

# The Spitzer Manuscript—Report on Work in Progress<sup>1)</sup>

Eli Franco

Between 1902 and 1914 four German expeditions were dispatched to the Central Asian Silk Road in the area called Eastern Turkestan and Chinese Turkestan under the directorship of Albert Grunwedel and Albert von Le Coq.<sup>2)</sup> A fifth expedition was already at the planning stage when World War I broke out bringing with it the termination of German activities in that part of the world.<sup>3)</sup> As is well known, the expeditions were extremely successful and returned to Berlin with rich booty including, amazingly enough, most beautiful murals removed from cave walls in their entirety<sup>4)</sup>; many of them, however, were destroyed by Allied bombing during World War II. Some of the surviving pieces of art returned to the Berlin museum of ethnology after the war, others were transported as *Beutekunst* mainly to the USSR but also to the USA. The German expeditions were also successful in recovering thousands of manuscripts and block-prints, usually fragmentary or incomplete, in no less than seventeen languages and twenty-four scripts.

Most of the Sanskrit manuscripts, the earliest of which go back to the Kuṣāṇa times,<sup>5)</sup> were discovered in the so-called Rotkuppelraum (“room of the red cupola”) in the Ming-öi (“thousand caves”) near Kyzil.<sup>6)</sup> The epoch-making work of Heinrich Lüders on the early Buddhist dramas and the *Śāriputraprakaraṇa*, the *Kaḷpanāmaṇḍitikā*, *Kātantra* and *Kaumāralāta* as well as Dieter Schlingloff’s work on the *Chandoviciti* and the so-called *Yogalehrbuch*, are all based on manuscripts found in this cave. In his reports on the second and third Turfan expeditions, published some twenty years after the event, von Le Coq still captures the excitement of the discovery very vividly<sup>7)</sup>:

Die Erfolge, die wir hier erzielten, liessen alle anderen, früheren, weit hinter sich. Überall fanden wir neue, unberührte Tempel, voll der interessantesten und künstlerisch vollkommensten Bilder, alle aus frü-

her Zeit, früher als jene der eben besuchten Siedlung der Kumtura. In der Malweise ostasiatisch abgewandelte Gemälde fehlen noch ganz. Alles ist, in Malerei wie in der Skulptur, indo-iranisch auf spätantiker Grundlage. Nach unserer, relativen, Chronologie hat diese Siedlung zwischen dem 5. und dem 8. Jahrhundert unserer Ära geblüht. Sie muss, gegen Mitte des 8. Jahrhunderts, verlassen, oder vielleicht damals schon gewaltsam zerstört worden sein.

Gleich in den ersten Tagen glückte es mir, in einem Tempel, der nach seiner roten Kuppel den Namen "Rotkuppelraum" erhielt, eine alte Bibliothek aufzudecken. Hier fanden wir frühe, indische Handschriften in grosser Menge, auf Palmblatt, Birkenrinde und Papier, sowie beschriebene Holztabletten. Alle Buchblätter waren in der Form des indischen Buches, des Pothi, zugeschnitten.

Among the most precious finds in the Rotkuppelraum was a manuscript that is now classified as SHT-810, but it is better known under the name that Dieter Schlingloff gave to it, namely, "the Spitzer manuscript," in homage of the German-Jewish scholar Moritz Spitzer (1900-1982) who was the first to work on this manuscript in 1927-1928. In the *Sitzungsberichte der Preussischen Akademie der Wissenschaften* 1928 (for 1927), p. LVII, it is stated:

Hrn. Dr. Moritz Spitzer wurde eine Unterstützung gewährt für die Bearbeitung der Bruchstücke (mehr als 1000 grösstenteils ganz kleine Fragmente, von denen sich bereits manche zu grösseren Abschnitten haben zusammensetzen lassen) einer umfangreichen Palmblatthandschrift in Kuschan-Charaktern, die in Qyzil gefunden ist. Darunter sind ungefähr 100 mit Seitenzahlen versehene Blattanfänge mit Ziffern von 3 bis 414, so dass das ganze Buch ungefähr 420 Blätter enthalten haben wird. Nach der Schrift dürfte es etwa um 200 n. Chr. geschrieben sein. Inhaltlich handelt es sich um eine systematische Abhidharmaschrift der Sarvāstivāda-Schule. Sowohl als älteste annähernd datierbare philosophische Handschrift wie um der zahlreichen literaturgeschichtlichen und kulturgeschichtlichen Angaben willen, die in den Fragmenten enthalten sind, verdient und lohnt das Werk eine gründliche Bearbeitung, soweit sie erreichbar ist.

In the report of the following year Spitzer's work is still briefly mentioned, but no longer in the reports of 1929 and 1930. In his introduction to the catalogue

of the SHT [Sanskrit Handschriften der Berliner Turfansammlung] Waldschmidt remarks enigmatically: "in any case he disappeared from the Berlin field of vision."<sup>14</sup> What the *Sitzungsberichte* do not mention is the type and extent of the financial support accorded to Spitzer. An enquiry with the archives of the Academy reveals that Spitzer was not actually employed by the Academy, but paid, probably by the hour, from the funds for "Sachmittel"<sup>15</sup> during only four or five months for which he received the following sums: December 1927 80 Marks; January 1928 180 Marks; February 1928 130 Marks; April 1928 130 Marks.<sup>16</sup>

Spitzer was unable to complete his task and never published the preliminary results of his work. The first publication that mentions the manuscript is Lüders' study of the figure 70 in Mathurā inscriptions of the Śaka and Kuṣāṇa periods.<sup>17</sup> In this paper Lüders reproduces the recto side of three leaves of the manuscript (marked V, VI and VII; the excellent hand copies of these leaves were probably made by Else Lüders), but he only uses them in order to confirm his conclusion about the figure 70. The content of the manuscript is irrelevant for his study, and he only mentions in passing that it is a philosophical manuscript.

Sometime before the World War II the great Japanese scholar Shōkō Watanabe stayed at the Academy of Sciences in Berlin and prepared beautiful hand copies of the larger fragments. Watanabe himself, to the best of my knowledge, did not publish anything about his research on the manuscript. Rather, at some point he gave his hand copies to Yūshō Miyasaka. The latter published a short paper with transcriptions of several fragments in 1962 in which he noted some similarities with the \**Satyā-/Tattvasiddhīśāstra* of Hari-varman and suggested that the manuscript contained a *Vibhā s ā* of the Sautrāntika school.<sup>18</sup> Miyasaka, in his turn, passed Watanabe's handcopies on to the renowned Abhidharma specialist Junkichi Imanishi now at the International College for Advanced Buddhist Studies, Tokyo. Professor Imanishi kindly showed me these hand copies when I stayed as a visiting scholar at the International Institute for Advanced Buddhist Studies.<sup>19</sup> We hope to collaborate in the future in one way or another. The most important publications to date on the Spitzer manuscript are two papers by Schlingloff. He has shown what a spectacular potential the study of the fragments of the manuscript has and how far-reaching inferences can be drawn even on the basis of a few small

fragments.<sup>20)</sup> There is no need to repeat here his well known results about the oldest surviving *parvan*-list of the *Mahābhārata*.

Spitzer stayed in Berlin throughout the thirties working for the Schocken publishing house (1932-1938) as a reader; he made a narrow escape from Berlin to Jerusalem in 1939. Fortunately he took his transcripts with him, and they miraculously survived in a small plastic bag in his son's attic in Jerusalem. I had the chance and privilege to meet Mr. Amitai Spitzer in 1995, and he graciously entrusted me with his father's Nachlass, which, as I discovered later on, contained also materials that Schlingloff sent to Spitzer in the sixties in the hope that the latter would resume his work after some forty years of interruption. These additional materials consist of black and white photographs of the fragments that occasionally record a better state of the manuscript compared to what is nowadays preserved at the State Library in Berlin (cf. the reproduction of the fragments below). A considerable number of the photographs are accompanied by Schlingloff's own preliminary transcriptions. Upon my receipt of the materials Professor Albrecht Wezler of the Institute for Culture and History of India and Tibet, University of Hamburg, showed interest in the manuscript and its history, and kindly applied for funds with the German Research Council to enable me to conduct a research project on the Spitzer manuscript. The project was finally approved in 1997 and I have started preparing an edition of the manuscript in 1998. If all goes well, it will be completed by the end of the year 2000.

As already stated by Lüders, the original manuscript probably contained some 420 leaves. It is not necessary to assume that leaves bearing higher numbers simply did not survive; on the contrary, one can ascertain that the leaves bearing high numbers, such as 414, formed indeed the end of the manuscript because the leaves at the beginning and the end of the manuscript are narrower, and those in the middle are broader; thus the manuscript seen from its side would have formed an oval shape. The remaining fragments are kept in some 854 glass frames, with some frames containing more than one fragment. The largest number of fragments in a single frame is, I believe, 27. As indicated in the *Sitzungsberichte* quoted above, the manuscript is written in Kuṣāṇa-Brāhmī script and accordingly dated by Lüders to ca. 200 A.D. I tend to assign the manuscript to a slightly later date, that is, to the late Kuṣāṇa period, but in any case the palaeographical evidence does not allow us to

assume that it could be later than the 3rd century.<sup>21)</sup> Thus, we are dealing here with what is certainly the earliest philosophical Sanskrit manuscript that has survived.

The Spitzer manuscript without doubt contained an Abhidharma work, or even more than one such work.<sup>22)</sup> As almost all Turfan Sanskrit manuscripts that can be assigned to a specific Buddhist school have been determined as belonging to the Sarvāstivāda school, my working hypothesis, and I would like to emphasize that it is nothing more than that, is that the Spitzer Manuscript also belongs to that school. So far I have come across no evidence to suggest that it is a Sautrāntika work as suggested by Miyasaka. In any case, one of the most remarkable features of the text(s) is frequent reference to non-Buddhist literature and topics, e.g., the Mantras, Brāhmaṇas and Upaniṣads, *arthaśāstra*, *kāmaśāstra*, *Rāmāyaṇa*, *Mahābhārata*, *the kalās*, etc., and notably to the non-Buddhist philosophical schools of Sāṃhya and Vaiśeṣika.<sup>23)</sup> This seems to be typical for *Jñānaprasthāna* commentaries of the Kuṣāṇa period.<sup>24)</sup>

A few words are due here on my working procedure which was made possible only by recent developments in digitization of optical data and their integration into word-processing programs.<sup>25)</sup> The first task, of course, is the photographing of the manuscript. The best results are achieved with high-resolution color slides that are far superior in resolution to photoprints. The "Photostelle" of the State Library in Berlin provided such slides of an outstanding quality. The slides were then scanned, digitized, and sometimes graphically modified by me when the legibility had to be enhanced (e.g., by increasing or decreasing brightness, contrast, etc.). This procedure is, of course, more time consuming than the traditional one: a scholar simply received ready-made photoprints and did not have to waste any time on the technical aspects of things. Yet the digitization of the slides provides us with considerable advantages. First, the digitalized images offer better legibility of the fragments, and one can enlarge an image or any part of it almost indefinitely (especially in the display, less so in the print-out). Second, one can integrate the graphic files into a word-processing program such as Word Perfect 8; this allows us to print the fragments and their transcription next to each other and on normal paper, unlike the traditional method according to which photos had to be printed on expensive glossy paper and thus were usually separated from their transcriptions so that one had to leaf back and forth. Third, the assem-

bling of fragments can be effected without the actual removal of the fragments from their glass frames (cf. the reproduction below). It goes without saying that every opening of the glass frames is detrimental to the fragile palm leaves. Finally, the possibility of “cutting out” single *akṣaras* and placing them in a character table will bring about tremendous progress in the field of palaeography in the coming years. First results on the basis of this method can be seen in a recent study of script of the *Śrāvaka bhūmi* manuscript by Kōshin Suzuki.<sup>26)</sup>

The slides have to be scanned with a very high resolution. I used the relatively cheap Microtek ScanMaster 35TPlus LE and scanned the slides in a resolution of 2400 dpi (dots per inch). It is important to use such high resolution even though it has some disadvantages: The higher the resolution, the larger the file containing the data of the image. A single slide scanned at 2400 dpi in “16 million colours”<sup>27)</sup> requires storage room of more than 20 MB!<sup>28)</sup> And such large files are, of course, slow and cumbersome to work with. Nevertheless, one cannot forego such a high resolution if one wants to print pictures of the fragments in more or less their original size. For instance, if a 5cm-long fragment is represented on the slide by a surface with the length of 1cm, one can imagine how small the surface for a single *akṣara* may be.

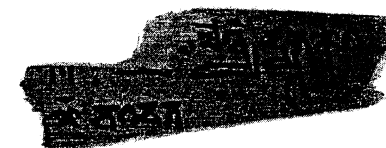
Working with several manuscripts or even with a single large manuscript would in most cases require compression of the files. I therefore used the JPG format which reduces the size of a file to about 15% of its original size. Saving a file in JPG format causes a certain loss of information which presumably diminishes the quality of the image, but such changes cannot be perceived by the naked eye either on the display or on a print-out; I for one was unable to detect any differences in the images before and after they were saved in the JPG format.<sup>29)</sup> Floppy disks are, of course, inadequate to store these graphic files (even in compressed formats), and one would usually require a CD-writer (or at least a ZIP drive) to backup the information on the hard disk.

In what follows I reproduce four fragments to illustrate two of the points made above. (1) The fragments from frames 64, 73 and 76 show that in some cases the old black and white photographs that Schlingloff sent to Spitzer preserve fragments in a state better than the current state of the originals at the Staatsbibliothek, Berlin. (2) The remarkable fact that our text refers frequently to non-Buddhist literature and topics.

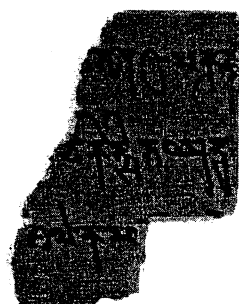
18a (2.4×6.8)



18b



64a (4.7×4.1)



64b



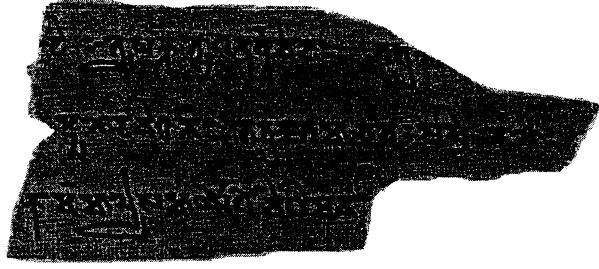
73a (4.8×5.5)



73b



76a (4.6×11.5)



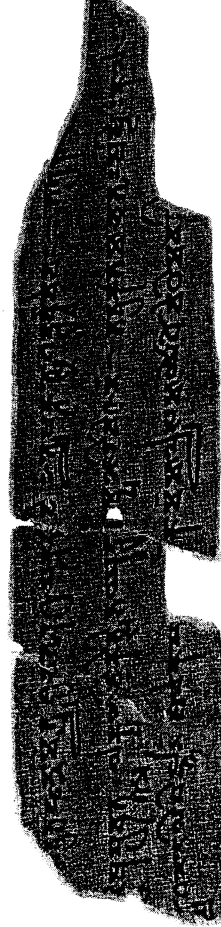
76b



As can be seen from the photographs used by Schlingloff as well as from the transcription of the fragments prepared by Spitzer, 64, 73 and 76 were originally one fragment. In my opinion fragment 18 also belongs to the same leaf and could be placed to the right of the combined fragment as follows. Note, however, that the space between the two resulting fragments must have been larger than it appears below; the original size of the leaf was some 40 cm. length.

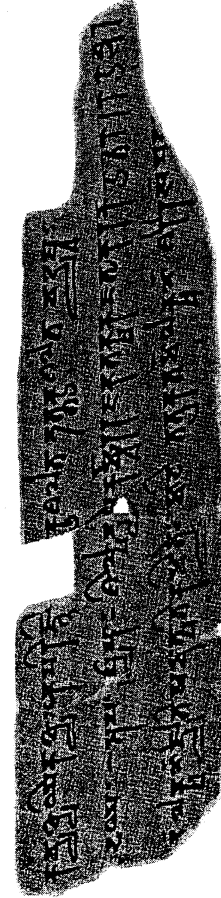
The transliterations that accompany the combined images below generally follow the conventions used in the catalogues of the Turfan Sanskrit manuscripts: + is used for a missing *akṣara*, .. for an illegible *akṣara*, . for a partly illegible *akṣara*; *akṣaras* or parts of *akṣaras* in [ ] are uncertain or difficult to read, in ( ) added by me, and in { } to be deleted (i.e., are scribal mistakes). /// represents the breaking point of a fragment, and \* stands for

64 + 73 + 76 & 18 recto



1 ///+ [ta tālan nāma tvaśrācaturāśrāpakī(ṣṭā)di ◊ ity eṣa kṛtsno gandharvavedaḥ | tatra k(a)(t)(ama)+ + ... ///  
 2 ///[i]ṣṭi pravṛttam\* lakṣṇacikitsitavyudha .. mpañādividhānaḥ | tatra katamā catuṣṣaṣṭiḥ kalāḥ | ///  
 3 ///y. gaṇanālījñānaḥ śalākāha(ṛaṇa) [n] + ..ṃ kāmaḥ mālyasamāyogo veṭhimavā. i+++++////

64 + 73 + 76 & 18 verso



1 ///kāvyakhyāyikahyanakaparījñā(naḥ)gīta)kuśalātā nṛttakuśalātā vādyev a ..+++++////  
 2 ///. .dayaḥ | apare 'py āhuḥ śīpāny api karmmāraṇajakatakakṣajātukārak(a)[kun]lak (ā)rakakumbha [k] (āraka?)///  
 3 ///[i] ..ṃ lakṣaṇaḥ jyoṭiṣaḥ utpātīkam ity evamādi ◊ tatra katamaḥ lakṣaṇaḥ ◊ śārirasamba[d](dha?)++ + ///  
 ///... .ḥ etā api kalā ity

*virāma*. Spaces in the manuscript are indicated by ◇, other spaces between words as well as *avagrahas* are added by me.

The fragment is obviously part of a larger segment of the text that deals with various sciences or branches of knowledge. The surviving text begins with the last section about the science of music, namely, on rhythm: "Among these(?), what is called rhythm is three beat, four beat, *apakṛ* [ṣṭa?] etc.<sup>30</sup> This is the entire science of music" ([*ta*]tra tāḷan nāma tryaśracaturāśrāpakṛ [ṣṭa]di ◇ ity eṣa kṛtsno gandharvavedaḥ). Next comes the description of an unidentified branch of knowledge. Fragment 326a [not reproduced here] which reads [*kata*]maṃ bhāgavatam jñā(nam) ("Which one is the knowledge belonging to the exalted one?") could perhaps fit here, but I was did not succeed to paste the two fragments together in a satisfactory manner.

Assuming that no other branch of knowledge was treated in-between, the next line contains the last part about this knowledge: *lakṣaṇacikitsitayuddha .. mpaṇādividhānam*. The first two members of the compound are relatively clear; *lakṣaṇa* could refer to some kind of mark, maybe used for divination, and *cikitsita* means, of course, "healing." The next word, however, is problematic. Although only one syllable is missing I could not identify it. The reverse index of Schwarz and Pfeiffer contains only one word ending in -*mpaṇa*, namely, *champaṇa* which is recorded as a varia lectio for *śaṅkhana* (a name of various men). The only other word fitting in here is *trmpaṇa* ("pleasing"), but I fail to connect it meaningfully with *yuddha*. Professor Schlingloff kindly suggested to conjecture *yuddhārambhana*, and although the hole in the fragment is too small for the *akṣara ra* and the confusion of *p* and *bh* is not typical for the Spitzer manuscript, this is the best solution so far. The fragment also enumerated the domains in respect to which these branches of knowledge were applied (cf. -[*i*]ṣu pravṛttam), but unfortunately this information did not survive.

Next comes an enumeration of the sixty four *kalās* ("arts and sciences"). The most extensive study of this topic remains that of A. Venkatasubbiah who collected and briefly commented on ten *kalā*-lists,<sup>32</sup> discussed their origin and date,<sup>33</sup> pointed out their division into manly and womanly arts (*śtrīkalāḥ* and *puruṣakalāḥ*), and explained their relation to the sixty-four tantras.

Without entering into complicated matters of the chronology of texts such as the *Samavāyasūtra*, *Kalpanāmaṇḍitikā*, *Kāmasūtra* and *Lalitavistara*, let

me just point out that our fragment presents one of the oldest surviving *kalā* lists. It is certainly the oldest list of sixty-four *kalās*,<sup>35</sup> which Venkatasubbiah, albeit with inconclusive arguments, considers to be the original number of the *kalās*.<sup>36</sup>

Only a few of the sixty-four arts are mentioned on this side of the leaf: painting (*ālekhyā*),<sup>37</sup> skilfulness in gambling (*dyūtakauśalyā*),<sup>38</sup> the knowledge of calculating and writing (*gaṇanalibijñāna*),<sup>39</sup> surgery (*śalākāharaṇa*),<sup>40</sup> *kāma*, which is open to several interpretations,<sup>41</sup> flower arrangement or more precisely stringing flowers into garlands (*mālyasamāyoga*),<sup>42</sup> and *veṭhima*. This last *kalā* is problematic. It is not recorded by the dictionaries and I assume that *veṭhimā* is a Middle Indic form corresponding to *veṣṭana*; cf. the Ardhamāgadhī *veḍhima*.<sup>43</sup> However, I could not find anything quite similar in the extensive *kalā* lists compiled by Venkatasubbiah. The meaning of this *kalā* could be "wrapping around" (a turban, etc.) or "clothing, dressing" (as in a piece of cloth, etc.); cf., also *Sūtrālaṅkāra* # 27: "Books about precious clothes."

The enumeration of the *kalās* continues on the verso side of the leaf: the complete knowledge of poetry, stories in prose,<sup>44</sup> and legend-like narratives (*kāvyaḥkhyāyikākhyanakaparijñāna*),<sup>45</sup> skillfulness in singing (*gītakuśalāṭā*),<sup>46</sup> skillfulness in dancing (*nṛtakuśalāṭā*)<sup>47</sup> and (skillfulness in playing) musical instruments (*vādyā*).<sup>48</sup>

The above are the only arts that are mentioned in the fragment. Obviously, a considerable part of the list is now lost, but it is also quite clear that not all sixty-four arts were explicitly mentioned because the enumeration seems to have ended at the beginning of line 2 in -*ādyaḥ*. We cannot be certain, of course, that -*ādi* stands here for the rest of the *kalās*, but we can be certain that the enumeration was incomplete, because the entire enumeration covered a bit less than three lines, from recto line 2 to verso line 2.<sup>49</sup> Assuming that the original length of the leaf was ca. 40 cm and deducting the difference between the beginning of the enumeration in line 2 recto and its end in line 2 verso (ca. 16 cm) we can conclude that the entire enumeration covered ca 104 cm. This would leave less than 2 cm for each *kalā* and, therefore, it is practically impossible that all 64 *kalās* were listed. It is also clear that our leaf contained only the mere names of (some of) the *kalās*, and that there were no discussions or definitions of them, at least not at this point.

Although only a small portion of the original enumeration remains, the brief comparison conducted in the notes above between the remaining *kalās* of

the Spitzer Manuscript and those in the other *kalā* lists makes it clear that our list is not identical with any other list, neither in the identity of the individual members nor in the order in which they are given. The results of the comparison can be conveniently represented in the following table. The names of the *kalās* are abbreviated. Numbers in brackets indicate that the correspondence is only approximate.

Spitzer Ms	Sama-vāyas.	Lalita-vistara	Kāma-sūtra	Kādambarī	Jaya-maṅgalā	Rāma-candra	Śukra-nītis.	Kalpān-tarv.	Sūtrālaṅkāra
ālekhyā	3(rūpa)	33(rūpa)	4	20	6	—	27	—	33
dyūta-	10	29	59	21	25-44	6	6	—	17
gaṇana-	2	3	—	—	—	—	—	3	15
libi-	1	3	—	44	4	8	59	1/34	—
śalākā-	—	—	—	(29)	—	—	(9)	(29)	(3)
mālyā-	—	44	14/(48)	—	9	—	(5)	—	24/36
veṭhima	—	—	—	—	—	—	—	—	(27?)
kāvya-	(19-22)	—	(33)/54	42	—	(2)/4	—	—	—
ākhyāyī-	—	—	(32)	(39)/41	—	—	—	—	—
ākhyāna-	39	—	—	—	—	—	—	—	—
gīta-	5	38	1	—	1	3	—	4	19
nṛta-	4	37	3	12	2	—	1	5	21
vādyā-	6	37	2	11	3	—	(2)	—	20

After the enumeration of the sixty-four arts the author reports the opinion of certain not further identified “others” (*apara*) that the crafts (*Silpa*) too are arts (*apare 'py āhuḥ silpāny api ... eṭā api kalā iti.*). Among the crafts mentioned we find (the professions of) blacksmith (*karmāra*), silversmith (*rajaka*)<sup>53</sup> (?), carpenter (*takṣaka*), lac-maker (*jatukāraka*), spear(?)-maker (*[kum]tak(ā)raka*) and potter (*kumbha[k](ā)raka*). This opinion of the “others” does not seem to have been prevalent. I could find only a single parallel in the list of the *Kādambarī*, namely, no. 47: *sarvaśilpāni*.

The last line of the fragment enumerates three more branches of knowledge or sciences, *lakṣaṇa*, *jyotiṣa*, and *utpātika*, and at least two of the three are occasionally mentioned in the *kalā*-lists, but we seem to have left already the domain of the *kalās*<sup>54</sup>. What is probably common to these three branches of knowledge is that they can be used to predict the future. The word *lakṣaṇa*

can refer to a wide variety of “marks”. The *Samavāyasūtra*, for instance, mentions the marks of men, women, horses, elephants, bulls, cocks, goats, discusses, umbrellas, sticks, swords, gems, jewels and shields<sup>55</sup>. The marks in our text, however, seem to be those connected to the body (*tatra katamaṃ lakṣaṇam* ◇ *śarīrasaṃba[d](dha?)* ...). Perhaps this is a reference to the thirty-two marks of a superior person who is or will become either a Buddha or a Cakravartin.

The second science, *jyotiṣa*, is not problematic, and the third, *utpātika*, must mean a science concerned with the interpretation of natural calamities as omnia (cf. *autpāta*, *autpātika*).

To conclude, I would like to stress the limits of the above presentation. The study of the Spitzer manuscript is still in its beginnings. It is hoped that in the future more fragments can be pasted together and that we will be able to gain a more coherent picture of the structure and content of this precious and fascinating manuscript.

- 1) I wish to express my gratitude to my wife, Prof. Karin Preisendanz, for her very valuable comments.
- 2) More specifically, the first expedition, from November 1902 to March 1903, was headed by A. Grunwedel and G. Huth, the second, from September 1904 to December 1905, by A. von Le Coq. In the third, from December 1905 to June 1907, Grunwedel and H. Pohrt joined von Le Coq; the fourth, from January 1913 to February 1914, was again headed by von Le Coq.
- 3) The best popular introduction to the Indo-British, Russian, Japanese, German, Swedish and American expeditions to the Silk Road can be found in P. Hopkirk, *Foreign Devils on the Silk Road*. London 1980.
- 4) This exceptional exploit, unmatched by any of the other expeditions, required “herculean” strength and outstanding agility with a fox-tail saw; Theodor Bartus (1857-1941), the technical assistant (technischer Mitarbeiter) of all four expeditions, was the only person capable of such a feat. For a fascinating description of the procedure of sawing off and packing the slabs of stucco on which the murals rested cf. A. von Le Coq, *Auf Hellas Spuren in Ostturkistan. Berichte und Abenteuer der II. und III. deutschen Turfan-Expedition* (Leipzig 1926), pp. 116-117.
- 5) For an excellent survey cf. L. Sander, “The earliest manuscripts from Central Asia and the Sarvāstivāda mission,” in *Corolla Iranica. Papers in honour of Prof. Dr. David Neil MacKenzie on the Occasion of his 65th birthday on April 8th, 1991*, ed. R.E. Emmerick and D. Weber (Frankfurt am

Main/Bern/New York/Paris 1992), pp. 133-150.

- 6) Of the 640 Sanskrit manuscripts catalogued in *Sanskriithandschriften aus den Turfanfunden*, Vol. I, 5 were found by the first expedition, 59 by the second, 560 by the third and 16 by the fourth. Cf. E. Waldschmidt (unter Mitarbeit von L. Holzmann und W. Clawiter), *Sanskriithandschriften aus den Turfanfunden*, Vol. I (Wiesbaden 1965), p. XII.
  - 7) Cf. A. von Le Coq, *op. cit.* [see n. 3], p. 115.
  - 8) For a photograph of the Rotkuppelraum see A. von Le Coq, *op. cit.* [see n. 3], Tafel 35.
  - 9) In fact it was Bartus who discovered the important library in the Ming-öi of Kyzil; cf. von Le Coq's letter, dated 8.4.1906, quoted in D. Schlingloff, *Ein buddhistisches Yogalehrbuch* (Sanskrit Texte aus den Turfanfunden VII, Berlin 1964), p. 9.
  - 10) Cf. also D. Schlingloff, "Die Birkenrindenhandschriften der Berliner Turfansammlung," *Mitteilungen des Instituts für Orientforschung* IV/1, 1956, pp. 120-127.
  - 11) Cf. A. von Le Coq, *op. cit.* [see n. 3], p. 115.
  - 12) The glass frames are still labelled according to the previous classification introduced by Else Lüders as K 941. In this classification numbers between 900-999 refer to philosophical manuscripts; cf. E. Waldschmidt *et al.*, *op. cit.* [see n. 5], p. XX.
- It is possible to ascertain the provenance of the manuscript because of the abbreviation MQR [= Ming-öi, Qizil, Rotkuppelraum] that appears on some of the leaves, e.g., in glass frame 75b. The list of relevant abbreviations together with their meanings is given by E. Waldschmidt *et al.*, *ibid.*, p. XV.
- 13) Quoted by E. Waldschmidt, *op. cit.* [see n. 5], p. XXI (however, one sentence concerning the dating of the manuscript was inadvertently omitted), and by D. Schlingloff, "Fragmente einer Palmblatthandschrift philosophischen Inhalts aus Ostturkistan (Ms. Spitzer)," *Wiener Zeitschrift für die Kunde Süd- und Südasiens* 12/13, 1969/69 [= Festschrift Frauwallner], p. 233.
  - 14) Cf. E. Waldschmidt, *op. cit.* [see n. 5], p. XXII: "jedenfalls verschwand er aus dem Berliner Gesichtskreis."
  - 15) I would like to thank Dr. W. Knobloch and Frau W. Witzel for their helpful response to my enquiry.
  - 16) The buying power of one Mark in 1929 is roughly equivalent to that of ten Marks at the present.
  - 17) Cf. H. Lüders, "Das Zeichen für 70 in den Inschriften von Mathurā aus der Śaka- und Kuṣāṇa-Zeit," *Acta Orientalia* 10, 1932, pp. 118-125 [= *Philologica*

*Indica*, Göttingen 1940, pp. 721-726].

- 18) Cf. Y. Miyasaka, "Fragments of Sautrāntika," *Indogaku Bukkyogaku Kenkyū* 10, 1962, pp. 673-679.
  - 19) I would like to take this opportunity to thank Professor Hara and the board of governors for the kind invitation to the Institute.
  - 20) Cf. D. Schlingloff, "Fragmente" [see n. 12], pp. 323-328; —"The oldest extant parvan-list of the Mahābhārata," *Journal of the American Oriental Society* 89, 1969, pp. 334-338.
  - 21) It should be noted, however, that none of the early Turfan manuscripts is dated in colophons, etc. The dating of these manuscripts is based on the similarity between their script and dated inscriptions of the Kuṣāṇa period.
  - 22) Schlingloff suggested that the manuscript contained two works, the one divided into *āhnikas*, the other into *prakaraṇas*; cf. D. Schlingloff, "Fragmente" [see n. 12], p. 325.
  - 23) The word *laukṛtyatā* is also mentioned, but not in the sense of a materialistic philosophical school, but as a science whose nature is to criticize with reasons. (This definition strongly reminds of the famous definition of *ānvīṣkt* in the *Arthaśāstra*.) Cf. fragment 143b: b ///t. *hetūpālambhātmaikalaukṛtyatām sarvva(śāstrāni?)///*
  - 24) Cf. C. Willemen *et al.*, *Sarvāstivāda Buddhist Scholasticism* (Leiden/New York/Köln 1998), p. 239.
  - 25) I would like to thank my friend Mr. Burkhard Quessel, now curator of the Tibetan collection at the British Library, for his unfailing support in all electronic matters.
  - 26) Cf. K. Suzuki, "The script of the Śrāvakabhūmi manuscript," in *Studies on the Buddhist Sanskrit Literature*, ed. by the Śrāvakabhūmi Study Group and the Buddhist Tantric Texts Study Group (Tokyo 1995), pp. 21-38.
  - 27) My choice of this resolution was based in fact on a false information according to which the scanner was supposed to be capable of 2400 dpi of optical resolution. Only afterwards I discovered that it was capable of only 1950 dpi of optical resolution and that the remaining 450 dpi are digital resolution. I do not think that great harm was done by that, but I am told that it is preferable not to use digital resolution.
- It may be stressed that "dpi" refers to dots per inch, not per square inch. Thus, a square inch in 2400 resolution would contain 5,760,000 dots.
- 28) One would think that scanning in 256 colours should be sufficient, but in fact the quality of the image is considerably inferior in this format. The depth and the texture of the image are strongly affected by switching from 16



million colours format to 256 colours format, while the colours themselves remain the same, at least to the naked eye.

- 29) Another disadvantage of working with compressed files such as those in JPG format is that every time one saves a file further information is being lost. However, using the higher quality standard of JPG certainly allows one to save a file without any noticeable change. I usually saved each file twice: once after scanning the slide and once after removing the background to the scanned-in fragment and enhancing in some cases its legibility.
- 30) For *tryaśra* and *caturaśra* cf. *Nāṭyaśāstra* 31.9 and 11 (Bombay ed.). Cf. also E.M. Nijenhuis, *Indian Music, History and Structure* (Leiden/Köln 1974), pp. 67-68: "The general terms indicating the five varieties of [of Karṇāṭak tālas], viz. *tisra* ("threefold"), *caturaśra* ("fourfold"), *khaṇḍa* ("broken"), *miśra* ("mixed"), and *saṃkīrṇa* ("composite") refer to the structure of, or more precisely, to the number of beats contained in the main bar or section (*aṅga*) of a particular tāla cycle. The term *tisra* may derive from *tryaśra* which, like *caturaśra*, was already used in ancient times." So far I was not able to find the the word *apakṛ(ṣṭa)?* in relation to rhythm.
- 31) Cf. W. Schwarz and O.E. Pfeiffer, *Rückläufiges Wörterbuch des Altindischen*. Wiesbaden 1978.
- 32) Cf. A. Venkatasubbiah, *The Kalās. Inaugural Dissertation presented to the Philosophical Faculty of the University of Bern*. Adyar, Madras 1911.
- 33) These are the *kalā* lists found in: 1) *Samavāyasūtra*, 2) *Lalitavistara*, 3) *Kāmasūtra*, 4) *Kādambari* of Bāṇa, 5) "Pañcāla's list" [This list is reconstructed by Venkatasubbiah himself from the *Kāmasūtra* and commentaries thereon; it is derived from subdivisions of Vātsyāyana's text and has nothing to do with the *kalās* as they are usually understood.] 6) *Jayamaṅgalā* of Yaśodhara, 7) "Rāmacandra's commentary on the first verse of Lakshamaṇakavi's continuation of the Campūrāmāyaṇa of Vidarbharāja." 8) *Śukranītisāra*, 9) *Kalpāntarvācyāni*, 10) Aśvaghōṣa's *Sūtrālaṅkāra* [This text was later identified by Lütters as the *Kalpanāmaṇḍitikā* of Kumāralāta; cf. H. Lütters, *Bruchstücke der Kalpanāmaṇḍitikā des Kumāralāta* (Leipzig 1926), p. 17ff. Unfortunately the portion of the text dealing with the *kalās* did not survive.]
- 34) This part of his presentation is unfortunately completely out of date.
- 35) Aśvaghōṣa (*Sūtrālaṅkāra*, 9.61) has 47 *kalās*, the *Samavāyasūtra* and the Jaina sources in general mention 72, the *Lalitavistara* enumerates 86 and adds "etc."

Here and in the following I rely on the lists as given by Venkatasubbiah; I occasionally quote from his translations.

- 36) Cf. Venkatasubbiah, *op. cit.*, [see n. 32] p. 8. According to Venkatasubbiah the number sixty four was fixed by analogy to the sixty four subdivisions of the Rigveda.
- 37) Cf. also *Samavāyasūtra* # 3: *rūpa*, ("sculpture, painting" etc.); *Lalitavistara* # 33: *rūpa* ("painting"); *Kāmasūtra* # 4: *ālekhyā*; *Kādambari* # 20: *lekhyakarma* "painting," according to the commentator, however: "writing"; *Jayamaṅgalā* # 6: *citravidhi*; *Śukranītisāra* # 27: *citrādyaḷekhāna*; *Sūtrālaṅkāra* # 33: "The art of painting".
- 38) Cf. *Samavāyasūtra* # 10: *jūya* (= *dyūta*), cf. also # 85-86 in the same list, *sajiva* and *nijiva*, i.e., gambling with animate (cocks, horses, etc.) and inanimate (dice, etc.) objects. Cf. also *Lalitavistara* # 29: *akṣakrīḍā* (playing with dice); *Kāmasūtra* # 59: *dyūtavīṣeṣāḥ*; *Kādambari* # 21: *sarvāḥ dyūtakalāḥ*. Among the 64 *kalās* of the *Jayamaṅgalā*, no less than twenty (# 25-44) are varieties of gambling. Rāmacandra # 6: *durodara*; *Śukranītisāra* # 6: *dyūtādyanekakrīḍābhī rañjanam* "entertaining oneself with gambling and other pastimes."; *Sūtrālaṅkāra* # 17: "Books about playing dice".
- 39) Cf. *Samavāyasūtra* # 2: *gaṇīya* (*gaṇita*); *Kalpāntarvācyāni* # 3: *saṃkhyā*; *Sūtrālaṅkāra* # 15 ("Books about numbers and mathematics").
- 40) Cf. *Samavāyasūtra* # 1: *leha* (= *lekha*); *Kādambari* # 44: *sarvalipayah*; *Jayamaṅgalā* # 4: *lipijñāna*; Rāmacandra # 8: *lipijñāna*; *Sukranītisāra* # 59: *nānādeśīyavarṇānām susamyaglekhane jñānam*; *Kalpāntarvācyāni* # 1: *likhita*; *Kalpāntarvācyāni* # 34: *lipi*.
- 41) Cf. *Lalitavistara* # 3: *lipimudrāḡaṇanāsāṅkhyāsāmbhadhanurvedāḥ*, "writing, *mudrās*, calculating, numbers, wrestling and archery."
- 42) *salākāharaṇa* is not recorded in the dictionaries, but it is certainly synonymous with *salyāharaṇa*. I would like to thank Professor Schlingloff for this suggestion. "Surgery" is not usually included in the list of *kalās*; the only exception seems to be *Śukranītisāra* # 9: *salyagūḍhāhṛtau sirāvranavyadhe jñānam* "Knowledge of extracting burried arrows, spears etc., and of cutting open wounds and blood-vessels." *Kādambari* # 29 (*āyurveda*), *Kalpāntarvācyāni* # 29 (*vaidyaka*) and *Sūtrālaṅkāra* # 3 mention medicine in general.
- 43) Several lists mention "erotics", e.g., *Kādambari* # 37: *ratitantrāṇi*, Rāmacandra # 5: *kāmasāstra*, *Sukranītisāra* # 7: *anekāsanasandhanai rater jñānam* "knowledge of 'rati' in different postures", *Sūtrālaṅkāra* # 10 ("The art of Love"), but note that *kāma* is usually a masculine noun and *kāmaṃ* here could be an adverb (according to will/one's pleasure)
- 44) Cf. *Lalitavistara* # 44: *mālyagranthana*; *Kāmasūtra* # 14: *mālyagranthanavi-kalpāḥ*, cf. also *Kāmasūtra* # 48: *puṣpaśakaṭikā* "making carts, horses, etc. of

- flowers to send love letters in”; *Jayamaṅgalā* #9: *mālyavidhi*; cf. also *Sukranītisāra* #5: *sayyāstaranaṣaṅyogaḥṣpādigranthana* “making beds and garlands with flowers”; *Sūtrālaṅkāra* #24: “The arrangement of flowers.” and #36: “The arrangement of garlands.
- 45) Cf. R. Pischel, *Grammatik der Prakrit-Sprachen* (Strassburg 1900), p. 209 and further references therein.
- 46) Prose compositions are often divided into *ākhyāyikā* and *kathā*, but the principles of the distinction are not fixed.
- 47) Cf. *Lalitavistara* #39: *ākhyāta*; *Kāmasūtra* #32: *nātakākhyāyikādarśana*, *Kāmasūtra* #33: *kāvyaśaṣṭhāntarāṅga* “the last quarter of a śloka being given, the composition of the first three”, *Kāmasūtra* #54: *kāvyaśaṣṭhāntarāṅga*; *Kādambarī* #39: *kathāḥ*, *Kādambarī* #41: *ākhyāyikāḥ*, *Kādambarī* #42: *kāvyaśaṣṭhāntarāṅga*; *Rāmacandra* #2: *kāvyaśaṣṭhāntarāṅga*; *Rāmacandra* #4: *kavitva*.
- 48) Cf. *Samavāyasūtra* #5: *gīta* (= *gīta*); *Lalitavistara* #38: *gītapaṭhitam* (“singing and reading”); *Kāmasūtra* #1: *gīta*; *Jayamaṅgalā* #1: *gīta*; *Rāmacandra* #3: *gāyakatva*; *Kalpāntarvācyāni* #4: *gīta*; *Sūtrālaṅkāra* #19: “Books about music and singing.”
- 49) Cf. *Samavāyasūtra* #4: *nṛtta* (= *nṛtya*); *Lalitavistara* #37: *vādyanṛtya*; *Kāmasūtra* #3: *nṛtya*; *Kādambarī* #12: *bharatādīpraṇītāni nṛttaśāstrāṇi*; *Jayamaṅgalā* #2: *nṛtya*; *Sukranītisāra* #1: *nartana*; *Kalpāntarvācyāni* #5: *nṛtya*; *Sūtrālaṅkāra* #21: “Books about dancing and laughing.”
- 50) Cf. *Samavāyasūtra* #6: *vāḍya* (= *vāḍya*); *Lalitavistara* #37: *vādyanṛtya*; *Kāmasūtra* #2: *vāḍya*; *Kādambarī* #11: *vīṇā-murajaka-kāṣṭhyatāla-dardurapūṭa-prabhṛtīni vāḍyāni*; *Jayamaṅgalā* #3: *vāḍya*; *Sukranītisāra* #2: *anekavāḍyavikṛtau tadvāṃane jñānam* “Proficiency in playing many musical instruments together, i.e., in playing in an orchestra.” *Sūtrālaṅkāra* #20: “Books about playing the lute.”
- 51) The leaves of the central portion of the manuscript, to which the present leaf belongs, contained three lines on each side. At the beginning and the end of the manuscript, where narrower leaves were used, only two lines are written on each side, but towards the very end of the manuscript the scribe must have realized that the available space ran short, and reverted to three more tightly squeezed lines.
- 52) Note that *śilpa* is neuter, the feminine plural can be explained either by attraction due to *kalāḥ* or by assuming a feminine word, e.g., *vṛtti*, meaning the profession of the listed craftsmen, i.e., the profession of the blacksmith (= smithery), etc. The second alternative seems more probable to me.
- 53) *rajaka* is recorded only in the meaning of “washerman”; perhaps one should

read *rajatakāraka*.

- 54) Even if *lakṣaṇa* here refers to the same *lakṣaṇa* as in *lakṣaṇa-cikitsitayuddha-* (recto, line 2), which is doubtful, the first mentioned *lakṣaṇa* seems also to be outside the *kalā* list. In any case, we have no sufficient evidence to assume that after the enumeration of the *kalās* our text discusses or defines each *kalā* individually, but the possibility that at least some of the *kalās* were discussed individually cannot be excluded.
- 55) Cf. Venkatasubbiah, *op. cit.* p. 12.
- 56) This science also appears in some of the *kalā* lists, e.g. *Lalitavistara* #69, *Kalpāntarvācyāni* #27 (in both: *jyotis*).

(Universität Wien)