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European and Asian papers in Malay manuscripts; A provisional assessment

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Fig. 1. The spread of papermaking. From Grijns and Robson 1986:130.

RUSSELL JONES

EUROPEAN AND ASIAN PAPERS IN MALAY MANUSCRIPTS. A PROVISIONAL ASSESSMENT

1. Introduction

One of the advantages of discussing the materials on which manuscripts are written (as opposed for example to discussing language or script) is that any findings can usually be extended to the manuscripts produced in other traditions. There is no linguistic boundary. I will therefore refer to Malay or Indonesian manuscripts more or less interchangeably in this discussion. The conclusions furthermore can be extended beyond the confines of Southeast Asia: some can be applied to manuscripts from India for example, and even manuscripts from Africa. And of course vice versa. The study of Malay manuscripts may be seen by some as a narrow specialization. But we shall find that to understand the development of this study we must be aware of what happened long ago in China, and later in India, the Middle East and Africa, and above all in Europe. Human history is intertwined in this story.

Although the focus of this study is on paper, we must bear in mind that Malay manuscripts are found on other materials too. These include tree bark paper (*dluwang*), palm leaves (*lontar*), bamboo, wood, rattan, copper plates, buffalo horn, and other animal products. These do not lend themselves to such productive scrutiny as regards dating as paper does, but they must be mentioned, and should be systematically registered and investigated further.

The story of Malay manuscripts emphasizes the interdependence of different countries and of different continents. Most Malay manuscripts are written on paper of European make. Indeed, as we know, it was the Industrial Revolution in Europe which allowed the great Malay manuscript tradition to come into being. And it was the spread of printing from Europe in the nineteenth century that killed it. But both these techniques began in China. Printing probably passed fairly directly from China to Europe, there to be revolutionized. But papermaking went through a prolonged intermedi-

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ate formative stage in the Islamic world (see Fig. 1). We have to know something about that. And we must be alert to the possibility that, as paper-making took the long route from China to Europe, subsidiary flows of paper found their way into the Indonesian region to be used for writing.

So most Malay manuscripts, and perhaps a majority of Indonesian manuscripts, are written on paper made in Europe. Fortunately, I say fortunately because European paper is very communicative to those who care to interrogate it. It will always tell you something of the mould on which it was made, that is laid or wove, the dimension of the sheet formed, and will often give you a good idea as to what country it was made in, sometimes at what papermill. To those who care to make acquaintance with it, European paper on the whole is not coy about disclosing its age. The fact that not many Indonesian specialists are versed in the interrogation of European paper is not due to any dearth of information. Much has been written about paper-making and its history in Europe. The mass of information admittedly is not easily accessible, being found largely in scattered articles in many languages and in monumental watermark catalogues. But it exists, as can be demonstrated by any specialist on European paper one cares to seek out. And – this is the point – from this mass of material the Indonesianist needs to cull only certain very basic facts on papermaking technology, and he needs detailed information only on the relatively small proportion of papers that found their way to Southeast Asia. It is salutary to reflect that the needs of Indonesianists could have been met by the production of a single fairly comprehensive study incorporating just these aspects. It is all they need to undertake the necessary investigation of the supports of nearly all Malay and a large proportion of Indonesian manuscripts.

Perhaps a cautionary word is appropriate before we get too confident. It is that the mass of European material, as comprehensive and useful as it is, has to be adapted and reinterpreted for our particular needs. For the dating of manuscripts by means of watermarks (and other lookthrough features), for example, it is important that we construct our own chronological framework; we cannot safely rely on the existing watermark catalogues. But my experience tells me that what I propose is feasible, and that it works.

The problems are clearly soluble, and no doubt a solution will be provided as soon as that fact is generally recognized. It needs funds and organization. In this paper I should like to invite attention to a problem for which there is no such satisfyingly straightforward solution. That is the problem of paper other than European-made paper used for Malay manuscripts.

From what has been said, you might conclude that European paper is somewhat brazen, it reveals all. Asian paper on the other hand is coy, it is shy, it is a *puteri malu*. So identifying non-European paper is much farther from solution than that of European paper. For Asian paper we are still at the stage of trying to define our corpus of material and trying to evolve methods of studying it. We have to challenge longstanding assumptions such as for example that if paper is unusual it must be 'Chinese paper'. It

may well be; on the other hand it may not be. We have to focus our studies close-up; we have to meticulously examine and describe the identifying features of these papers scattered through the manuscript collections. Before we can do that, we must make an inventory of these scattered papers; we do not have one yet. It will seem perverse to direct so much energy to the study of materials which are found as supports in perhaps five per cent of the manuscripts extant. And even more perverse to spend much time studying Chinese paper, when that appears to be rarer still. Furthermore, we can never turn our attention away far from European paper, because from the sixteenth century onwards the availability or not of that ubiquitous material must have been a determining factor in the choice of alternative supports for writing. I am confident that eventually we shall find our answers, but not until we get the problems into focus. It will not escape the attentive reader that the problem is reflected in this working paper. While the discussion of European papers is approached with a modicum of confidence, when we get on to Asian papers a mood of uncertainty pervades the discussion.

To get down to business: let us put ourselves in the position of, say, an Indonesian ruler nearly five centuries ago – what choice of material did he have if he wanted to have a letter written and sent? We learn from the Malay texts that letters and the accompanying gifts were of central importance. I am almost convinced that our mythical ruler would have been acquainted with paper from the Islamic world before the European Christians arrived. As a Muslim he would surely have had a predilection for that. Yet most of the earliest letters sent by the Indonesian rulers to the earliest Europeans in the area are on European paper. Was this the most easily available? Did the European emissaries themselves urge him to send a letter to their own king or governor, and at the same time provide the paper for him to use? Did they sometimes even provide the scribe?

The earliest European paper used for Malay writing that I have seen is in Lisbon, in the *Arquivo Nacional da Torre do Tombo*. It is in the letters described by Blagden (1930). They are dated 1521 and 1522 AD. I have inspected them, and without question they are written on European paper. (One bears a watermark depicting a vertical serpent; it resembles for example Heawood 3763, but has 'bubbles' above its head; there are many serpent watermarks from ca. 1522 onwards. The other has a hand with a seven-petalled flower above it; compare for example Heawood 2468.) I suppose we must always bear in mind the rather remote possibility that these letters are not the originals, but copies made for the Portuguese in Melaka of originals which may not have been written on European paper; but that is unlikely.

That such European paper was already circulating in Asia, possibly as an article of commerce, can be established. The same *Arquivo* has evidence of this, the earliest reference to movement of European paper in the region that I have seen. It is an order dated 23 January 1515 made in Goa by Alfonso D'Albuquerque himself. It instructs Francisco Curvinel to supply 30 *mãos*

تَعْبَلْ مَنَعْلُو نَكْرِي فَاسِي اِيْت مَكْرُو بَكْنَدَه فَرِيكِي نَكْرِي دَان سِكْرَان
 دَان مِيدَان هَفَل دَسُون بَكْنَدَه تَمْبِيغ سِكْرَان تَمْبِيغ لَمْبِيغ ۲ هَفَل مَرَاتِي سِكْر
 مِيدَان اِيْت الْقَصَص مَكْرَت كِتَابَه فَرِيكِي تُون فَرِي كَرَجِي
 اِنُقَرَاتُو مَنَعْلَاهُ دَنَكْرِي جَاوَا كَرَن تُون فَرِي اِيْت قِيَادِي بَرَسُوَامِي
 سَبَاي هِنْدُو بَرَسُوَامِي كَرَن فَرِي اِنُقَرَاتُو ۲ مَبِيغ بَحْتَسَان دَان مَبِيغ فَرِي كَاس
 مَكْرَتُون فَرِي اِيْت مَبُوْر هَكْن كُوْرَغ هَلْبَالَقِي مَبِيغ مَرَنَام تَن فَرِي فَات جِيْن كُوْر
 سِكْر نَكْرِي اَكْن مَنُوْسَكْن رُوْ سِكْر اِنُقَرَاتُو ۲ مَبِيغ فَرِي سِكْر نَكْرِي سَوَ مَبَاوَه فَرِي
 سَغِي دَان دَعُوْه كَلُوْجِي دَان قَلَم بَرَسُوَامِي مَكْرَتَن فَرِي فَات جِيْن تُون بَرَسُوَامِي

Fig. 2. The passage from a manuscript of the *Hikayat Raja Pasai* which mentions paper ('*kertas sepeti dan dakwat sekoci dan kalam seberkas*'). From British Library manuscript Or 14350 (copied ca. 1796), with kind permission of The British Library.

of paper to Gaspar Corrlia for use in the Straits [= Ormuz, Mokka] (?) for marketing in Persia. The paper must have been available in the store in Goa, for two days later Gaspar Corrlia signed a receipt for it on the back of the order. The order and receipt are written on a small slip of undistinguished paper (about 120 mm x 150 mm) with no clear laid lines, so perhaps of local make.

A *mão* of paper (cf. French *main*, 'quire' in English) consists of 25 sheets. So the order was for 750 sheets, or a ream and a half. The implication is that by 1515 the Portuguese godown in Goa stored at least significant quantities of European paper.

We have other evidence of European paper being distributed in the Archipelago. When Pigafetta's party arrived in Brunei early in 1521 their present to the ruler consisted of 'a Turkish coat of green velvet, a chair of violet coloured velvet, five ells of red cloth, a cap, a gilt goblet, and a vase of glass, with its cover, three packets of paper, and a gilt pen and ink case'. To the herald who had met them they gave 'a coat of the Turkish fashion, of red and green colours, a cap and a packet of paper'. For seven other chief men who had accompanied him they gave 'for one cloth, for another a cap, and for each a packet of paper' (Pigafetta 1874:111). That paper was already known in the area is indicated by the fact that one of the Malay words collected by Pigafetta was *cartas*.

In fact we have indications that paper was known in the area earlier, both in the *Hikayat Raja Pasai* (where paper, pens and ink are mentioned, see Fig. 2) and in the *Sejarah Melayu*. In this latter text, to the best of my recollection the substance on which letters were written is not specifically mentioned, somewhat surprisingly. But during the Singapura period (ca. 1400 AD) we get the legendary tale of a wood shaving being sent by the Betara of Majapahit to the ruler of Singapore; the shaving was seven fathoms long and very thin (*nipisnya seperti kertas*) (manuscript Raffles 18 p. 26). The second reference comes towards the end of the fifteenth century when Hang Nadim was on a visit to Keling; there he was given paper on which to sketch the design of textile materials desired by Sultan Mahmud of Melaka (manuscript Raffles 18 p. 139). Perhaps this tale may be interpreted as meaning that Indians were more conversant with paper than the Melakans. It may properly be objected that these references in the *Hikayat Raja Pasai* and the *Sejarah Melayu* could be anachronistic, since the manuscripts cited were copied at the end of the eighteenth or in the early nineteenth century, but I find their testimony generally helpful in such matters.

Near the end of one version of the *Hikayat Hang Tuah* (Raffles Malay 1, copied ca. 1811, p. 461), we find reference to an agreement early in the sixteenth century between the Johor people and the Dutch inscribed on *kertas emas*, but that is described as a sheet of gold beaten until it was no thicker than paper.

We have corroboration of these early occurrences from an early external source. In 'A Chinese vocabulary of Malacca Malay words', believed to

have been compiled in the fifteenth century before the Portuguese arrived on the scene, we find the word *kertas* (as well as *kalam*) (Edwards and Blagden 1930-1932:734). It may be remarked that the copy of this vocabulary used by Edwards and Blagden was written on Chinese paper, in fact on the back of the leaves of an early Chinese printed book.

The fact that in these early days 'paper' was known to the Malays by the Arabic loanword *kertas* must be of profound significance to the question as to whether paper came directly from China or via the Islamic world. It is well known that many Chinese loans occur in Malay and Indonesian, but I have never heard of any form of the Chinese word for paper as a loan word in Malay or any other Indonesian language (compare Jones 1986a:131).

2. *The role of European paper*

The dominant factor governing the circulation of paper in the area during Company and colonial times was economic. There were three important streams of paper supply to the Indonesian area. The first was from the Netherlands. It was understandable that the Netherlands Indies government (and before it the Vereenigde Oostindische Compagnie) would favour the importing of paper from papermills in the Netherlands. The same applied to the colonial government in the Malay Peninsula: it favoured the importation of paper from British mills. I have not investigated whether these powers actually banned the importation of paper from other than the colonizing country.

The third stream in order of importance was paper made in northeastern Italy (formerly within the Austro-Hungarian Empire). This paper enjoyed no colonial preference and must have arrived by less formal channels, perhaps along the trade routes of Islam. One is tempted to surmise, in fact, that this Italian paper may have taken the place of Islamic paper which travelled by the same trade routes in earlier times. This at least is what had happened in Egypt. It is known that '[b]y the seventeenth and eighteenth centuries the paper sold in Egypt came almost exclusively from Europe' (Baker 1992: 31). Indeed Walz's thorough study (1985) shows the first assault on the Egyptian industry to be in the sixteenth century; and he demonstrates that from about 1780 onwards, the paper imports into Egypt came mainly from Italy. So this may have been the pattern for other parts of the Islamic world. For the present study we must not ignore Italian paper (see Appendix).

We see then that at least after colonies were well established there was a trio of sources for paper to the Indonesian area. Prior to that, one finds all sorts of paper being used in the area, evidently Italian, French, Dutch, British and perhaps Spanish and Portuguese.

The East India Companies seemed to have depended on paper supplies from Europe, as their regular requests for paper testify. For example, in 1622 we find an East India Company official complaining '[i]n want of paper,

books, pens, ink'. And in the following year an East India Company official in 'Jacatra' requests that '[t]wenty reams of paper may be yearly sent, and some gum, galls, and copper as to make ink' (*State Papers* 1964, 1622-1624:64, 113). Of greater interest to us is an entry for 1632: 'Ordered, on intimation of the profit made at Bantam and Jambi by mariners and others by the sale of ordinary writing paper, that 100 reams be sent in the *Reformation* for a trial' (*State Papers* 1964, 1630-1634:329). This last is clear evidence that there was a firm local demand for European writing paper, a demand that was being met privately early in the seventeenth century by European sailors.

The more extensive Dutch records of reports to the Heeren XVII in Holland contain many references to paper. Take this excerpt from a despatch in 1615:

For trade [...] 50 reams of paper, including some very fine, but all must be good, no rubbish, as supplied before.

A dozen large books of large format for the Bantam places, as general books, one half journals and one half for recording sums due.

Same, a consignment of ordinary format for all the godowns, above all a consignment of 1000 books unlined for accounts (*tot cargasoen*), some in folio, some quarto, bound in fine white horn-parchment, gilded at the edges, with printed decoration without figures, and some bound in red leather, all of the best paper. (*Generale Missiven* I:60)

Again in 1696 we find that the Vereenigde Oostindische Compagnie suffered a shortage of paper for its own clerks (*Generale Missiven* V:773). The significance of this to us is that at such times presumably they would have nothing to supply the local market.

We learn that in 1654, paper was included in cargo brought from Portugal to Goa, evidently as merchandise; paper was also included in the cargo of a vessel from Portugal which arrived in Goa in 1668 (*Generale Missiven* III:2, 634). So the two main colonial powers were busy importing paper from Europe; what we do not know is how much of this paper found itself eventually on the local market.

We do have evidence that ca. 1600 paper was a trade commodity being offered for sale in Aceh (Lombard 1970:61-62). We do not know where it came from.

In 1708, the Vereenigde Oostindische Compagnie wanted to print bibles. For this they requisitioned 'the whitest and finest printing paper to print the bible in large quarto' as well as compositors able to handle Arabic and Malay script, and type foundry and letter cutters to provide the missing letters (*Generale Missiven* VI:528). The VOC had established a printing house in Batavia in 1667, for which it had also ordered material from Holland. The decision to print bibles in 1708 may be connected with the fact that at that time the printing house was directed by an ex-clergyman, Andre-

as Lambertus Loderus (De Graaf 1969:13, 16). Loderus is known also for his reprinting of Malay dictionaries in Batavia in 1707 and 1708.

In a rounded account of paper in the Netherlands Indies Henk Voorn (1978:4-7) mentions the strongly protectionist laws which benefited the papermakers in the Netherlands during the nineteenth century, and the importance of the Indies market to them.

We must make it clear that our discussion is about paper of writing quality. We have some figures for the imports of paper into the Netherlands Indies in 1898 which show that commercial imports (when we include newsprint and packing paper) were not mainly from the Netherlands. See Table 1.

Table 1. Import of paper into the Netherlands Indies. Source: *Encyclopaedie* 1902 sub 'papier'.

	from Netherlands		from elsewhere	
Private imports	f	707,579	f	1,217,704
Government imports	f	68,578	f	300

The article cited in Table 1 discusses the reasons why European papermills had not been set up in the Indies, and lists the failures of such ventures in Calcutta, Australia, Venezuela, Brazil, Buenos Aires and Egypt. It could have included the unsuccessful Dutch attempt to set up a papermill in Batavia in the 1660s (see Voorn, 1978:7-10; *Generale Missiven* III:351, 368, 449, 460, 471). One interesting point recorded, in 1663, is that 'it turns out to be easier to make blue paper than white paper' (*Generale Missiven* III:460). Have early Indonesian manuscripts been found on blue paper? I do not recollect finding Malay manuscripts on blue paper before the later part of the nineteenth century. But it should be noted that blue paper was not in fact a late discovery: it was being made in Belgium in the sixteenth century. And perhaps to the Dutch, as to the English, 'blue' could refer to a lower quality of paper, intermediate between white and brown, used either for wrapping or for writing.

So the possible argument that papermakers in the Netherlands and Britain would have used their influence with the colonial governments to discourage such local economic initiatives is not the whole story. Pigeaud writes: 'In the nineteenth and twentieth centuries the supply of European paper, made in a Dutch papermill in Java, gave Javanese authors the opportunity to write down anything they thought of interest' (Pigeaud 1967:36). But other authorities contradict this. Thus we find: 'Herhaalde malen zijn dan ook voorstellen uitgewerkt om te komen tot de oprichting van een papierfabriek op Java, tot nu toe evenwel zonder veel succes. Wel bestaat er een cartonfabriek te Soerabaja' (*Encyclopaedie* 1919 sub 'papier').

This is confirmed by Voorn (1978:11-12), who lists unsuccessful attempts by Dutch entrepreneurs to set up papermills in the Netherlands Indies in 1882, 1886, 1894, 1905, 1908, 1912, 1914, 1920, 1935 and 1938. (He mentions that the mill for making cardboard in Surabaya was founded in about 1910.) Voorn makes it clear that, apart from mills making cardboard and packing paper, no papermill functioned in Indonesia until the Padalarang mill was opened in 1923 (Voorn 1978:13-15). Further details of the Padalarang mill can be found in the Gelderland Archives (Adam 1985: esp. 7-10, 21). From these we learn that the need for a papermill in the Netherlands Indies was brought home as a consequence of the interruption of supplies during World War I. In 1915 the Governor-General appointed a committee to look into industrial development and its report in 1917 recommended the establishment of a papermill, which should use local materials. With this high-level backing a syndicate of Dutch papermakers was able to overcome the economic and technical problems which had hitherto prevented the establishment of a European-type papermill in Indonesia. The first papermill was established at Padalarang on 22 July 1921; it was officially opened by the Governor-General on 4 May 1923, and by December 1923 production of paper had reached full capacity. In 1937 a second papermill was established at Leces near Probolinggo in East Java. I have heard indirectly from Professor Drewes that in the 1930s Balai Pustaka relied on paper imported from Europe; and if that was not forthcoming, Balai Pustaka could not publish books. Then a papermill was set up in Bandung, and they used that paper. If we allow for a lapse of some years for the production of the Padalarang mill to take effect, this corroborates the facts given above – Padalarang is near Bandung.

I have seen only one example of paper from the Padalarang mill. It is wove paper, with the name PADALARANG in capital letters along one edge, followed by a small motif – possibly the head of a rice plant. This paper was in a Javanese manuscript which I saw on sale in 1993 in Jakarta. After the occupation of the Netherlands by Germany in 1940, the Padalarang mill was pressed into service to produce stamps and currency paper.

3. The use of Chinese paper in the region

In about 1250 Chau Ju-kua, the Inspector of Maritime Trade in Hokkien Province, wrote that in Tonkin (the region of present-day Hanoi in Vietnam) '[t]hey do not know how to manufacture paper and writing brushes, so those from our provinces are in demand' (Hirth and Rockhill 1911:45).

But by about 1505 a visitor to Tenasserim (on the east side of the Bay of Bengal in present-day Burma) recorded: 'Their writing is on paper like ours, not on the leaves of a tree like that of Calicut' (Varthema 1863:209).

In Cambodia around 1600 it was reported that 'Ils ont un écriture particulière qu'ils tracent sur du papier de Chine avec un pinceau [i.e. 'brush']' (San Antonio 1914:98).

In 1636 a visitor to Siam recorded:

All daily happenings (messages, sessions of the court, etc.) are written as open letters on bad paper with a little round pen of soft baked earth. The signature is wanting, but the letter is confirmed with a mark or with a seal, with which the king has honoured the writer. Those who have not received any mark from the king, use a little cross or stroke where the name ought to be.

Everything concerning the trade, the courts, and other public places, is daily noted down in books of black paper and every day these books are closed and sealed. But all definite and important affairs such as letters from the king and mandarins, commands, ordinances, sentences of law, contracts, prescriptions, obligations and so on, are written on fine Chinese paper with black ink. When the letter consists of more than one sheet of paper, each sheet is signed at the corner, so that it can not be changed for another or forged. (Van Vliet 1910:97-8)

Regarding the reference to black paper, compare Trant 1827:265: 'Burmese also used their own coarse paper for everyday purposes, but blackened it first and then wrote in a white chalk pencil' (cited by Reid 1988:228).

3.1 Chinese paper imported into Indonesia

The earliest recorded instance of the importation of Chinese paper must be that of I-Tsing, the Buddhist monk who was in Sumatra from 685 to 689 AD, but that may simply have been for his own use, using a Chinese brush (see Jones 1986a:131).

The Portuguese Tomé Pires, writing in 1515, mentions the *Lequjos* (from the Ryukyu islands, between Japan and Taiwan). He says that they traded with China, specifically with the 'port of Foqem', which would probably be Amoy. These *Lequjos* brought varied merchandise to Melaka, inter alia 'a great store of paper and silk in colours' (Pires 1944:128-130). The paper could have been from Japan, but the likelihood is that it was from China.

In 1596 early Dutch travellers found that in Bali, palm leaves were used. But they continue: 'They also write on Chinese paper of different colours, very fine and pure, also [they write] on a sort of paper made from trees' (Lodewycksz. 1915:120, cited by Reid 1988:225).

The Vereenigde Oostindische Compagnie records show that in 1658 two junks from Amoy in China arrived in the East Indies, with cargoes which included paper. And in 1686 a small Portuguese vessel sailed from Macau

to Batavia with a cargo which included Chinese paper (*Generale Missiven* III:241; and V:2).

In 1694 the Vereenigde Oostindische Compagnie itself dabbled in trading in Chinese paper; it ordered a trial consignment (*Generale Missiven* V:692). In 1709 the VOC records that in Persia they needed particular types of porcelain and Chinese paper as gifts for the Shah; and in 1710 it is recorded that they had ordered these commodities from China (*Generale Missiven* VI:633, 705).

Henk Voorn (1978:7) mentions the frequent references in the Dutch *Dagh-Register* in Batavia to the importation of paper from China. But he adds that this was mostly Chinese 'sacrifice paper' for the Chinese population, and coloured paper, often for ceremonial purposes. As such it would not be relevant to the manuscripts. A letter received by Governor Speelman in 1681 incidentally discussed the purchase of Japanese paper (Voorn 1978: 7). I do not know of any other definite reference to the import of Japanese paper into Indonesia at this time.

In a book published in 1680 a German traveller to Java, Johann-Christi-an Hoffmann, writes of the Javanese: 'They write their characters on Chinese paper which is grey, fine and transparent and made of bamboo pulp, or on palm leaves with an iron pencil, and as in many Indian places they use the Malay language' (Kratz 1981:69).

We learn that in 1809 Daendels in Batavia 'instructed his official subordinates to use Chinese paper or lower quality paper for envelopes and for wrappings. In June of the same year Daendels ordered the use of 'Javanese' paper for envelopes. Most authorities agreed that the term 'Javanese paper' referred to an inferior quality paper imported from China' (Zubaidah 1972:37).

In Europe in the early nineteenth century, remarkably enough, artists liked to use paper from China (known curiously as 'India paper') for engravings. It seems that the paper introduced as linings in tea chests set the fashion. Penny Jenkins cites (1990:47): 'That which is used for the linings of tea chests is equal in quality to any [...]'.

This may help us understand a reference we find in the *Hikayat Abdullah*. Munshi Abdullah (Abdullah 1882:411-414) describes how his belongings lost in the Singapore fire (probably in 1830, see Hill 1955:22, 210, 211, 319) included '*peti tulisku serta beberapa lagi barang-barang yang indah-indah yang kubeli dari wangkang Cina*'. In a poem about the blaze Abdullah wrote later: '*Pakaianku menyalalah seperti kertas*'. The reporter ever, Abdullah rummaged in his pocket and found a pencil; he continues: '*Maka berlarilah aku ke tengah simpang itu, maka kudapatlah kertas Cina membungkus daun teh, maka kuambillah kertas itu, kupegang[...]*'. He used that piece of paper to record what he saw. So we can surmise that with the tea imported into Singapore also came paper for the scribes.

3.2 Chinese paper in Indonesian manuscripts

I have only ever seen one Malay manuscript definitely written on traditional Chinese paper, and the paper was not particularly thin. This is a manuscript of the *Cerita Syah Nobat* in the Brunei Museum (no. Arkib 4-5-6-7/75). The paper is rough, possibly locally made, and was unquestionably prepared for Chinese use: it has thin red ochre vertical column lines on the page to accommodate Chinese characters, and a typically thick Chinese frame of the same material printed around the page; moreover, it is bound as a 'wrapped back' Chinese book, that is, with each leaf folded back double, leaving only one surface of each for writing. I would estimate it to date from the nineteenth century. I do not think this single instance of the use of a Chinese style book significantly detracts from the conclusions of our present study. One Malay scribe simply got hold of a blank book prepared for Chinese use, and used it.

Until recent years, the cataloguers of Malay manuscripts paid scant attention to the paper they were written on. Occasionally they did allude to 'Chinese paper'. In at least some cases it is erroneous, the paper being western 'wove' paper; 'Chinese paper' seems to have been used sometimes as a catch-all category for paper with no clear lookthrough characteristics. Dr Voorhoeve has suggested to me that Van der Tuuk may have led the way in rather freely using the description 'Chinese paper' to describe the paper of Indonesian manuscripts without any real basis.

There is some evidence of paper of Chinese origin being made for writing that is thicker than the traditional fine Chinese paper. (The Laude manuscript no. 291 may be such, compare Jones 1986b and see below.) I have not been able to find out much about this thicker Chinese writing paper, which is right outside the main Chinese tradition of paper and book-making. What is profoundly puzzling is the fact that for centuries the Chinese preferred to use thin paper which could be written on only one side rather than thicker paper of which both sides could be used.

We can look at a few of the references to Chinese paper in connection with Malay manuscripts. Firstly we can remove a possible doubt raised in Ricklefs and Voorhoeve 1977:127: a manuscript in the Skeat Collection at Oxford (manuscript 5, *Syair Syamsu'l 'Alam*) is described as being on 'European-style paper watermarked with Chinese characters'. This is in fact European paper made for Guthrie & Co, whose name is given in Jawi and Chinese characters as well as in English letters.

In 1980 Teuku Iskandar examined the paper of 250 Malay manuscripts in the Netherlands, taken at random. Of these he concluded: '24 are entirely or partly on Chinese paper' (Teuku Iskandar 1980:2). However, I think the only manuscript described by him in a subsequent draft of a catalogue of Malay manuscripts as being on 'Chinese paper' is LOr 1999. I would rather think the paper of this manuscript is European wove.

3.3 Chinese paper made in Indonesia

A Chinese chronicler ca. 1200 recorded that outside China, paper was made in Korea and Java. Of the paper made in Java he wrote: 'This paper is thick and strong. The sheets were about seven and a half to ten metres long' (Salmon 1983:116). From the fact that the paper was 'thick and strong', and on account of the dimensions of the sheet, Claudine Salmon thinks it must have been a form of *tapa*. But one cannot be certain. We do know that large sheets of real paper were made in China. The claim that in the tenth century AD a sheet of paper fifty feet long was made in China (Tsien 1985: 48) does raise technical questions. However, Sung Ying-hsing (1966:230), writing of seventeenth-century China, observes that paper made from tree bark was made in large sheets, necessitating correspondingly large vats. He reports that the mould was so large that it required two vatmen, working opposite each other, to handle it. But this was not *tapa*, it was real paper, formed from pulp made from mulberry bark, bamboo and rice straw. We find further corroboration in the eighteenth century, when an American scientist reported the making of sheets of real paper in China which were four and a half ells (say five metres) long and one and a half ells wide (Dard Hunter 1978:235-237). So the size of this substance made in Java does not preclude its being paper.

Definite references to the Chinese making paper in Indonesia are rare. But there is mention of it taking place in 1902. The Chinese made paper from bamboo, which they made into a stuff, which was shaped in moulds into sheets, which were dried and pressed. 'The Chinese use this paper unsized for their brush writing'. In fact some of it was sized and then it could be exported to Europe for engravings (*Encyclopaedie* 1902, sub 'Papier').

Referring probably to the early nineteenth century, Peter Carey writes:

Apart from Javanese and European paper, locally made Chinese paper (*kertas dhedhak*) produced from pulped rice husks, was also used quite extensively for less important documents. This was particularly the case with lower level official reports during the British period. The copies of the secret correspondence between the courts which are edited in this volume [...] for example, were written on this thin Chinese paper probably for reasons of economy, and there are at least three documents emanating from the Yogya court [...] which also use this material. But, despite this additional supply of locally produced paper, the Central Javanese rulers preferred to use paper of European manufacture whenever possible. (Carey 1980:3)

4. Indian paper

4.1 Papermaking in India

The art of papermaking was probably introduced to India in about the thirteenth century AD by Muslims. Paper was first imported from Iran, but later it was 'produced in India in centres like Daulatabad, Ahmadabad, Lahore, and Kashmir. The centres of excellence of paper manufacture were by the sixteenth century producing beautiful papers of thick and durable quality, capable of being highly burnished and decorated' (Losty 1982:12; see also Jones 1986a). In 1618 the East India Company included paper in a list 'of goods brought out of India and vendible in Persia' (*State Papers* 1964, 1617-1621:159). There are shadowy references to the import of Indian paper (*waraq hindi*) into Egypt also in the seventeenth century; and into Basrah early in the nineteenth century (Walz 1985: n. 18). The relevance of such reports to us is that if India was exporting paper westwards, it might also have been exporting it eastwards, to our region.

Regarding the introduction of European papermaking to India, it is on record that in 1812 William Carey set up a papermill in Serampore (near Calcutta) for missionary work. 'Serampore paper' came into general use in India to describe a type of indigenous white paper (see 'Yellow paper' below). In 1820 a steam engine was introduced in Serampore for operating the beaters, and by 1832 they had installed Fourdrinier papermaking machines. But it seems these ventures did not succeed 'due to lack of demand for paper and the Government's apathy'. It may have been in the 1870s before European papermaking really got going in India (Podder 1979:vii, 4, 5; Diehl 1964:59, 60).

4.2 Use of Indian paper in the Indonesian region

The earliest reference I have seen to paper from India is to be found in a treatise on the Moluccas, ca. 1544, written by a Portuguese. Its terse reference is: 'They write upon ola, which are palm leaves, and on paper which is imported from India; and the pens are made of ferns, for those of ducks are not known here' (Jacobs 1971:123).

We have testimony that paper was a regular import into Aceh in about the middle of the seventeenth century. The *Adat Aceh* (f. 151a) records that of every ten *dasa* of paper imported into the country, one *dasa* went to Raja Setia Muda, the royal scribe. Drewes and Voorhoeve (1958:27) comment that paper 'was imported in quires apparently consisting of ten sheets and therefore called *dasa*', presumably alluding to Sanskrit *dasa* with the meaning '10'. If we construe *dasa* as meaning 'ten leaves', this would suggest Islamic paper, as that was often used in quires of ten leaves (five fold-

ed sheets), whereas European paper was handled commonly in larger units. This then may have been Islamic paper from India.

4.3 Surat paper

In 1682 the Dutch had subdued the state of Banten. When the Dutch Governor and Council in Batavia wished to write to the old ruler and the young ruler, they chose special paper to show their respect. This was 'a gilded Surat paper', that is, paper from Surat (on the western coast of India). In the previous year, going to considerable lengths to show honour to the Chinese governor of Fujian, they had written a letter in Dutch and Chinese also on 'gilded Surat paper' (Voorn 1978:7). We also learn that when Governor-General Van Outhoorn sent a letter to the Shah of Persia in 1700, this was written on gilded paper ('*op verguld papier*'); we are not told where the paper came from; an interesting touch is that the letter was to be translated into Persian or Turkish in Gamron (near Hormuz), on a sheet signed in advance by Van Outhoorn (*Generale Missiven* VI:135). We get confirmation of the origin of the gilded paper from a VOC record of 1721 which tells us that they sent to the Prince [of Bantam] 'eenig Sourats verguld schrijfpapier' (*Generale Missiven* VII:531). So consistently the gilded paper seems to be from Surat in India.

Later we shall mention British Library manuscript no. Eur. D.742/1, fol. 58-60, no doubt also on Surat paper.

In 1808 an outgoing Dutch Governor of the northeastern coast of Java remarked 'that the rulers often asked for sheets of gold-rimmed surat paper (made in western India) for important official decrees' (Carey 1980:2). At a paper congress in 1986 Dr Henk Voorn 'showed slides of 'The Dutch gilt papers in the collection of the Royal Library in the Hague' (*IPH Information* 1986.3-4:91). I have been told however that these are 'brocade' papers, not the gilt papers in question.

Munsyi Abdullah records that when Sir Stamford Raffles came to Melaka from India in December 1810, 'He brought with him [...] paper for writing letters to Malay rulers and princes with gold and silver headings' (Hill 1955:72). The Malay reads: '[...] *serta kertas membuat surat kepada raja-raja Melayu yang telah tertulis dengan bunga emas dan perak*' (Abdullah 1882:93-94).

Greentree and Nicholson (1910:12) describe manuscript Laude Or. b. 1(R) – the letter dated 1615 AD from the ruler of Aceh to James I of England – thus: '*Material*: Oriental paper, recently backed with calico, and furnished with parchment tail-piece'. It is impossible now to investigate the paper of this work. They add: '*Ornamentation*: the space occupied by the writing was sprinkled beforehand with crimson and gold dots'. They also describe the rich patterned ornamentation (for illustration in colour, see Gallop and Arps 1991:35).

When I visited the Royal Asiatic Society in London on 17 November 1992, Graeme Gardner was restoring a Palembang treaty from manuscript Malay no. 142. It is on gold speckled paper. He expressed the view that it would have been speckled while the paper was still wet, and that the paper would be probably from India. But Annabel Gallop has drawn my attention to evidence that the gold speckling could be added in the Malay world. John Anderson on a mission to Sumatra in 1823 gave a sheet of parchment to a *raja* on which to write a schedule of duties. Before it was used, the *raja* caused the sheet 'to be elegantly stamped with gold spots by his female slaves' (Anderson 1971:174).

4.4 Yellow paper

We find in the records various mentions of yellow, or yellowish, or off-white paper and it is worthwhile inquiring what this paper was. Podder (1979:4) describes 'Serampore paper' as 'a particular type of indigenously made white paper'. In a memoir of the Serampore Mission written in 1820 we find the view that their paper made from Indian materials was 'equally impervious to the worm with English paper, and of a firmer texture, though inferior in colour', meaning presumably that it was off-white in colour (Diehl 1964:60). One is reminded of the off-white paper used in Raffles' scriptorium for the *Hikayat Raja Pasai* and associated manuscripts. Professor Chaudhuri, of the School of Oriental & African Studies, tells me that the Serampore paper was in fact not white but yellowish. This could be due to an arsenic compound used in the Serampore Mission as elsewhere in India as an insecticide to protect paper (Diehl 1964:60-61). We get a mention of a yellow paper when in 1681 Governor Speelman in Batavia received a letter 'in Persian' from a Muslim lord written on 'fine yellow paper adorned with red flowers'. It is not clear to me who the sender was (Voorn 1978:7).

Coming to modern times, we learn that some publishers print *kitab* on orange-tinted ('*kuning*') paper (produced especially for them by Indonesian papermills) because this seems more 'classical' (Van Bruinessen 1990:235). Did this tradition originate in India?

A cautionary word: 'India paper' (like Indian ink) has been applied in Europe to almost any thin paper from the Far East. And 'India paper' has nothing to do with India, it comes from China (Jenkins 1990:46).

It is worth noting that we may have unsuspected samples of indigenous Indian paper at our disposal for examination. I refer to books published in places like Calcutta. One day thumbing through vol. 12 of *Asiatick Researches*, published in 1816 at Calcutta, I was intrigued to find that the paper was very reminiscent of some of the Asian papers we find in manuscripts. This source for further study could be exploited by anyone with access to an oriental library.

In any discussion of Islamic paper from India, as Dr Yasin Safadi has pointed out, one thing must be borne in mind, that is the possibility that it could have been produced further westwards, in Persia or Khurasan. But at all events the import of traditional Indian-made paper for Malay manuscripts must have ceased as the end of the nineteenth century approached. Not only had the 'Indonesian' market been flooded by European-type paper, but by 1892 the European papermills in India had virtually killed local manufacture there. 'The steam papermills established in the neighbourhood of Calcutta and at Bombay have almost entirely destroyed the local manufactures of paper which once existed in many parts of the country. The hand-made article, which was strong though coarse, and formed a Muhammadan speciality, is now no longer used for official purposes' (Hunter 1892:721).

It would be helpful to have information on the European-type mills producing paper in India from the late nineteenth century onwards. Of the catalogues of Malay manuscripts I have seen I recollect only one where the paper is attributed to India on account of its watermark: LOr 7335 (Undang-Undang Palembang). The paper has been described by Teuku Iskandar as 'Indian made European laid paper; watermark Ganeça and FINE;' [estimated late nineteenth century]: 'This *undang-undang* was accepted at the command of Van der Meulen [district officer] on 21 January 1891.'

But the circumstantial evidence suggests that more letters and manuscripts are on paper from India, especially handmade paper.

5. About Asian papers in general

Identifying the scattered examples of Asian papers, and discovering anything at all about their origin, is difficult. It occurs to me that we can proceed in two ways. Firstly we can locate and register the manuscripts in the various collections in the world, and invite specialists on Chinese, Islamic and European papermaking to examine them and give opinions; a variant of this plan would be to bring as many as possible of the manuscripts written on enigmatic paper to one centre and there hold a conference with the various specialists present at one time. Such a step would constitute a great leap forward in our knowledge of the culture we are studying and its links with the non-Indonesian world.

Alternatively, and in the meantime, those codicologists within this field who have some specialist knowledge of paper should take the trouble to make careful descriptions of the more unusual papers whenever they have the opportunity; if we have time available, we should not content ourselves with saying merely that a manuscript is written on 'Asian paper'.

Microscopic examination of the fibres would obviously be very helpful. For a start in this kind of investigation, some very useful notes on identifying the fibres in Asian papers can be found in an article 'The identification of Oriental paper-making fibres' by Collings and Milner (1978).

Fig. 3. Example of a deckle edge of a sheet of laid paper. This sheet was made in Italy probably around the end of the nineteenth century.

Describing Asian paper without technical equipment (and with no great expertise) is not simple, and guidance is badly needed. But progress will come not through discussing this, only by making the attempt. I will give a couple of examples of what can be accomplished with patience.

Example 1. The first is an examination of the paper used for the well-known Bodleian manuscript of the *Hikayat Seri Rama*. A description will be found in Jones 1986b.

The noticeable features of the paper include these: the paper used for fols. 323 onwards is remarkably poor, even having holes which were there before the manuscript was written (so no writing is lost as a consequence). I have found inferior paper in the later parts of other manuscripts; it was natural that scribes would use up their better paper first. These later leaves display deckle edges, which show that the type of mould used was one with a deckle. European paper was nearly always made from such a mould, but some Asian papers also display deckle edges (see Fig. 3).

The main run of paper (fols. 1-322 approximately) also displays deckle edges. A singular feature is found near the edge of the mould: a pair of thickened chain lines close together, with loops over the double lines every 20 mm or so. Chain lines and the intervals between them can be overwhelmingly effective in identifying papers (for a technical discussion of thorough research carried out in Estonia see Utter 1991). In the main run of our *Hikayat Seri Rama* we find a singular pattern of chain line intervals. The chain lines lie vertically in the leaf, and the intervals are (in mms):

19	19	19	10	19	19	19	10

I have no idea where such a paper would come from, but knowing this pattern would be of inestimable value in matching this paper up with any other paper coming to light, particularly as a betaradiograph of the lookthrough features of the paper is provided in the publication cited. Most significant is the occurrence of a Chinese red ochre stamp on two leaves of this codex, discussed by Dr David Helliwell (in Jones 1986b:52). This is a strong indication (not amounting to proof) that the paper was of Chinese origin.

Example 2. The second is a more recent essay at description which has not been published. In the Ricklefs and Voorhoeve catalogue (1977:77) we find a description of a Royal Asiatic Society manuscript registered as Raffles Java 1. It comprises various texts in Javanese and has 317 pages; regarding the paper the description reads: 'Chinese paper, except for ff. [= pp.] 127-142 which are Engl paper: "C Cripps 1816".' The C Cripps paper we can dismiss from our minds with one observation. It allows us to date the codex around 1819, and implies (rather surprisingly) that the codex must have been copied after Raffles left Java in 1816.

There is a reproduction of the manuscript in Gallop and Arps 1991:84. In a caption Ben Arps writes (referring to the first Javanese text in the codex, pp. 1-136): 'The illustration shows the first pages of one of the manuscripts of the *Bratayuda Kawi* collected by Raffles. Its wide margins and the fact that each stanza begins on a new line show that it was especially written for him.' The caption includes 'ink on Chinese and English paper'.

On 17 November 1992 I was able to make some provisional observations on this manuscript following a rather hasty inspection of it. I examined pp. 1-100, 200 to end; the leaves after p. 317 are blank and dry point ruling is evident, I cannot decide whether by *mistar* (ruling board) or not.

The paper. The leaf dimensions are 295 x 200 mm. The edges are gilded. The main run of paper is clearly handmade, as is attested by faults, for example water spots, and opaque lumps, e.g. p. 275. The paper is very coarse, p. 79 having embedded in it a sliver of wood 12 mm long; this deforms adjacent leaves too. The paper is of a brownish colour.

Curiosities of the paper. The paper appears to be lightly burnished, suggesting it may be Islamic (Indian?) rather than Chinese. One side of the leaf bears indented lines, sometimes in the form of the segments of concentric circles, sometimes more or less parallel but irregular and sometimes (for example p. 245) crossing each other; the total effect being rather like the indentations formed by scribbling with a pointed stick. This could be due to a burnishing instrument, but is it conceivable that anyone would burnish with an instrument having a projection? It could be the result of the paper while still wet being laid against a wall of plaster or board for drying – the Chinese traditionally used this method of drying sheets of paper. It is puzzling, but could be a very useful clue for matching with other papers.

Chain lines. This paper also has a singular pattern. The chain lines are vertical. There are no bar shadows. The chain line intervals are 22 mm. Now on some leaves (I suspect once on each pair of conjoint leaves, probably corresponding to the sheet as it came from the mould) there is one narrow chain line interval, 8 mm. In two respects this is extremely unusual; firstly because it is not at the edge of the mould, where narrow intervals are often found in European papers; secondly, the width of this narrow interval is taken out of the widths between the two immediately adjacent chain line intervals, which are reduced to 18 mm as a result:

mms	22	22	18	08	18	22
chain lines						

The two front and rear end leaves, blank, are on similar paper but lacking chain lines altogether. Islamic paper often has a different chain line pattern from European (see Appendix).

I was able to examine this paper together with the Royal Asiatic Society's paper specialist, Graeme Gardner. We concluded that there was no particularly Chinese feature about the paper. The slight burnishing could point to Islamic-made paper (perhaps from India). We were somewhat baffled by it, and we could not make any confident suggestion about its origin.

Example 3. Paper used in Raffles' Buitenzorg scriptorium. Most of the Malay manuscripts in the Raffles' collection are on well-made and easily recognizable European paper. However, some fifteen of the manuscripts are on paper which is not recognizably European. The paper is characteristic enough to identify the codices which use it. The fifteen works are Raffles Malay nos. 7, 43-46, 51-55, 58-61 and 67. It was when I was preparing an edition of the last, the *Hikayat Raja Pasai*, that I came into contact with this curious paper.

A further identifying feature is a note in Javanese at the end of each of these manuscripts, reflected in the Ricklefs and Voorhoeve catalogue with: 'the manuscript is from Kyai Suradimanggala, *bupati sepuh ing panagari Demak, nagari Bagor, warsa 1742* [AD 1814]'. In fact Kyai Suradimanggala was appointed translator in Raffles' translators' office in Buitenzorg (i.e. Bogor) on 30 June 1814, and remained there probably until November 1815. Now the thirteen dated manuscripts bearing the Javanese note fall between 13 September 1814 and 29 July 1815 (Jones 1987:vi-vii). It seems that the fifteen manuscripts were copied there for Raffles under Kyai Suradimanggala's superintendence, and mention of his name tells us nothing about the provenance of the models on which these manuscripts were based. For further discussion of Kyai Suradimanggala, see Sarwono Pusposaputro 1976:18 and especially Chambert-Loir 1980:38-41. An attractive illuminated letter by Kyai Suradimanggala is illustrated in Gallop and Arps 1991:99.

Most of these codices have leaves of dimensions roughly 260 x 200 mm, but with some slight variations.

The paper of codex Raffles Malay 67 of the *Hikayat Raja Pasai* is quite typical of this group and therefore can represent these manuscripts in general. The leaf size in this codex is 230 x 172 mm.

My notes on its paper were: 'rather coarse; is weak, rather brittle; is strange; it is laid, with clear laid and less clear chain lines, but chain lines are at irregular intervals (e.g. narrow chain line interval in centre of rear end leaf); could it be from a bamboo mould? [Its] furnish contains opaque impurities, reminiscent of what one finds in some European papers of a century or so earlier. But this does not resemble early European paper; colour creamish brown; stiff. No watermark.'

The paper has a remarkable feature (to be found in only some of the fifteen manuscripts). On some of the leaves a reinforcing strip of identical paper 7 mm wide can be seen running vertically about 30 mm from the binding; the writing runs over these strips, so they were affixed before the manuscript was written; yellowish glue is visible at the edges; but there is

no sign of a break in the paper under the strip, so it was not a repair strip; furthermore (so far as I could see) it does not represent what one would expect, a join between two leaves of paper. These strips are found on the later leaves of the codex (for example fols. 68 and following), so we may surmise that paper reinforced in this way was less desirable, therefore left till last. If the strip is found on any leaf it is not found on the conjoint leaf. The distance between chain line intervals was not measurable. There is no soiling of front or back pages to suggest that the manuscript was used before being bound.

The feature which identifies this group of manuscripts most easily is the note in Javanese. We should not of course assume that the type of paper discussed here occurs only in these manuscripts. It may occur in other Raffles manuscripts copied in 1814 or later. All Raffles manuscripts ought to be investigated in chronological order, insofar as they can be dated. Are these fifteen manuscripts on a local paper because by 1814/1815 Raffles had used up his supplies of European paper? My feeling is that this stock of paper may have been imported from India. Is it too fanciful to surmise that he was able to obtain supplies from the recently established papermill in Serampore, near Calcutta?

Example 4. A letter in Malay. Finally, in the British Library is a fine specimen of a letter written to the Malay ruler of Palembang in 1780 by the Dutch Governor-General, Reynier de Klerk. It is manuscript no. Eur. D.742/1, fol. 58-60 (described and illustrated in Gallop and Arps 1991:49).¹

Unusually 'this letter is written on Oriental paper made from jute fibres, the unusual design fuelling speculation that "ready-decorated" sheets of paper may have been imported from India' (Gallop and Arps 1991:49). Jute was a common ingredient of paper in India; see for example Podder 1979:4, and Dard Hunter 1978:141. The first leaf of the letter is 478 mm by 283 mm, and before losing its bottom edge (see illustration) this sheet must have been 501 mm long. The second leaf has been cut short, and is 417 mm long.

The paper is off-white. There are no chain lines, and the laid lines are not regular enough to have been produced by a rigid western mould. The ornate floral pattern in gilt, evidently painted by hand, can be seen clearly in the illustration. Dr Yasin Safadi of the British Library sees affinity with Moghul illumination. It is reasonable to conclude that this paper is the product of Islamic traditional papermaking in India. It could perhaps be classified with the Surat paper mentioned earlier.

¹ Incidentally the year given, 1782, has to be amended to 1780. The date given in the ornate Jawi script at the foot of the letter seems to read '[*limabelas Agustus*] *seribu tujuh ratus lapan puluh tahun*'; De Klerk died 1 September 1780 at his home in the Molenvliet, Batavia.

6. Concluding remarks

To a degree, we are still in the position of the cataloguers who described any paper which was not identifiably European as being 'Chinese'. We tend to identify 'Asian' papers negatively: if they are not European they must be Asian. In the Appendix I give two examples from my own experience.

A comparatively small number of Malay manuscripts are written on non-European paper. But these represent something more than a negligible problem. For one thing any unsolved problem poses a challenge which the researching scholar cannot avoid. Apart from that, when any Malay manuscript is written on paper, for practical reasons we need to contribute to the integral study of that manuscript by throwing light on the identity of that paper, and if possible the probable date of it.

Finally, setting manuscripts to one side, an effective study of the manufacture, trading and use of Asian papers will throw much light on shadowy aspects of intra-Asian commerce which do not receive attention from western sources and research. Countless samples of Asian papers survive in the archives of the world. I have no doubt that with systematic research using scientific methods they will eventually yield up their secrets.

ABBREVIATIONS

Heawood	see: Heawood 1950
IPH	International Association of Paper Historians
VOC	Vereenigde Oost-Indische Compagnie

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APPENDIX

Some tentative features to help identify papers

European papermoulds are distinguished by their rigidity and the use of metal wires (parallel or wove); indicative of European paper would be:

1. clear watermarks;
2. clear and regular chain and laid lines;
3. smooth white paper;
4. blue tinted paper (mostly late nineteenth century);
5. paper with horizontal printed lines, or ledger paper (i.e. with printed vertical lines also) (usually late nineteenth or early twentieth century);
6. deckle edges usually point to European made papers (see e.g. LOr 7347); but deckles are also found on Asian papers (see Fig. 3 on page 492 and e.g. Jones 1986b:50).

When I see in descriptions such terms as 'thick, strong, white' to describe paper I am inclined to the *prima facie* view that it is European.

My experience tells me that it is only by handling paper itself that one can make practical progress with understanding or identifying types of paper. Nevertheless some acquaintance with the history and nature of papers is an essential prerequisite to such an understanding. Any scholar wishing to undertake library research into Asian papers in general will find the section 'Oriental' in the bibliography of Dard Hunter (1978:586-590) a good starting point, if somewhat diffuse. I have embarked on a concise survey of the early history of papermaking, in China, which may serve to put that epoch of paper in a perspective helpful to our study.

I know of no book devoted to the history of paper in the Islamic world, remarkably enough; sources on the subject are voluminous, but not very accessible. The articles by Don Baker (1989 and 1992) focus on a period which

antedates the papers encountered in Indonesian manuscripts; but an acquaintance with Arab papermaking, even for earlier times, must serve to increase our general understanding of paper made in the Islamic world.

Such reading does direct our attention towards the clues we need for the identification of a paper. For example another specialist in Islamic manuscripts writes: 'Broadly speaking, two types of paper were used; Oriental (probably Persian) and European. The Oriental paper is mostly laid, without chain lines' (Gacek 1985:ix). That is a useful clue.

Adam Gacek has something further to tell us about chain lines, if they do occur: 'In Arabic paper the chain lines are often grouped in twos and/or threes and there is no fixed distance between each line or group of lines' (Gacek 1984:xi). Don Baker in his articles (especially 1992:30-31) refers to the multiple chain lines which occur in Islamic papers from the early thirteenth century; chain lines can be grouped in twos, in threes, or twos and threes alternately. Even groups of four are found, in heavy papers. This must prepare us for associating our pairs of chain lines encountered above with the Islamic world.

Further, we learn that from the twelfth century both laid and wove papers show bar shadows; unlike the bar shadows in European papers, these do not coincide with the chain lines if there are any. Such clues as these must increase our chances of identifying the Asian papers of Malay manuscripts.

We can also bear in mind the fact that burnishing has been a feature of paper from the Islamic world, including India; cf. Dard Hunter 1978:196. (Muslim scribes habitually burnished Italian paper prior to use too.)

I will conclude by offering two descriptive examples of 'Asian' papers.

1. In April 1984 I was sitting in the Museum Nasional in Jakarta when the paper of an Arabic manuscript that someone was studying caught my eye. It was a copy of *Nasihah al-Muslimin* (No. A 209); the copyist's date, incomplete, put it in the twelfth century AH (so between 1786 and 1884 AD). It was written on a very coarse laid paper, unburnished, with unusually wide chain line intervals. It had a very crude three-crescent watermark and initials A G A or B G A. That suggested an Italian origin, but I could not bring myself to believe that Italy, the home of such superbly fine paper, could produce such a coarse article. A subsequent experience caused me to change my mind.

2. I have been able to examine at leisure two double leaves which are all that is left of a long Malay text. This is what I find.

The text

Length of line: 102 mm; top to bottom line: 160 mm.

Ink: black (carbon ink), with rubrication – typical of Acehnese Islamic texts.

These leaves once formed the two outer leaves of an unbound *kuras*: one sheet is marked in the top left corner: '*al-kurras al-thalathina*' and the text begins: '*semithal itu tiada berubah pada masa jahiliyah dan masa Islam iaitu berat tujuh puluh dua biji syair yang pertengahan dengan kulitnya dan dibuang kedua hujungnya yang halus lagi panjang. Ada pun dirham Makah pada masa Islam [...]*'

The paper

Format: quarto; dimension of full sheet would be: 475 mm deep (allowing 5 mm for one deckle edge lost in trimming); 347 mm wide.

Laid lines: discernible lying over most of the leaves, vertical.

Chain lines: faint, in parts invisible; horizontal; chain line interval about 30 mm.

Paper: thick, rough, irregularities of surface and of furnish; possibly burnished. From these features I concluded it must be of Asian make. But in December 1992, after the workshop on manuscripts in Leiden had ended, I produced one of these leaves to Dr Theo Laurentius of Voorschoten, a recognized specialist on European paper. Although it has no watermarks, from its lookthrough character-

istics he identified it at once and confidently as being Italian. This also helps me overcome my reluctance to accept that that Arabic manuscript in Jakarta, as crude as it was, must also be Italian as the watermark would signify. The dimensions given above for it (475 mm x 347 mm) are consistent with the dimensions of sheets of Italian paper that I have found in other Malay manuscripts.

I mention these two instances as illustrations of the difficulties of identifying which papers are Asian; they also emphasize the ubiquitous character of European paper in our field of study. I hope I have said enough to convince the reader of the need for much more study of the paper supports of Malay manuscripts.