to the same family. Other studies show that despite variation in size, functionally equivalent vessels in various ceramic assemblages display identical proportions. There are many methods for shape representation for boundary retrieval and display using pattern matching to provide automatic retrieval³⁰. Handmade pots from early

29. Darina Bialeková – Anna Tirpáková, Preukazateľnosť používania rímskych mier pri zhotovovaní slovanskej karamiky, *Slovenská Archeológia* 31 (1983), 121–147; Ivana Pleinerová – E. Neustupný, K otázke stravy ve staroslovanském období (Experiment v Březne), *Archeologické rozhledy* 39 (1987), 90–101 and 117–119. For the experiment in Březno, see Ivana Pleinerová, Březno: experiments with building Old Slavic houses and living in them, *Pamatky Archeologické* 77 (1986), 104–176. See also Hally, Identification of vessel function, 273 and 275.

30. P. Stehli – A. Zimmerman, Zur Analyse neolithischer Gefäßformen, *Archäo-Physika* 7 (1980), 147–177; R. Whallon, Variables and dimensions: the critical step in quantitative typology, in *Essays in Archaeological Typology*, eds. R. Whallon – J. A. Brown, Evanston 1982, 127–161; P. Caselitz – R. B. Michl, Zur formalen Klassifikation von Gefäßen. Eine Studie zur Gruppierungstechnik am Beispiel des eisenzeitlichen Urnengräberfelders von Wetzten, Kr. Harburg, *Zeitschrift für Archäologie* 22 (1988), 37–63; P. H. Lewis – K. J. Goodson, Images, databases and edge detection for archaeological object drawings, in *Computer Applications and Quantitative Methods in Archaeology 1990*, eds. Cl. Orton et al., Oxford 1991, 149–153; A. Buko, Ceramology and medieval pottery research in Poland, *Archaeologia Polona* 30 (1992), 5–25. For a survey of various methods of profile analysis, see U. Kampffmeyer, P. Zamperoni, W.-R. Teegen, L. Graça, *Untersuchungen zur rechnergestützten Klassifikation der Form von Keramik*, Frankfurt am M.–Bern–Paris 1988. For equiangular swept radii profile codes and fuzzy boundary discrimination, see G. Liming – L. Hongjie – J. Wilcock, The analysis of ancient Chinese pottery and porcelain shapes: a study of classical profiles the Yangshao culture to the Qing dynasty using computerised profile data reduction, cluster analysis and fuzzy boundary discrimination, in *Computer Applications and Quantitative Methods in Archaeology 1989*, ed. S. Rahtz – J. Richards, Oxford 1989, 363–374. For automatic classification using image analysis techniques, see Marion F. Smith, A functional analysis of reconstructible vessels, in *Function and Technology of Anasazi Ceramics from Black Mesa, Arizona*, ed. Marion F. Smith, Carbondale 1994, 67–116; P. Durham – P. H. Lewis – S. J. Shennan, Classification of archaeological artifacts using shape, <http://www.ecs.soton.ac.uk/research/rj/im/lewis/phl.html> (visit of October 28, 1997).

medieval ceramic assemblages in Eastern Europe are, however, typically asymmetrical, which suggests that approaches based on vessel ratios should be preferred to those based on vessel profiles. The advantage of using ratios is that they eliminate all differences which would arise in comparing vessels of similar shape but different size³¹. In Eastern Europe, the most popular approach to shape analysis based on vessel ratios is that pioneered by the Russian archaeologist Vladimir Gening and used by Irina Rusanova for her analysis of the early Slavic pottery. The method is still used, with slight variations, by archaeologists working with sixth- and seventh-century ceramic assemblages in Moldova, Slovakia, and Poland³². Genning's approach consists of a number of basic measurements made from scale drawings of vessels (figure 1), which are then used to derive shape variables, viewed as ratios between these measurements. Classification is obtained by applying the Robinson coefficient of agreement to the matrix of shape variables³³. Classes of pottery are thus derived, which are then considered as chronologically sensitive and used for dating sites.

Rusanova and others made extensive use of this statistical procedure for shape analysis, in order to approximate as closely as possible that combination of mechanical and aesthetical executions, which, in their eyes, formed a definite structural pattern in the minds of the early medieval potters. In order to test the idea that a certain mental template existed behind ceramic types, I selected 112 vessels from various sites in Romania, Ukraine, and Moldova, both hand- and wheel-made³⁴. Some of these pots were found in archaeological assemblages with no certain date (Korchak IX)³⁵. Others were associated with mortuary assemblages in

31. Parczewski, *Anfänge der frühslawischen Kultur*, 28. See Whallon, Variables and dimensions, 127–161; T. Madsen, *Multivariate Archaeology. Numerical Approaches in Scandinavian Archaeology*, Højbjerg 1988, 17; Anna Tirpáková – Ivona Vlkolinská, The application of some mathematical-statistical methods for the analysis of Slavic pottery, in *Computer Applications and Quantitative Methods in Archaeology 1991*, eds. G. Lock – J. Moffett, Oxford 1992, 184.

32. V. F. Gening, Programma statisticheskoi obrabotki keramiki iz arkeologicheskikh raskopok, *Sovetskoi arkheologii* 1 (1973), 114–135; Idem, *Drevniia keramika: metody i programmy issledovaniia v arkheologii*, Kiev 1992. See also Rusanova, *Slavianskie drevnosti*, 10–11. For a brief history of this approach, see Tirpáková – Vlkolinská, Application of some mathematical-statistical methods, 183–186; Postică, *Românii din codrii Moldovei*, 15–16; Fusek, *Analyse der Formen*, 19–27; Idem, *Formanalyse vollständiger Gefäße*, 15–33; Parczewski, *Anfänge der frühslawischen Kultur*, 31–32.

33. Gening, Programma statisticheskoi obrabotki, 120–123 and 132. For a description of the Brainerd-Robinson method of ordering assemblages, see St. Stennan, *Quantifying Archaeology*, Edinburgh 1990, 191–192.

34. For full list of the vessels used for analysis, see Curta, *Making an Early Medieval Ethnie*, 349–955.

35. Rusanova, *Slavianskie drevnosti*, pls. 8/7, 8/17, 8/18, 9/1, 9/16, 9/20.

"Gepidia", which have nothing to do with the "Slavic culture" (the sixth-century cemetery at Bistrița)³⁶. Another pot was found during excavations on an early Byzantine site south of the Danube³⁷. All pots were classified according to two sets of variables proposed by Vladimir Gening and Michał Parczewski, respectively (figures 2 and 3)³⁸.

Both plots show a strong resemblance between almost all pots considered, regardless of where they were found. Two zoomed details of these plots indicate that very similar proportions were used for the manufacture of both hand- and wheel-made pots (figures 4 and 5). Can this pattern be interpreted as a template, in Borkovský's and Rusanova's sense? In my opinion, the answer must be negative for a variety of reasons. First, Borkovský and Rusanova insisted that the Prague type is a specific class of handmade pottery, but this series of plots clearly shows that both hand- and wheel-made pots were shaped similarly. Second, the Březno experiment and the fact that very similar shapes appear in ceramic assemblages considerably different in date suggest that vessel shape is primarily determined by vessel use and is not a function of "ethnic traditions". Furthermore, the experiment demonstrated that contents of all pots had to be mixed frequently as the cooking was mostly carried out at the hearth by the over gate, so that only half of the pot was usually exposed to fire³⁹. This seems to point to a certain correlation between use of cooking ovens and vessel shape and size. If so, the allegedly prototypic shape should be interpreted in relation to food preparation, not to "emblemic style"⁴⁰. The archaeological context in which some of the 112 pots selected for analysis were found strongly supports this hypothesis. They were normally on the hearth, by the oven's gate. Third, archaeologists working on distinguishing artifact variability that reflects differences in consistent practices or templates from "accidental" variability normally focus on single assemblages or, at the most, on assemblages from the same site. As the example from Rashkov shows, procedural modes pertaining to the manufacture of pots may have existed at the individual site level. A limited number of distinct practices and templates may have been in use in any given community. This is further substantiated by a detailed analysis of ceramic assemblages from sites independently dated by dendrochronology, which points to a long use-life of most

36. C. Gaiu, Le cimetière gépidique de Bistrița, *Dacia* 36 (1992), 117 fig. 2/23 and 119 fig. 4/1.

37. C. Scorpan, O nouă problemă pentru secolele VI-VII e.n., *Pontica* 1 (1968), fig. 22b.

38. For a detailed description of the ratios used in this analysis, see Gening, *Drevniia keramika*, 50-51; Parczewski, *Anfänge der frühslawischen Kultur*, 32.

39. See Fusek, *Analyse der Formen*, 19; Pleinerová, Březno: experiments with building, 162.

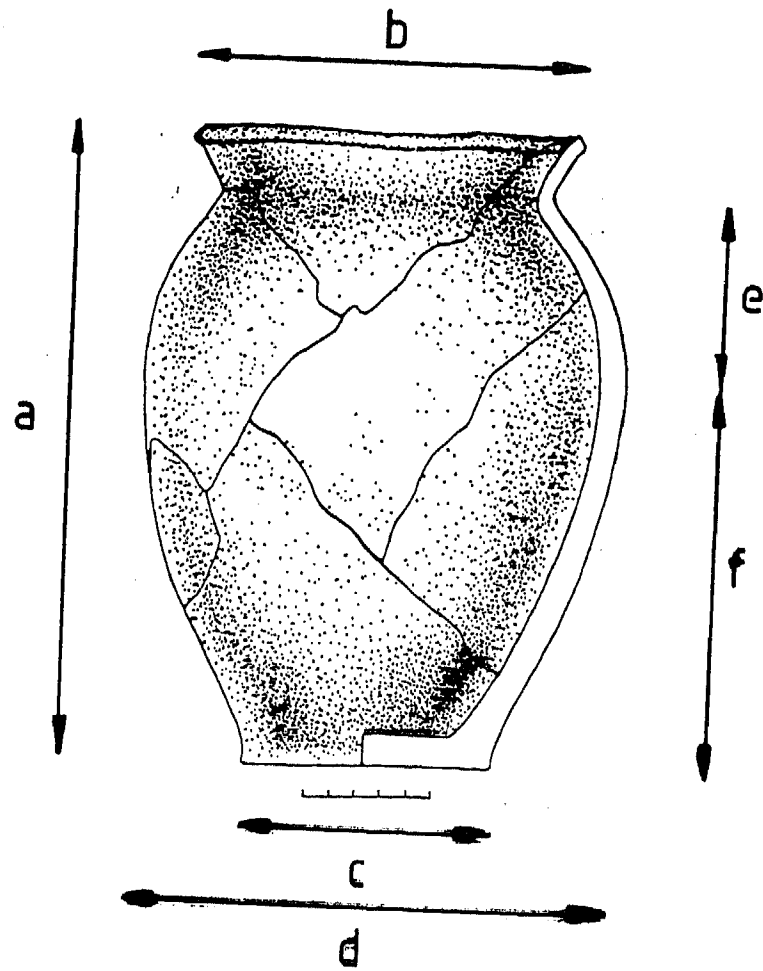
40. The concept of "emblemic style" is that of Polly Wiessner, Style and social information in Kalahari San projectile points, *American Antiquity* 48 (1983), no. 257-258.

pottery types⁴¹. It is simply unknown whether or not such isomorphism existed between sites, particularly between those located at considerable distance from each other, such as Rashkov and Dulceanca.

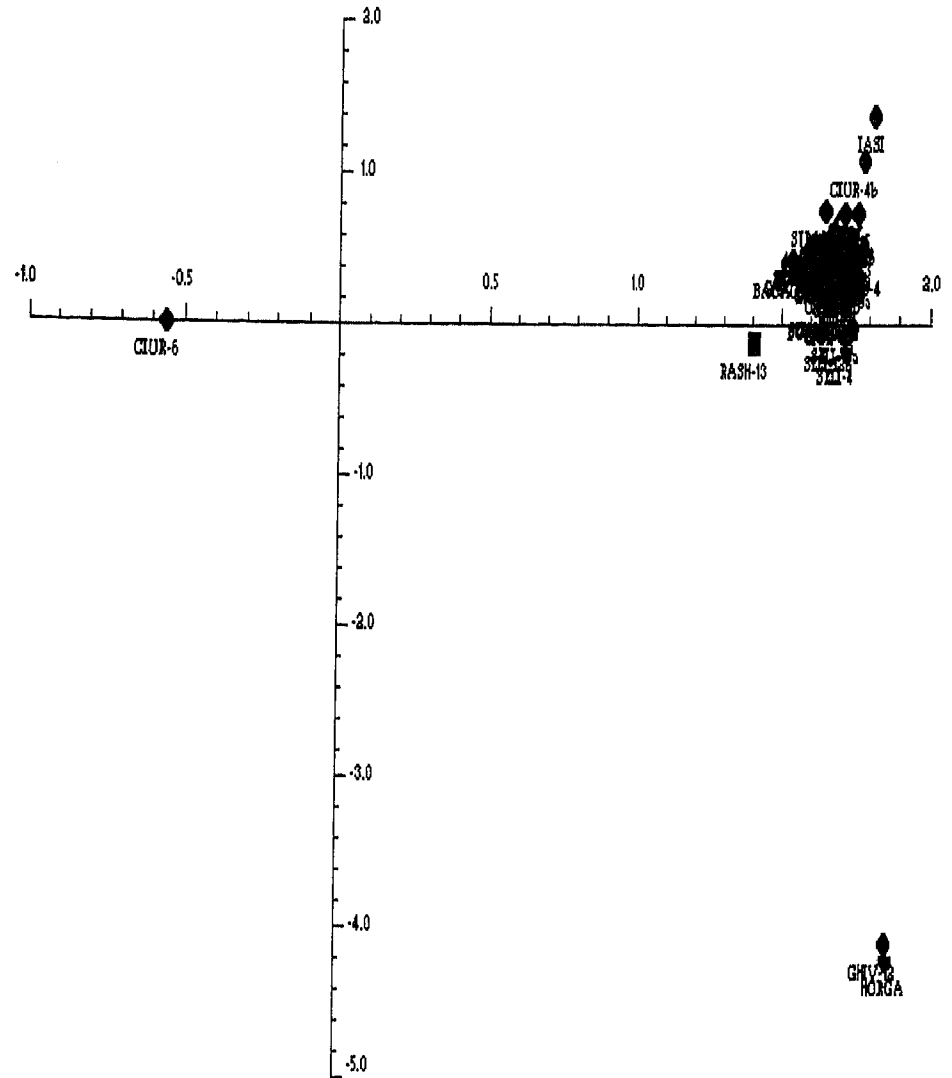
In conclusion, there is no statistical evidence for the existence of a ceramic category recognized by manufacturers and users in the past, which would allow the construction of pottery chronologies or the identification of Slavic ethnicity. As an archaeological construction, the "Prague type" is the by-product of a pervasively culture-historical approach to material culture, with its obstinate idea of equating artifacts with people⁴². Though profoundly tied to the specific political and historical conditions of the archaeological discourse, the concept of a specific ceramic category which would represent Slavic ethnicity remains popular with many archaeologists in Eastern Europe. The critique of Rusanova's efforts to delineate the Slavic pottery focused almost exclusively on her use of statistical methods, without questioning her basic assumptions about material culture and ethnicity. Reified as ethnic badge, the "Prague type" was further used to date sites, on the assumption that its map distribution coincided with the alleged migration of the Slavs known from written sources. The evasive "ethnic traditions" behind the concept of Slavic pottery constructed by Czech and Soviet scholars still fuel the archaeological discourse about the early Slavs. To archaeologists inspired by a critical approach, however, the "Prague type" cannot bring any light into the Dark Ages of Eastern Europe.

41. V. D. Baran, Die frühslawische Siedlung von Raškov, Ukraine, *Beiträge zur allgemeinen und vergleichenden* 8 (1986), 52; Cowgill, *Artifact classification*, 72. For sites dated by dendrochronology, see P. Donat, Probleme der Gliederung und Chronologie altslawischer Keramik, in *Zbornik posveten na Boško Babić. Mélanges Boško Babić 1924-1984*, ed. Mihailo Apostolski, Prilep 1986, 85.

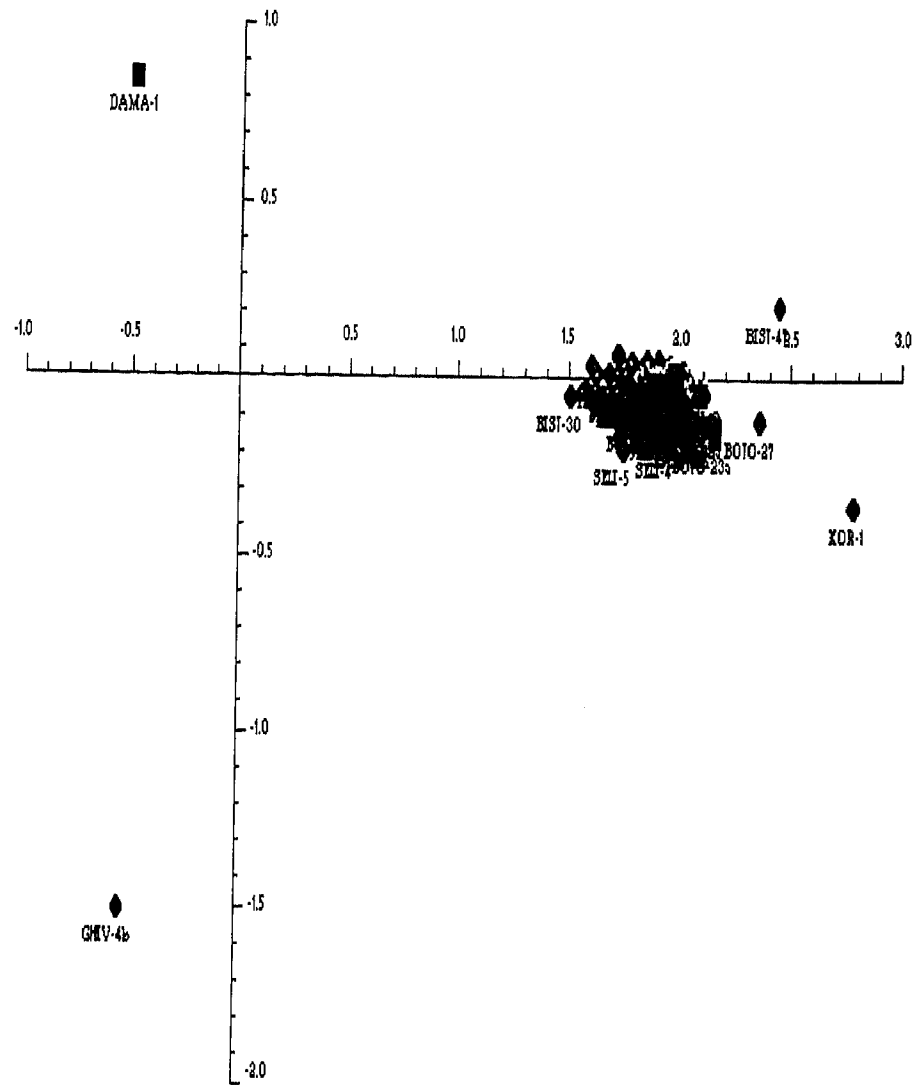
42. For an excellent survey of the culture-historical paradigm in archaeology, see Br. Trigger, *A History of Archaeological Thought*, Cambridge 1989, 148-206.



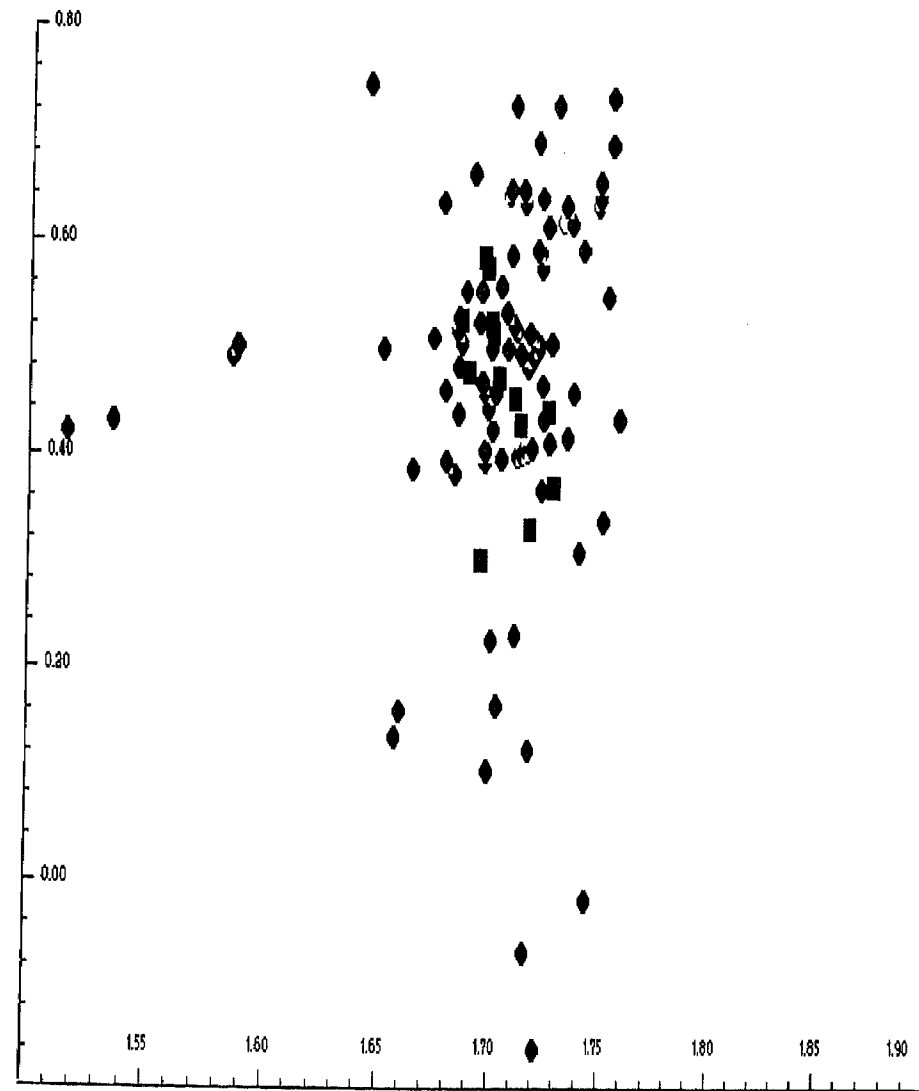
1. Measurements used for vessel shape analysis based on vessel ratios.



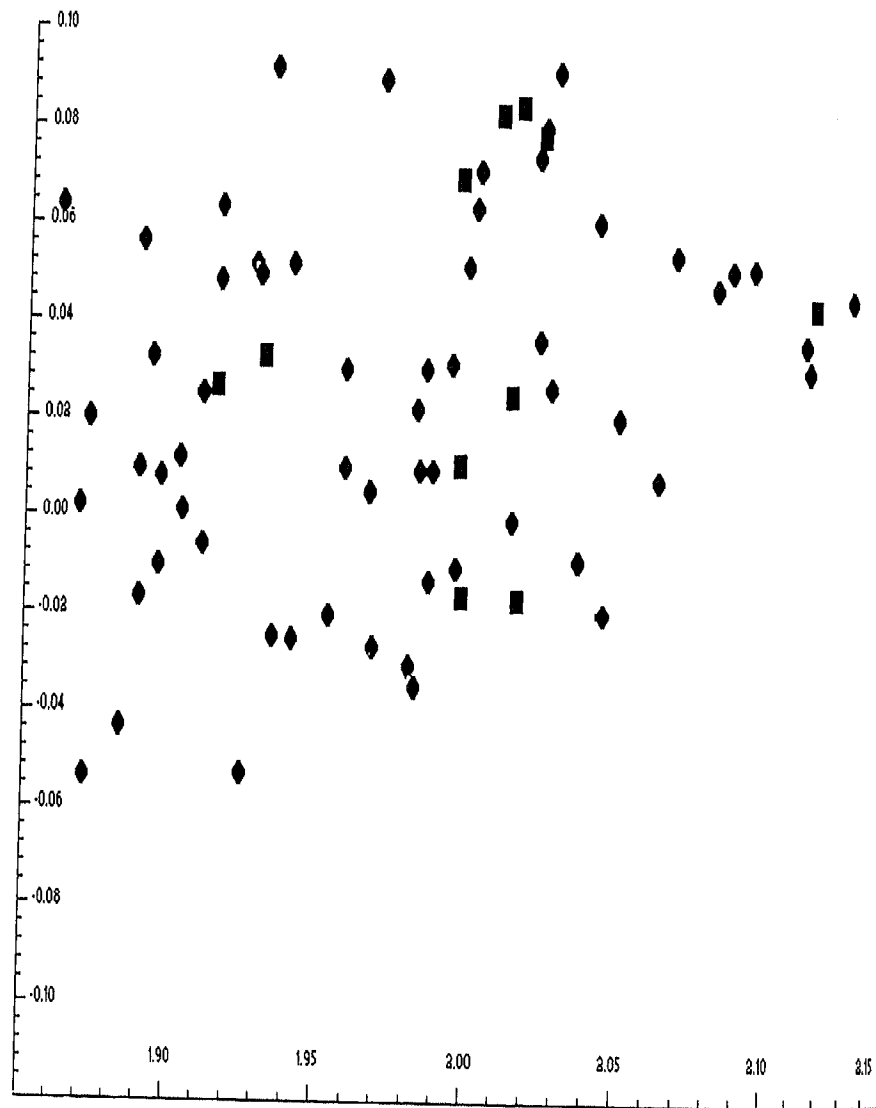
2. Correspondence analysis of 112 vessels in relation to eight ratios proposed by V. F. Gening.



3. Correspondence analysis of 112 vessels in relation to six ratios proposed by M. Parczewski.



4. Zoomed detail of the correspondence analysis of hand- (circle) and wheel-made (rectangle) vessels in relation to eight ratios proposed by V. F. Gening.



5. Zoomed detail of the correspondence analysis of hand- (circle) and wheel-made (rectangle) vessels in relation to six ratios proposed by M. Parczewski.

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ΒΟΥΛΑ ΚΟΝΤΗ, ΑΓΓΕΛΙΚΗ ΠΑΝΟΠΟΥΛΟΥ

ΣΥΜΒΟΛΗ ΣΤΗΝ ΕΡΜΗΝΕΙΑ ΤΩΝ ΑΡΧΑΙΟΛΟΓΙΚΩΝ ΤΕΚΜΗΡΙΩΝ ΤΗΣ
ΠΕΛΟΠΟΝΝΗΣΟΥ ΚΑΤΑ ΤΟΥΣ «ΣΚΟΤΕΙΝΟΥΣ ΑΙΩΝΕΣ»

Τò ενδιαφέρον πολλῶν μελετητῶν, Ἑλλήνων καὶ ξένων, ἔχει ἐπικεντρωθεῖ στὴν ἔρευνα τῆς ἱστορίας τῆς πελοποννησιακῆς κερσονήσου κατὰ τὴ διάρκεια τῶν σκοτεινῶν χρόνων. Ἡ περίοδος αὐτὴ προσδιορίζεται χρονικὰ ἀπὸ τὰ τέλη τοῦ 6ου - ἀρχὲς τοῦ 7ου μέχρι καὶ τὰ τέλη τοῦ 8ου αἰ. καὶ χαρακτηρίζεται, κυρίως, ἀπὸ τὴν πῶση τῆς νομισματικῆς κυκλοφορίας καὶ τὴν ἀπουσία οἰκοδομικῆς δραστηριότητος, γεγονός που εἶχε ὡς ἀποτέλεσμα τὴν ἔλλειψη χρονολογημένων καὶ ἀναγνωρίσιμων μνημειακῶν ἀρχαιολογικῶν τεκμηρίων τῆς περιόδου, ποὺ θεωρήθηκαν ὡς συνέπειες τῶν σλαβικῶν ἐπιδρομῶν στὴν περιοχὴ, γιὰ τὶς ὁποῖες οἱ μαρτυρίες τῶν φιλολογικῶν πηγῶν εἶναι σαφεῖς. Ἔτσι, τὸ ἐνδιαφέρον στράφηκε τόσο πρὸς τὴν ἔκδοση καὶ τὸ σχολιασμό τῶν φιλολογικῶν πηγῶν, ὅσο καὶ πρὸς τὴ μέγιστη δυνατὴ ἀξιολόγηση τῶν τεκμηρίων τῆς ἀρχαιολογικῆς ἔρευνας¹.

Ἡ κύρια ἱστορικὴ πηγὴ σχετικὰ μὲ τὶς σλαβικὲς ἐπιδρομὲς στὴν Πελοπόννησο καὶ τὶς συνέπειές τους, τὸ *Χρονικὸ* τῆς Μονεμβασίας, ἀποτελέσασε ἀντικείμενο ἀλλεπάλληλων ἐκδόσεων ἀπὸ τὶς ἀρχὲς τοῦ αἰῶνα, ἐνῶ τὸ περιεχόμενό του σχολιάσθηκε ποικιλοτρόπως ἀπὸ τοὺς ἐπιστήμονες στὴν προσπάθειά τους νὰ προσδιορίσουν τὸ συγγραφέα του, νὰ ἀποκρυπτογραφήσουν τὶς συχνὰ ἀντιφατικὲς πληροφορίες

1. Βασικὸ ἔργο γιὰ τὴ μελέτη τῆς βυζαντινῆς Πελοποννήσου παραμένει τὸ βιβλίο τοῦ Α. Βον, *Le Péloponnèse byzantin jusqu'en 1204*, Paris 1951. Βλ. ἐπίσης γιὰ τὴν πρωτοβυζαντινὴ Πελοπόννησο τὰ πρόσφατα δημοσεύματα τῆς Anna Avraméa, *Le Péloponnèse du IVe au VIIIe siècle. Changements et persistances*, Byzantina Sorbonensia 15, Paris 1997 καὶ τοῦ Η. Αναγνωστάκη, *Οἱ πελοποννησιακοὶ σκοτεινοὶ χρόνοι: Το σλαβικὸ πρόβλημα. Μεταμορφώσεις τῆς Πελοποννήσου ἢ τῆς ἔρευνας*, στὸ *Οἱ Μεταμορφώσεις τῆς Πελοποννήσου (4ος-15ος αἰ.)*, «Επιστήμη Κοινωνία». Εἰδικὲς Μορφωτικὲς Εκδηλώσεις ΕΙΕ, [Ἀθήνα 2000], 19-34. Βλ. ἐπίσης, Anne Lambrouliou, *Le Péloponnèse occidental à l'époque protobyzantine (IVe-VIIe siècles). Problèmes de géographie historique d'un espace à reconsidérer*, στὸ *Byzanz als Raum. Zu Methoden und Inhalten der historischen Geographie des östlichen Mittelmeerraumes*, ἐκδ. Kl. Belke - Fr. Hild - J. Koder - P. Soustal, Öster. Akad. der Wiss. Veröffentlichungen der Kommission für die TIB 7, Wien 2000, 95-113.