

K R I T I K A

A REVIEW OF CURRENT SOVIET BOOKS ON RUSSIAN HISTORY

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SOVIET WATERMARK STUDIES -- ACHIEVEMENTS AND PROSPECTS

"Sometimes they deceive themselves into supposing that an ability to spot a similar watermark within the four volumes of Briquet's Les Filigranes is quite enough to know about that watermark and the paper it identifies."¹

The six decades since the publication of Charles Moïse Briquet's monumental album of watermarks Les Filigranes² have witnessed a proliferation of similar but less ambitious albums and the development recently of new techniques and a truly scientific approach to filigranology (watermark study). Nevertheless, as an auxiliary discipline, this science is rarely part of the professional training of those scholars who may need it.³ Historians, literary scholars, and

¹Allan Stevenson, Observations on Paper as Evidence, Lawrence, Kansas, 1961, p. 3.

²Published in four volumes, Geneva, 1907. Most recently republished under the same title but with supplementary materials and the overall heading The New Briquet. Jubilee Edition, Amsterdam, 1968.

³I know of only one manual of filigranology: Karl T. Weiss, Handbuch der Wasserzeichenkunde, Leipzig, 1962. Manuals of paleography generally devote little space to the subject. L. V. Cherepnin's Russkaia paleografiia, Moscow, 1956, provides no practical guidance for studying watermarks. V. N. Shchepkin, Russkaia paleografiia, 2nd ed., Moscow, 1967 (1st ed. 1920), contains an excellent introduction to methodology and a useful appendix on dating by means of watermarks (the latter published separately as V. N. Shchepkin and M. V. Shchepkina, "Paleograficheskoe znachenie vodiannykh znakov", Problemy istochniko-vedeniia, VI, 1958, pp. 325-346).

librarians of manuscript and rare book collections are aware in a general way that watermarks may be of use in dating the objects of their research, but in this work one finds "unwarranted assumptions, confusion...and consequent frustration".⁴ This tendency is doubly unfortunate, since it not only calls into question conclusions drawn directly from the study of manuscripts, but limits the usefulness of manuscript descriptions for those working from published information. A clear understanding of the use and abuse of watermarks is essential both in order that accurate results be obtained from filigranology and that these be properly interpreted.

In view of the relative neglect of this auxiliary discipline, I shall attempt here to survey the theory and practice of Soviet filigranology, assess its virtues and shortcomings, and suggest possibilities for its improvement. My remarks concerning the applications of filigranology refer specifically to the study of Old Russian manuscripts, but are relevant also for the study of old printed books.

* * *

The Russian tradition of filigranology has deep roots. The first major album of watermarks to appear in

⁴Allan Stevenson, "Paper evidence and the Missale Speciale", Gutenberg-Jahrbuch 1962, pp. 102-103.

Europe was the work of the Moscow engraver and lover of antiquities Kornilii Tromonin, whose approach compares favorably with that of his successors a century removed.⁵ The first work to exceed in scope that of Tromonin was also published by a Russian, the historian, paleographer, numismatist and expert on iconography Nikolai Likhachev.⁶ Although soon eclipsed in size by Briquet's Les Filigranes, the work of Likhachev remains one of the most important reference works for those studying pre-seventeenth-century Russian manuscripts, since it is based in large part on documents of Russian provenance.

With few exceptions, Soviet work on watermarks has been written in the past two decades. A good concise survey of this work is on pp. 88-91 of the article "Soviet Paleography" in the collection Vspomogatel'nye istoricheskie distsipliny reviewed above (pp.55-77).⁷ The author of this

⁵Iz"iasnenie znakov, vidimykh v pischei bumage, posredstvom kotorykh možno uznavat' kogda napisany ili napechatany kakii libo knigi, grammaty, risunki, kartinki i drugii starinnyia i nestarinnyia dela, na kotorykh ne oznacheno godov, Moscow, 1844. The Paper Publications Society has reissued this rare volume in facsimile, with supplementary materials prepared by S. A. Klepikov, as Tromonin's Watermark Album, Hilversum, Holland, 1965 (Monumenta Chartae Papyraceae Historiam Illustrantia, Vol. XI).

⁶Paleograficheskoe znachenie bumazhnykh vodianykh znakov, 3 vols., St. Petersburg, 1899.

⁷In addition to works cited there on Russian and Lithuanian watermarks, among them a major album of the latter, there are recent studies of papermaking and watermarks in the Ukraine and Georgia. References to the former may be found

article, M. V. Kukushkina of the Manuscript Division, Library of the Academy of Sciences in Leningrad, is one of three scholars who have helped fill a major gap in watermark literature -- the study of Russian paper manufacture and the watermarks on Russian paper. The dean of Soviet filigranologists S. A. Klepikov initiated this study, and its definitive treatment is Z. V. Uchastkina's A History of Russian Hand Paper Mills and Their Watermarks, published in The Netherlands in 1962.⁸

Other Soviet work has been important for its concentration on the period beginning with the seventeenth century, since previous studies of watermarks had emphasized the period prior to 1600. A book of particular value for those working on seventeenth-century Russian manuscripts, despite its considerable imperfections, is the posthumous

in O. Ia. Matsiuk, "Rol' filihranolohii u vstanovlenni chasu napysannia nedatovanykh dokumentiv", Istorychni dzherela ta ikh vykorystannia, vyp. 2, Kiev, 1966, esp. pp. 256-258; see also by the same author, "Dzhereloznavche znachennia filihranei dokumentiv l'vivs'kykh virmen XVI-XVII st.", op. cit. vyp. 4, Kiev, 1969, pp. 267-289. For the latter, see two articles by R. M. Pataridze published in Akademiia nauk Gruzinskoi SSR, Institut rukopisei im. K. S. Kekelidze, Paleograficheskie razyskaniia, 1, Tbilisi, 1965, pp. 45-56, 109-130. These articles are in Georgian with Russian summaries; I rely here on the citation and summary by J. S. G. Simmons published under "Miscellen" in Papiergeschichte, Jhrg. 16, Nos. 5-6, 1966, p. 28.

⁸References to the works of all three authors are in Vspomogatel'nye istoricheskie distsipliny, vyp. 1, p. 89 n. 64. The Uchastkina volume, written in English, is the ninth in the Paper Publication Society's Monumenta.

album of A. A. Geraklitov.⁹ It contains primarily watermarks found in seventeenth-century Russian printed books and by no means exhausts these, as the author was limited to those he could obtain in Saratov. Since Geraklitov often made free-hand sketches and the watermarks were partially obscured by heavy inking of the type, in many instances it is practically impossible to determine that one of the distorted reproductions of his album is indeed a variant of a mark found in a manuscript. The 1500 marks of his album represent only a fraction of the seventeenth-century corpus of marks on paper used in Russia, and there is still a need for a really comprehensive album, which accurately reproduces the marks of this era.

In addition to the work of Geraklitov, there are several studies by Klepikov devoted to watermarks of particular design; these studies help fill gaps in the collection of published marks for the seventeenth and eighteenth centuries.¹⁰

⁹A. A. Geraklitov, Filigrani XVII veka na bumage rukopisnykh i pechatnykh dokumentov russkogo proiskhozhdeniia, Moscow, 1963.

¹⁰These studies deal with the watermarks "Arms of Amsterdam", "foolscap", "Pro Patria", and "horn". References to the first three, one of which was co-authored by Kukushkina, are on p. 90 of Vspomogatel'nye istoricheskie distsipliny. The final work has not been fully published, but preliminary results are in S. A. Klepikov, "Filigran' 'rozhok', ee istoriia i opyt analiza ee evoliutsii (1314-1600 gg.)", Arkheograficheskii ezhegodnik za 1967 god, Moscow, 1969, pp. 59-67.

The system by which he has organized the material in these articles deserves extended discussion, since it is his answer -- but in my opinion an unsatisfactory one -- to the question of how best to publish watermarks.¹¹

Klepikov begins by recognizing that the total corpus of watermarks and their variants increases to such size over the centuries that it becomes virtually impossible to consider publishing pictures of all of them. Furthermore, the variance in detail between one mark and a later one of the same design can be so minute that marks of quite different date may be indistinguishable unless reproduced photographically or by some other means superior to tracings. Klepikov suggests a means of removing these difficulties and compiling a reference work for use by historians and archivists that is "sufficiently portable and convenient" and provides "the most economical reproduction of the mark".¹²

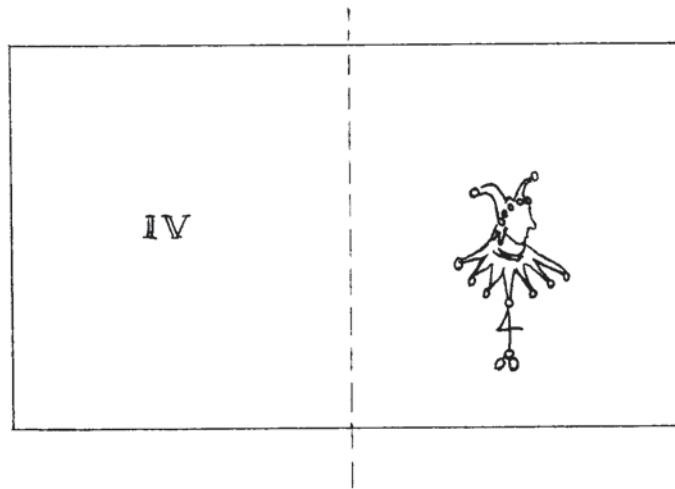
Klepikov's solution to these problems is exemplified by his treatment of the watermark "foolscap", which was particularly common in the seventeenth and eighteenth centuries. Figure I depicts two possible variations of the mark. The portion of the mark which is the actual picture of the foolscap may exist in several designs, and Klepikov

¹¹He outlines the system and the reasons for using it in "Problema filigranograficheskikh publikatsii", Arkheograficheskii ezhegodnik za 1962 god, Moscow, 1963, pp. 331-337.

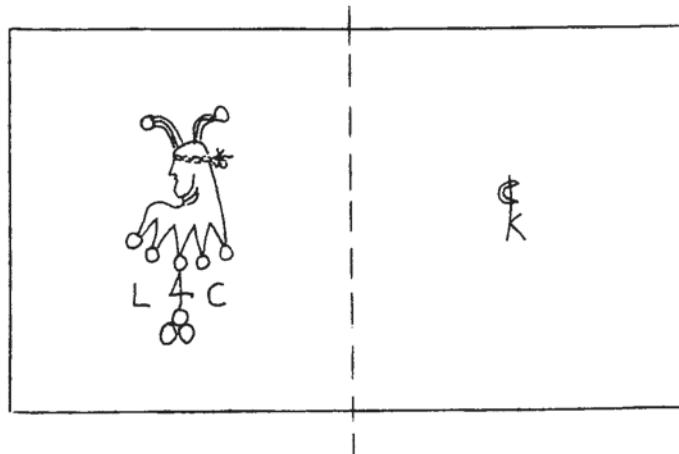
¹²Ibid., pp. 331, 333.

Figure I

Two variants of the watermark "foolscap"



Klepikov No. 144, Foolscap type 4 with countermark IV



Klepikov No. 153, Foolscap type 6 with letters LC and countermark a monogram C/I/K

distinguishes six common "types" of these. He provides a single picture of each basic design, but also pictures of all other foolscaps he has found which are of exceptional design and do not fit these categories. In the majority of cases, a foolscap is accompanied by letters, on the same half of the sheet as the picture, on the opposite half (the so-called countermark), or on both. Klepikov feels that any given set of such letters was used for only a relatively small number of years. If this be the case, a table arranged alphabetically by these letters but not including pictures of every mark should define within fairly narrow chronological limits the date of the paper on which they are found. Such a table should provide a simple and reliable tool for dating. For the two marks pictured in Figure I (p. 84), I reproduce on p. 86 the entries from Klepikov's table, where he describes the mark with reference to the appropriate type and indicates the date and nature of the documents on which he has found it.¹³

Is such a table a satisfactory reference aid for those working on old manuscripts? In my opinion, it is not. Both precise identification and precise dating are impossible using the table. Furthermore, it contains no information which

¹³"Bumaga s filigran'iu 'golova shuta (foolscap)'. (Materialy dlia datirovki rukopisnykh i pechatnykh tekstov)", Gos. biblioteka SSSR im. V. I. Lenina, Zapiski Otdela rukopisei, vyp. 26, Moscow, 1963, pp. 431-432.

Classifi- cation No.	Position of mark on sheet		Date	Nature of source	Reference: Album or MS. where mark located
	left half	right half			
144	IV*	fools- cap, type 4	1659- 1660	MS. doc.	PBRO**, <u>fond</u> 299, No. 469
			1689	MS. doc.	PBRO, <u>fond</u> 594, No. 77
			1686	--	Heawood***, No. 2027
			ca. 1714	printed book	Heawood, No. 2083

153	fools- cap, type 6 L-C	C/I/K (mono- gram)	1649	MS. doc.	Churchill****, No. 344
			1649	MS. doc.	PBRO, <u>fond</u> 538, No. 830
			1650	MS. doc.	PBRO, <u>fond</u> 538, No. 875
			1651	MS. doc.	PBRO, <u>fond</u> 538, No. 923

* Initials for I. Villedary

** Manuscript Division, Saltykov-Shchedrin Public Library

*** Edward Heawood, Watermarks Mainly of the 17th and 18th Centuries, Hilversum, 1950 (Monumenta..., Vol. I)

**** W. A. Churchill, Watermarks in Paper in Holland, England, France, etc. in the XVII and XVIII Centuries and Their Interconnection, Amsterdam, 1935.

might enable one to determine the provenance of a manuscript from its watermarks. I shall consider all these points in some detail, as they lead me to suggest some improvements which might be made in the study of watermarks and publication of the results.

First, the problem of dating. The theory that the letters accompanying a given watermark define closely its chronological boundaries has been seriously questioned.¹⁴ Where the letter combination is an unusual one, as in the case of Klepikov's foolscap No. 153, approximate dating may be possible. However, it is clear from the example of his foolscap No. 144 that a given set of letters and a single main mark may have been used over a period of decades. Furthermore, as I shall indicate below, recent work demonstrates that even for apparently "identical" marks such as those in question, changes in the main mark over time may be distinguished. Frequently-occurring marks such as the type four foolscap with countermark IV were not identical over a period of half a century. The moulds in which the paper was made changed in a fraction of that span, and it is only by taking such changes into account that one may obtain precise identification and dating.

In addition to determining the date of a manuscript, one would like to determine its place of origin. Although I do not suggest that watermarks are wholly reliable indicators,¹⁵ they can help determine provenance and may prove quite accurate for this purpose if a method is developed

¹⁴See the comments of Gerhard Piccard in his important article "Die Wasserzeichenforschung als historische Hilfswissenschaft", Archivalische Zeitschrift, Vol. 52, 1956, esp. p. 69.

¹⁵For a skeptical view of such possibilities, see Gerhard Piccard and Lore Sporhan-Krempel, "Die Untersuchung

whereby they may all be recorded in some retrievable form. It is obvious, however, that one cannot say anything about the provenance of a manuscript from its watermarks if those who have published similar marks indicate merely the current location of unpublished documents and manuscripts from which they are taken. Such is the case with the work of Klepikov and other filigranologists.¹⁶

Since those studying Russian manuscripts have rarely used watermarks to determine provenance, I shall illustrate their potential in this regard. My first example demonstrates how one may establish that two manuscripts were copied in the same scriptorium. In his study of the manuscripts of the so-called "Historical Tale about the Taking of Azov", A. S. Orlov noted that two of the copies were so close textually that they both derived from "one very similar original".¹⁷ Examination of the two manuscripts reveals that

der ältesten erhaltenen Zeitungen auf ihre Wasserzeichen", Papiergeschichte, Jhrg. 1, No. 1, 1951, p. 16.

¹⁶In this respect, worthy of imitation is the example of N. P. Likhachev, op. cit., Vol. 2, where he indicated the content and where possible the provenance of manuscript materials he consulted. Some recent publications indicate provenance; for example, Gerhard Piccard, Die Ochsenkopf-Wasserzeichen, Part I, Stuttgart, 1966 and the album of Lithuanian watermarks by Laucevičius, cited in n. 19 below.

¹⁷A. Orlov, Istoricheskii i poeticheskii povesti ob Azove (vziatie 1637 g. i osadnoe sidenie 1641 g.). Teksty, Moscow, 1906, p. 164. The two MSS. are in the State Historical Museum in Moscow, Collection of the Synodal Library No. 409, and Uvarov Collection, No. 1363/16. Both watermarks and handwriting cast serious doubt on Orlov's dating of No. 409

in both at least two watermarks are identical and others are similar. To me this is rather convincing proof, supported by textual evidence, that the manuscripts originated in the same scriptorium.

My second example illustrates the desirability of indicating in watermark publications the provenance of the documents in which the marks are found. The older of the two known copies of the "Tale about the Turks" (Povest' o turkakh) a translated work on Ottoman history and mores, is watermarked with a small double-headed eagle.¹⁸ This mark or a variant of it is found in several documents in Ukrainian archives and one document presently located in the Academy Library, Vilnius.¹⁹ In addition, I have encountered a

to the end of the seventeenth century and certainly after 1658 (p. 3). Regarding the Uvarov manuscript, one should note an important omission in his and other descriptions: the Tale of the Founding and Fall of Constantinople beginning on f.495 is in fact a hitherto unknown copy of the works of Ivan Peresvetov. The copy coincides precisely with that in Uvarov Collection MSS. Nos. 1584/168 and 1321/103 (both copies break off in the middle of the text at precisely the same point), with the significant exception that in MS. No. 1363/16, the Large Petition of Peresvetov is absent.

¹⁸Manuscript Q.IV.126 of the Saltykov-Shchedrin Public Library. Now bound separately, this MS. was apparently part of the former collection of F. A. Tolstoi, in a larger MS. consisting of three separate parts. See K. Kalaidovich and P. Stroev, Obstoiatel'noe opisanie slaviano-rossiiskikh rukopisei, khраниashchikhsia...v biblioteke...grafa Fedora Andreevicha Tolstova, Moscow, 1825, Section II, No. 157, p. 312.

¹⁹These marks are published respectively as No. 674 (1659-1673) in I. Kamanin and O. Vytvyts'ka, Vodiani znaky na paperi ukraïins'kykh dokumentiv XVI-XVII vv. (1566-1651), Kiev, 1923, and No. 426 (1673) in E. Laucevičius, Popierius Lietuvoje XV-XVIII a., Vilnius, 1967.

variant of the mark in a manuscript known to be of Ukrainian origin and containing, among other works, a portion of this same "Tale about the Turks" in a different translation.²⁰ Both of the manuscripts I have examined were once in the library of Prince Dmitrii Mikhailovich Golitsyn, who owned many Ukrainian manuscripts.²¹ Furthermore, one notes that the language of the "Tale about the Turks" is "Russian, rich in Polonisms and White Russianisms [read, Ukrainianisms]".²² While the language of the partial translation of the tale is obviously Ukrainian, linguistic evidence does not preclude the possibility, suggested by the watermarks, that the complete translation is also of Ukrainian origin. Clearly, convincing conclusions about provenance derived from watermark data would depend upon exhaustive proof that the watermark in question

²⁰Manuscript F.IV.215 (formerly Tolstoi Collection, Section I, No. 157) of the Saltykov-Shchedrin Public Library. Regarding this MS., see Kalaidovich and Stroev, op. cit., pp. 84-87, and A. Rogozinskii, "'Kroinika' Feodosiia Safonovicha i ee otnoshenie k 'Kievskomu Sinopsisu' Innokentiiia Gizelia", Izvestiia Otdeleniia russkago iazyka i slovesnosti, Imperatorskoi Akademii nauk, 1910, Vol. XV, Bk. 4, pp. 270-286. I am grateful to Vladimir Andreevich Kuchkin of the USSR Academy of Sciences Institute of the History of the USSR, Moscow, for his helpful observations regarding this manuscript.

²¹Kalaidovich and Stroev, op. cit., describe more than 180 manuscripts which belonged to Golitsyn. Some additional information on Golitsyn and his collection is given by P. Pekarskii, Nauka i literatura v Rossii pri Petre Velikom, Vol. I, St. Petersburg, 1862, pp. 257ff.

²²A. I. Sobolevskii, Perevodnaia literatura Moskovskoi Rusi XIV-XVII vekov. Bibliograficheskie materialy, St. Petersburg, 1903, p. 89. Sobolevskii correctly concluded that the Tale is a translation from Polish, but he was unable

is found in Ukrainian manuscripts but not in Russian ones. At any rate, the role of watermark evidence in supporting other facts bearing on provenance should be obvious.

In my discussion so far, I have assumed that one can identify identical watermarks by comparison of those in a manuscript or book with pictures of others in albums, which is in fact a rash assumption for most of the existing albums, where even tracings are not accurate enough to permit such identification.²³ This brings me to my final point regarding Klepikov's tables -- did he not in fact begin compiling them before asking whether they were accurate enough for the type of use he had intended? He does not seem to have been aware of the controversy in the past two decades among watermark specialists outside of the Soviet Union regarding the best way to classify and reproduce watermarks and whether, indeed, they can be relied on for dating, given the present means of reproducing them. Those engaged in this debate agree that the mere image of the watermark is not sufficient to determine

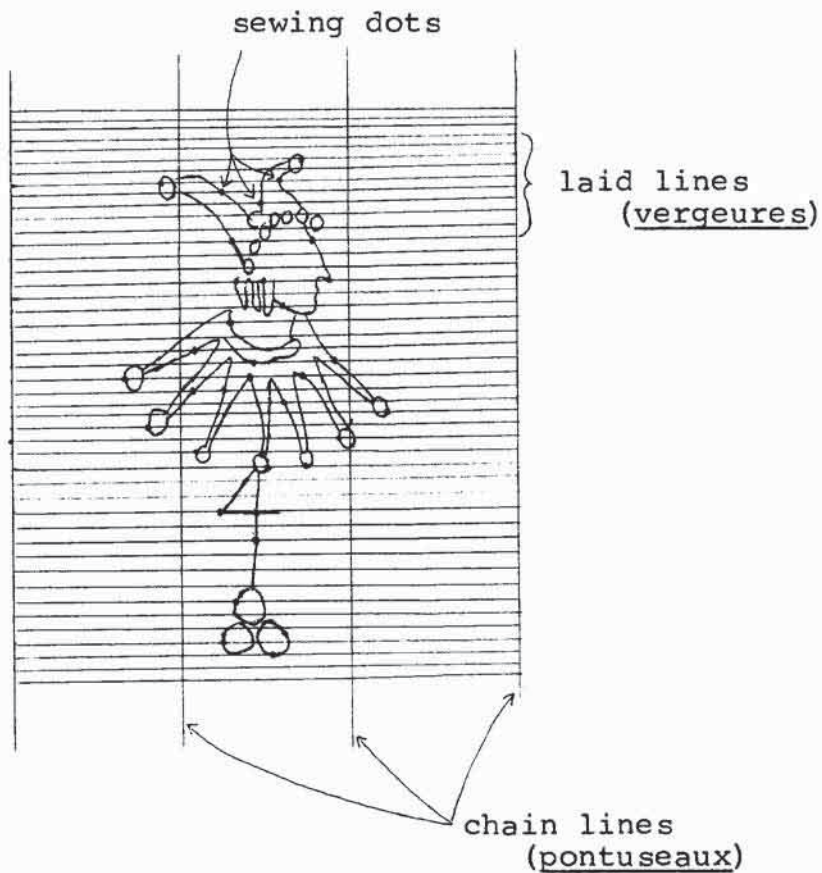
to identify the original. I have established that it is in fact a translation from the tenth book of Alexander Guagnini (Gwagnin), Kronika Sármaćyey Europskiey, Kraków, 1611.

²³Allan Stevenson, "Paper Evidence and the Missale Speciale", op. cit., p. 104, insists, "Though tracings may well provide a background for study and indeed clues to identity, in the end neither the investigator nor his reader can depend on them absolutely. No matter how carefully tracings are made, they are inevitably incomplete representations of watermarks and full of minor distortions...Only some form of photographic reproduction seems adequate..."

identity, but that other features connected with it must be considered.²⁴ Figure II depicts some of these features which one sees when examining a piece of handmade paper.

Figure II

Detail of paper with watermark "foolscap, type 4"



²⁴See references in The New Briquet. Jubilee Edition, op. cit., pp. *39-*40. Of particular importance are various works by Allan Stevenson, Theodor Gerardy and Gerhard Piccard.

While the issue is still being discussed, it seems clear that certain measurements may help define the uniqueness of a given watermark. Some of the parameters that might be measured are the spacing between chain lines, the positioning of the mark with respect to chain lines, the dimensions of the mark, the number of laid lines per 100 millimeters, and, if possible, the size of the entire sheet of paper.²⁵ Furthermore, indication of the sewing dots (the marks from the wire that was used to tie to the paper mould the shaped wire that forms the watermark) can be decisive for determination of mark identity. All of the measurable quantities could be included in a table describing a mark, which immediately would make the table more accurate than one

A number of articles by the last two are published in Papiergeschichte. In an article which I have not seen, Jean Irigoien attempts to resolve some of the differences between Gerardy and Piccard: "La datation par les filigranes", IPH-Information, N.F., I, No. 3, 1967, pp. 33-35, 48-49 (IPH = Die Internationale Arbeitsgemeinschaft der Papier-Historiker). Elsewhere Irigoien notes, "Accord seems to have been reached on one basic point: one dates not a watermark but a sheet of paper produced by a definite mould, with its format, its "laid" wires (filis vergeurs), its chains (pontuseaux), and bearing as a mark, at times completed by one or more countermarks, a particular filigrane." Jean Irigoien, "La datation des papiers italiens des XIII^e et XIV^e siècles", Papiergeschichte, Jhrg. 18, Nos. 3-4, 1968, p. 49.

²⁵Was not Geraklitov way ahead of his time in his approach to these problems, and did Klepikov not take a step backwards in the editing of Geraklitov's Nachlass? On p. 232 of Geraklitov, op. cit., Klepikov noted that Geraklitov included with each of his watermarks a formula expressing the number of chain lines on the half-sheet of paper, the distance between them and the number of laid lines per centimeter. Since Klepikov feels this information is not important for the seventeenth century, he omitted these formulae from the album.

where no such measurements are given.

In any proposal about the form which future watermark publications should take, the problem of precise identification must be considered along with that of classification and organization. Klepikov seems to have become more aware of the latter as he progressed from his early work on the Arms of Amsterdam to his most recent work on the horn watermark. In the former case, he was dealing solely with those marks which were accompanied by letters. Noting distinctions in details of design seemed of no consequence, since alone such distinctions do not follow any recognizable chronological sequence. However, this approach ignores the basic point that any element which defines more precisely the uniqueness of a given mark is of value. A classification system similar to the one employed for the "foolscap" would have been appropriate for the Arms of Amsterdam too.²⁶ In studying the horn watermark, since most of the examples prior to 1600 lack accompanying letters, he has devised a very useful classification system based on details of design and orientation.²⁷ He plans to publish the results of this work

²⁶See, for example, G. Liljedahl, "Eine Wasserzeichensammlung in Stockholm", Papiergeschichte, Jhrg. 6, No. 5, 1956, pp. 61-65.

²⁷While he cites one of the marks pictured by Wisso Weiss, curiously Klepikov does not evaluate Weiss's suggested classification of the horn mark published two decades ago, "Das Posthorn. Ein Beitrag zur Wasserzeichenkunde", Gutenberg Jahrbuch 1944/49, pp. 39-46.

in tabular form similar to that of his previous work but accompanied by many more illustrations of the basic types and variants of the mark. As I understand it, he believes that this publication will provide an adequate basis for dating manuscripts and books containing the mark. For reasons I have indicated above, I am skeptical. Klepikov's work in classification and tabulation is certainly a step in the right direction, but clearly further steps must follow if watermark publications are to be reliable.

It is necessary that a system for classifying and recording watermarks provide a reference aid that is "sufficiently portable and convenient" but also is sufficiently precise. If expanded to include measurements of the most appropriate parameters as indicated above, a tabulation of watermarks found in manuscripts of Russian origin might answer these requirements. Simultaneous study of the paper trade in Russia might produce evidence regarding the distribution of paper and an estimate of the numbers of watermarks that would comprise a complete catalogue. I wonder whether in fact the conditions of paper trade in Russia might mean that one is less likely to encounter there long runs of watermarks that are the product of a single mill -- in other words, might not the total number of variants for a given mark be fewer and be confined within narrower chronological limits in Russia than in Germany, for example? If such were the case, then measurement data might be reliable and not need to be

supplemented by an accurate reproduction of each mark. A truly precise and thorough system of recording watermarks goes one step further than this -- computerization.

* * *

Before outlining such possibilities, I shall complete my survey of Soviet watermark studies by examining the work of historians, literary scholars, and librarians who may not be specialists on watermarks but who apply filigranology in their work on old Russian manuscripts. In this work there is clearly room for improvement, even using the present imperfect apparatus for watermark study. One finds evidence to support this contention in commentaries accompanying editions of texts and in descriptive catalogues of manuscript collections, where watermark information is one of the most important items which any such publication should provide.

From the standpoint of watermarks, only a small percentage of Russian manuscripts is adequately described. In the majority of cases, existing manuscript catalogues date to pre-revolution days when watermarks were examined only by those compiling albums of them (for the manuscripts formerly in the Tolstoi Collection and now in the Saltykov-Shchedrin Public Library, one must rely on a description published in 1825!). Even in recent descriptions, information on watermarks contains far too many errors or simply is not thorough

enough, and in some cases is entirely absent. Moreover, vast numbers of manuscripts in Soviet repositories simply have not been described at all.

Errors in the examination of watermarks may arise from inexperience -- it is sometimes difficult to recognize a watermark which one has never seen before if it is faint or partly obscured. Lack of proper training in filigranology is a connected factor, since it is essential to know the difference between identity of a mark and conformity to the general type of one that has been published. When these two faults are combined with haste and sloppiness, one finds results of the type that I now illustrate. My first examples are from books where the study of watermarks was auxiliary to the publication of Old Russian texts.

There are two detailed descriptions of Manuscript No. 4469 in the Museum Collection of the Lenin Library.²⁹ In the published description, compiled by A. A. Zimin for his otherwise meticulous edition of Ivan Peresvetov's works, the watermark data are most unreliable. In all fairness, it should be noted that Zimin did the work before some of the most useful watermark albums had been published. However,

²⁹Sochineniia I. Peresvetova, Podgotovil tekst A. A. Zimin, Moscow-Leningrad, 1956, pp. 81-83; Gos. biblioteka SSSR im. V. I. Lenina, Otdel rukopisei, Muzeinoe sobranie, f. 178 - russkaia (i slavianskaia) chast'. Opis', vol. II [MSS. Nos. 640.2 and 3006-4500], pp. 530-534. Presently in typescript presumably this description will be published soon, as the first volume has already appeared (see note 35 below).

the absence of a mark in an album is no excuse for identification with a vaguely similar one, or worse yet, failure to recognize the type of mark being examined. Nor should marks simply not be mentioned if their likeness is not in any album. For the five marks and their variants in MS. No. 4469, I list my results in the left hand column and Zimin's, with appropriate comments, on the right:

1. A fluted shield containing a horn suspended from a cord bracketed by letters FF. Similar to N. P. Likhachev, op. cit., No. 2736 (late 16th or early 17th century).
(No mention of this mark. The typescript opis' mentions but does not identify the mark.)
2. Fluted shield surmounted by a crown; containing a lion rampant. Countermark NA. Heawood, op. cit., No. 3133 (1616-1624) is of the type but lacks the countermark.
"Heraldic shield with lion(?), surmounted by a crown (cf. Tromonin No. 706 = 1627)." (But the mark in Tromonin is not close at all!)
3. Crozier. Similar to Geraklitov, op. cit., No. 77 (1638).
"Lily (cf. shield with analogous lily: Tromonin, No. 1233 = 1636)." (The typescript opis' correctly names the mark but suggests Geraklitov, Nos. 65-70 as likenesses. This is erroneous, since clearly the crozier has a band across it and these do not.)
4. Coat of arms with four quadrants (containing a tower, an eagle and two lions) a small central shield with parallel bars, and an oval field below this. The device is surmounted by a crown. Heawood, No. 481 (1602) is of the type; his No. 480 (1623-4) is closer in some details but contains letters in the oval space, which is blank in the MS. mark.
(Not mentioned.)

5. Pillars topped by grapes; between the pillars, letters RP. Geraklitov's No. 1135 (1639) is a good likeness.

"Fortress gate with grapes (Tromonin, Nos. 1158, 1154 = 1638)". (What one might normally term "fortress gate" is another mark also known as the Arms of Ravensburg. For the indicated numbers, Tromonin pictures pillars, but ones for which no letters are distinguishable.)

In this case using unreliable watermark data, Zimin arrived at approximately the same date one might determine from more reliable data, but by chance rather than by the virtues of his own work. Until reference aids are improved, my own findings must remain suspect, too.

A second example illustrates how inaccurate identification of a watermark can alter significantly the dating of a manuscript. Manuscript No. 1567 of the Pogodin Collection in the Saltykov-Shchedrin Public Library has been described in extenso twice. The most recent description, in the 1951 edition of the Epistles of Ivan Groznyi, indicates that in the portion of the manuscript containing the first letter of Kurbskii and Groznyi's reply, the watermark is "precisely determined according to N. Likhachev (The Paleographic Significance of Watermarks on Paper), No. 4127 = 1611-1612".³⁰ If this be so, the manuscript is approximately two decades older than the others containing copies of the two letters. In fact, as one sees from Figure III, the mark --

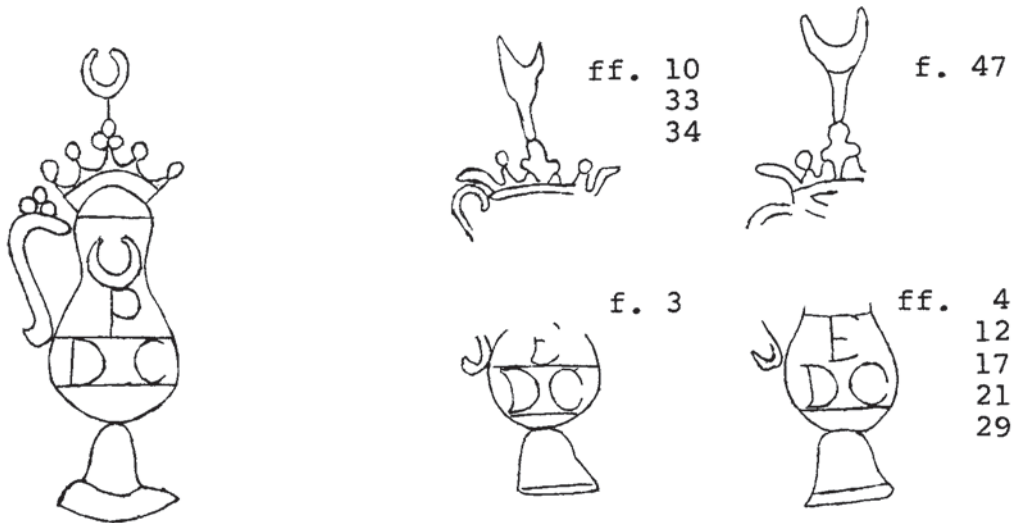
³⁰Poslaniia Ivana Groznogo, Podgotovka teksta D. S. Likhacheva, Ia. S. Lur'e. Perevod i kommentarii Ia. S. Lur'e, Moscow-Leningrad, 1951, p. 537.

a one-handed pot -- is not that depicted by Likhachev.³¹
Generally differences of detail such as those evident here

Figure III

Likhachev No. 4127

MS. Pogodin Collection No. 1567



are not what one would expect in a mark that was merely a distorted variant of Likhachev's No. 4127. While with pot watermarks, details of decoration are not reliable indicators of chronology,³² one finds nevertheless that pots with

³¹In Figure III, the mark from Likhachev is a tracing; the manuscript mark, which clearly exists in at least two variants, is a careful freehand drawing, accurate in detail but possibly not precisely to scale.

³²See the comments of Klepikov on decoration of pots and their dating in his notes to Geraklitov, op. cit., p. 236.

decoration similar to that of the mark in question have been discovered only for the period from 1620 to 1631.³³ A difference of as much as two decades in the dating of this manuscript is significant, as current work on the genesis of the Kurbskii-Groznyi correspondence indicates.³⁴

So much for descriptions by editors of texts. What about manuscript catalogues, where one might expect more expertise about watermarks on the part of the compilers? I have mentioned in passing the unpublished portion of the Lenin Library description of its Museum Collection. In the published portion covering the first 3000 manuscripts, the compilers merely cite earlier descriptions where available, and make no effort to supplement incomplete or obsolete information.³⁵ Consequently there is still no published watermark information for many of the manuscripts -- e.g., the more than 400 formerly in the collection of T. F. Bol'shakov. Concerning those which

³³See Geraklitov, op. cit., Nos. 504, 509. If letters are crucial for dating, then one should note that the combinations P/DC and P/DO exist as late as 1630 and 1633 respectively (Geraklitov, Nos. 477, 499 and 500). Probably the letters in the Pogodin manuscript mark should be read E/DC or E/DO, although P and B are also possible for the first letter. Regarding details of decoration, it is clear from folio 12 that the mark has no crescent immediately above the letters.

³⁴I refer to the forthcoming book by Edward L. Keenan, Jr., The Genesis of the "Correspondence" between Tsar Ivan IV and Prince A. M. Kurbskii.

³⁵Gos. biblioteka SSSR im. V. I. Lenina, Otdel rukopisei, Muzeinoe sobranie. Opisanie, Vol. I [MSS. Nos. 1-3005], Moscow, 1961.

the catalogue does describe, the information may be unsatisfactory, as the example of Manuscript No. 707 will illustrate. As above, I present my observations parallel with those of the published description on p. 24 of the Opisanie, Vol. I:

1. On folia 3-11, 372-end, Arms of Amsterdam, crudely drawn; with countermark NIM in rectangular frame. Klepikov* lists such a mark as No. 34 (199b) for 1683. It may be of some relevance that the same countermark is found with foolscap, type 1, for 1681 and 1682 (Klepikov,** No. 199).
"Ff. 1-11 of the type Heawood, 'Further Notes',*** No. 6, 9 -- 1682, 1686" (While the main mark is indeed similar to that depicted by Heawood, he provides countermarks PHO and ?HR in frames.)
2. Ff. 13-16, Blank, crudely-drawn shield over letters I (or L) DM. Probably a variant of Geraklitov, op. cit., No. 1422 (1642) or 1423-4 (1643).
(Not mentioned)
3. Ff. 17, 26. Letters IDM.
(Not mentioned)
4. Ff. 22-47, Foolscap of undetermined type. Probably mid-17th century.
"Ff. 12-49 and end of manuscript -- foolscap of undetermined type, last quarter of the 17th century."
5. F. 50, a different foolscap.
(Not mentioned)
6. Ff. 52-230, 231ff., lily on plain "rectangular" shield surmounted by crown. The lower half of the shield is uneven, one corner being more rounded than the other. Generally one expects this mark in the middle or third quarter of the 17th century.
"Ff. 50-342, of the type Heawood, 'Papers',****No. 37-1657, 1666, 1670 -- and close to the type Heawood, 'Further Notes', No. 85--1694, 1701." (The likeness in the first case at least is not terribly good.)
7. Blank folio between f. 230 and 231. Snake on a cross
(Not mentioned)

attached to a house, generally a mark of the second quarter or middle of the 17th century.

8. Ff. 336ff. New paper with different lily on a shield. (See above)
9. Ff. 343ff. Fluted shield containing horn suspended from a cord bracketed by letters IA. Probably a mark of the second quarter of the 17th century. (Not mentioned)
10. F. 353, Foolscap, type 4 (?). (Not mentioned)
11. Ff. 356, 361. Letters or name, probably countermark to preceding. Indistinct because of location on inner edge of page. (Not mentioned)
12. Ff. 364ff., foolscap, type 4, with countermark IP. Klepikov**lists under No. 136 several for the years 1701-1704. (Not mentioned)

- * S. A. Klepikov, "Bumaga s filigran'iu 'gerb goroda Amsterdama' (Dopolnenie)", Gos. biblioteka SSSR im. V. I. Lenina, Zapiski Otdela rukopisei, vyp. 26, Moscow, 1963, pp. 479-485.
- ** S. A. Klepikov, "Bumaga s filigran'iu 'golova shuta (foolscap)'", loc. cit., pp. 405-478.
- *** Edward Heawood, "Further Notes on Paper Used in England After 1600", The Library, 5th ser., Vol. II, Nos. 2-3, 1947, pp. 119-149.
- **** Edward Heawood, "Papers Used in England After 1600", The Library, 4th ser., Vol. XI, No. 3, 1930, pp. 263-299.

My hasty reading of the watermarks in No. 707 may not be entirely correct, but it should be clear from the preceding that the material of the published description is incomplete and possibly misleading.

One is on somewhat more secure footing with the manuscript descriptions for the collection of the Library of the Academy of Sciences in Leningrad (BAN). It is worth pointing out that this is the only major Soviet repository which is attempting to publish a modern and complete description of all its manuscripts.³⁶ These opisaniiia describe the type of each watermark as well as indicating where a published variant exists. Moreover, they state clearly the nature of the comparison with the published variant, whereas other descriptions often indicate merely the number and date of the published mark. Unfortunately this care in watermarking is most apparent only in the latest volume of the BAN opisaniiia; the information in earlier volumes needs to be supplemented and revised. Furthermore, even in the most recent volume, accuracy may be questioned.³⁷ Nevertheless,

³⁶The same is true for incunabula in BAN. See J. S. G. Simmons, "Incunabula in the USSR. I. Russia and the Ukraine", The Book Collector, Vol. XIV, No. 3, 1965, p. 316.

³⁷Istoricheskie sborniki XV-XVII vv. (Opisanie Rukopisnogo otdela Biblioteki Akademii nauk SSSR, Vol. III, vyp. 2), Moscow-Leningrad, 1965. In the description of MS. No. 1.4.1 (p. 205), the letters accompanying the foolscap are probably MLI (not MPI -- see esp. f. 93); Klepikov, "Bumaga s filigran'iu 'golova shuta'...", lists such a mark, No. 180 (1668, 1681-1685). In the description of MS. No. 16.6.18 (p. 155), the letters on the pot should probably be read in reverse--H and probably L. Finally, in the description of MS. No. 4.7.16 (p. 269), while the compilers of the opisanie correctly caution against using fragmentary watermarks for precise dating, I feel that at least some of them may be usefully identified. In particular, the mark on ff. 48-53 seems to correspond to the pot with letters RP depicted by Geraklitov, op. cit., No. 832 (1639-40), which suggests that the indicated portion of the manuscript

as a whole, the BAN descriptions evidence greater accuracy and thoroughness than descriptions currently being compiled for collections in other Soviet repositories. Perhaps one reason this is true with particular reference to watermarks is that the Manuscript Division of BAN possesses one of the most complete and most accessible collections of watermark publications in the Soviet Union. If one is required to make a sketch or tracing of a watermark and take it to another location to check in an album, both accuracy and thoroughness are lost.

* * *

When one compares the published results of watermark study with observations derived from original manuscripts, existing manuscript descriptions are clearly found wanting. To correct this situation so that watermarks in a manuscript be properly described and recorded, a number of criteria should be followed. Some of them have been mentioned in passing, but several others are important. In the first place, every different watermark in the manuscript should be described even if it cannot be found in an album, and an appendix containing at least reduced-size tracings of

belongs to the first half of the century, not the second half as the description indicates.

undetermined marks might be included in the description. Some of the latter might thereby be identified in the future through comparison with marks in newly-published albums or other manuscripts. If a standard system of recording watermarks is adopted as I have suggested above, the watermarks of each manuscript should be so recorded and photographed before any restoration work is done on the manuscript. Once a manuscript has been newly bound, the watermarks in it may be lost in the inner edges of the pages forever. Not only should each mark be recorded, but the folia on which it is found should be indicated at least in a general way. For manuscripts containing only one hand, this may not be necessary, but in the case of one written in several different hands, changes in paper and hence the watermarks may well suggest whether the manuscript is a unity or is composed of several discrete parts.³⁸ When one is concerned with the convoy of works accompanying a given item of Old Russian literature, it is essential to establish whether or not a manuscript was copied in one place at one time. A description of watermarks that meets these criteria should never have to be repeated.

The same is true regarding other elements of a

³⁸Examples of this are MSS. Nos. 1604 and 1606 of the Pogodin Collection in the Saltykov-Shchedrin Public Library. Standard descriptions, relying largely on changes in handwriting, indicate that each one is composed of several separate parts. Yet watermarks reveal that in each case many of the parts contain the same paper.

thorough manuscript description. For example, pagination or the numbering of "gatherings" (tetradi) should be indicated in extenso, as it rarely is now. Such pagination may enable one to "reunite" pieces of a manuscript which had become separated and exist now in different collections. Data such as the redactions of individual items of literature which have not yet been studied might later be added to a complete description, but this need not mean that all the physical facts about a manuscript be checked a second time.

Not only should a description be thorough, but it should follow a standard set of rules and be published in a standard format so that a description for a manuscript in a Moscow repository be comparable to that for one in Kalinin or Yaroslavl'. If descriptions are standardized, the next step is obvious -- they all can be transferred to the memory of a computer. This would have the advantage, first of all, that any new information, such as that on redactions of individual works, could be added in the proper place. Furthermore, and this is the crucial point, a great deal about the output of individual scriptoria and the relationship among various manuscripts might be determined solely from the descriptions. For example, would it not be advantageous to have all owners' inscriptions in the computer memory?³⁹

³⁹In a complete description, one would hope that partially-erased inscriptions be read by means of special photography such as that used for deciphering unclear words

Handwriting could be classified according to a fairly simple system, and correlation between the handwriting in two different manuscripts could suggest a connection to be checked more closely. An electronic optical scanning device might eventually be applied to the comparison of handwriting so that precise distinctions could be made automatically. In a computerized system, correlations indicated by similar convoys of works that appear together could be readily checked. In fact, almost any bit of information about a manuscript could be so recorded, compared or retrieved.

Specifically with regard to watermarks, how would a computerized system work? If the watermarks are described in tabular form, all the information in such a table may be stored in the computer memory.⁴⁰ Given the parameters of a newly-discovered mark, the computer could determine instantly which marks in its memory have the same features. Depending on the accuracy of measurements and the tolerances allowed for error, tabular information might narrow down the

in the Izbornik 1076 goda. See V. S. Golyshenko, V. S. Liublinskii, D. P. Erastov, "Noveishie priemy fotoanaliza na sluzhbe paleografii i istochnikovedeniia", Problemy istochnikovedeniia, IX, 1961, pp. 408-432. For BAN MS. No. 45.13.12, such a process has rendered legible the long inscription on f. 332v indicating that the manuscript was in the possession of the Antoniev-Siiskii Monastery in the first half of the eighteenth century.

⁴⁰A method of recording watermark data on punch-coded cards is only one step away from this; see such a proposal by Theo Gerardy, "Zur Methodik der Wasserzeichenforschung", Papiergeschichte, Jhrg. 6, No. 2, 1956, pp. 14-20.

possibilities to a small number of watermarks identical with or close variants of the new mark. If provided with pictures of all the marks in its memory, the computer could then select the appropriate ones for visual comparison. A device exists already which superimposes the images of two watermarks and thus enables one to determine whether or not they are identical.⁴¹ Better yet, technology has now put the ultimate solution within reach: automatic comparison by means of an optical scanning device.⁴² One need only provide the computer with a picture of a watermark in order to learn immediately whether a picture of the identical mark is stored in the computer memory.

Once a computerized system had been set up, the

⁴¹On the need for such an optical comparison instrument, see Robert Grosse-Stoltenberg, "Beiträge zur Wasserzeichenforschung", Papiergeschichte, Jhrg. 14, Nos. 1-2, 1964, pp. 5-7, 17-23. A description of the device is the same author's "Der Wasserzeichen-Komparator", Papiergeschichte, Jhrg. 16, Nos. 5-6, 1966, pp. 26-28. One should note that the best method of reproducing a watermark photographically, by means of beta-radiography, was developed in the Soviet Union by D. P. Erastov of the Laboratory of Conservation and Restoration of Documents of BAN. See his "Beta-radiograficheskii metod vosproizvedeniia filigranei s dokumentov", Novye metody restavratsii i konservatsii dokumentov i knig. Sbornik rabot za 1958 god, Moscow-Leningrad, 1960, pp. 139-148, summarized in a portion of the article Erastov co-authored for Problemy istochnikovedeniia, IX, cited in note 39 above. Subsequent refinements in the method are mentioned by Ove K. Nordstrand, "Beta-Radiographie von Wasserzeichen", Papiergeschichte, Jhrg. 17, Nos. 3-4, 1967, pp. 25-28.

⁴²A very technical textbook examination of the theoretical basis for such a system is Azriel Rosenfeld, Picture Processing by Computer, New York and London, 1969, especially Chapter 6. Optical scanning devices which are appropriate have been developed by at least two American firms, Farrington Industries Inc. and Optical Scanning Inc.

corpus of watermarks could be recorded gradually over an indefinite period. Systematic examination of printed books and of every type of manuscript would ultimately permit the complete corpus to be recorded; in the interim, offset reproduction of tabular print-outs of watermark parameters could provide aids for immediate use by those working in locations other than where the central file would be stored. Sources for watermarks should not be restricted only to dated materials and those in large format, since eventually it should be possible to determine identity of watermarks even from sizeable portions of whole ones. In the end, one would be able to verify what written sources reveal about paper trade and distribution; ultimately one might determine date and provenance of most surviving Old Russian manuscripts.

A number of objections, cost among them, could be raised against computerization of a watermark collection in particular and manuscript descriptions in general. To see that such a proposal is feasible and desirable however, one need only consider the archives where for some time computers have been applied; eventually the entire content of an archive may be microfilmed and stored in such a way that any item is retrievable automatically.⁴³

⁴³See, for example, E. Califano, "L'introduction et l'adaptation des moyens mécanographiques aux archives", Archivum (Revue internationale des archives), Vol. XIV for 1964, pp. 147-158. Automation in the classification and description of archival materials differs from that which

It may be suggested, as the Head of the Manuscript Division of the Saltykov-Shchedrin Public Library wrote in 1964, that "the manuscript book of the sixteenth and seventeenth centuries is comparatively well-studied both from the standpoint of content as well as paleography"⁴⁴ and that the same is true for all other Old Russian manuscripts. Is it not reasonable to answer that if we have been waiting a century for the Public Library to describe its important Pogodin Collection of more than two thousand manuscripts, then perhaps we and the next generation of scholars can wait another century, if in the end the task of manuscript description will have been done once and for all time?

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might apply for Old Russian manuscripts only in the quantity of information which needs to be recorded for each item. For an archival letter, precise description may be relatively concise, whereas for a seventeenth-century sbornik a large number of facts may need to be recorded.

⁴⁴A. S. Myl'nikov, "Kul'turno-istoricheskoe znachenie rukopisnoi knigi v period stanovleniia knigopechataniia", Kniga. Issledovaniia i materialy, IX, Moscow, 1964, p. 38.