

Essential Subtleties on the Silver Sea. The Yin-hai jing-wei 銀海精微: A Chinese classic on ophthalmology. Translated and annotated by Jürgen Kovacs and Paul U. Unschuld. *Comparative Studies of Health Systems and Medical Care*; no. 38. Berkeley, Los Angeles, London: University of California Press, 1998. xii, 503 pp.

Hartmut Walravens

[Hartmut Walravens is Director of Bibliographic Services at the Berlin State Library and concurrently Director of the International ISBN Agency. He teaches at the East Asian Seminar, Free University of Berlin, and the Japan Center, Humboldt University, Berlin. His main interests are in bibliography, history of East Asian Studies and the history of science.]

While Chinese medicine has been very popular in recent decades, the main focus of Western researchers has been on acupuncture and techniques that might complement clinical medicine. This has led to a flood of publications but has not necessarily contributed to a better understanding of the evolution and development of this discipline in China.

Paul Unschuld has done a great deal to lay solid foundations in this respect: His *Medicine in China: A history of ideas* (Berkeley 1985) and *Medicine in China: A history of pharmaceuticals* (Berkeley 1985) were a major breakthrough in the historical field, while *Nan-ching: The Classic of Difficult Issues* (Berkeley 1986) gave a carefully commented translation of one of the most important traditional texts. Worth mentioning in this context are also the German predecessor of the History of pharmaceuticals, *Pen-ts'ao. 2000 Jahre traditionelle pharmazeutische Literatur Chinas* and also *Yü-chih pen-ts'ao p'in-hui ching-yao. Ein Arzneibuch aus dem China des 16. Jahrhunderts* (both: München 1973).

Now Unschuld and J. Kovacs tackle a special discipline, that of ophthalmology, as little attention has been paid so far to the genesis and development of individual branches of the medical sciences and their rich literature in China. The *Yinhai jingwei* sticks out as one of the most important traditional works on afflictions of the eye. While attributed to Sun Simiao (581-682?) it seems to be a compilation of different sources from the 14/15th centuries. This latter view is supported by the fact that the work is first mentioned in Ming works like Huang Yuji's *Qianqingtang shumu* 千頃堂書目, and the editors of the Qing imperial library catalogue pointed out that the term *yinhai* 銀海 was not used before Su Shi (1036-1101) and Wang Anshi. Also the editor of the known early editions of the work, Qi Yijing 齊一經 (second half of the 16th century), says that he received the unpublished manuscript of the treatise from a friend named Li Chonghan 李冲涵 who pitied him for suffering from an eye affliction. From circumstantial evidence we may

assume that the *Yinhai jingwei* was published by Qi before 1579 or shortly thereafter.

The authors have collated the texts of several editions:

Edition T, preserved in the National Central Library, Taipei; it originally consisted of two volumes, of which the last 104 and 84 pages are extant (10 lines per page, 20 characters per line). It is apparently a Ming edition.

Edition J, 2 volumes. Osaka: Kyoushiya, 1668.

Edition S, from the imperial library Siku quanshu 四庫全書, as printed by Wang Yunwu, Taipei. 266 pp.

Edition Z, modern edition, based on the Zuigengtang 醉耕堂 woodblock edition published Taipei: Wuzhou chubanshe, 1980; largely identical with the edition published Beijing: Remin weisheng chubanshe, 1956, which again goes back to the Qing edition collated by Zhou Liangjie 周亮節. A copy of the latter is preserved in the Bibliothèque nationale de France (Courant 5196), another one in the British Library, London.

Edition C, commented upon by Chen Zi 陳滋, Taipei: Lixing shuju, 1982; largely identical with the edition published Shanghai: Qianxiangtang shuju, 1982.

The *Yinhai jingwei* is introduced by 14 paragraphs which are devoted to the Chinese adaptation of the Indian theories of the five spheres (*wu-lun*) and eight boundaries (*ba kuo*), short surveys of the viscera and bowels, the conduits, the emotions, the body liquids, the five flavours, and the various influences (*qi* 氣) which may generate illness. The first main portion of the work described 81 eye afflictions, which is an adaptation of the number of 72 of the Indian tradition to Chinese standards. The descriptions themselves vary considerably according to pattern and concept. Then follows a listing of 106 prescriptions, including indications, ingredients, and specifications for processing and consumption. The last part of the book comprises 17 different sections elucidating the application of drugs; and there is a list of 134 individual drugs. Four sections cover criteria for eye examination.

The present book starts with a very valuable historical introduction that outlines the development of Chinese ophthalmology, and an analysis of the *Yinhai jingwei* (6-115). The main body of the work (117-464) consists of the collated Chinese text and an annotated translation of the *Yinhai jingwei*.

There are a number of appendices: 1. An alphabetical list of drugs mentioned in the *Yinhai jingwei* (465-477), 2. Literature used in the identification of drugs (479; it is surprising not to find there Bernard E. Read's *Chinese medicinal plants from the Pen Ts'ao Kang Mu*, repr. Taipei: Southern Materials Center, 1977), 3. A comprehensive bibliography (481-488; primary Chinese sources, secondary sources in Chinese, secondary sources in Western languages and Japanese) and 4. Editions of the *Yinhai jingwei* collated for the present edition (488-489).

The bibliographer misses a number of entries that are of no great importance in this context but which might be expected, e.g. Franz Hübotter: *Die chinesische Medizin*; K. Chimin Wong, Wu Lien-teh: *History of Chinese medicine* (Shanghai: National Quarantine Service, 1936. Vol. 1, 223-224); and E. R. Jellison: "Translation of a Chinese work on ophthalmology" (*Chinese Medical Journal* 13.1899, 84 ff).

There are three indices, two for prescriptions (Chinese as well as English), and a general index. Chinese characters are given throughout the book.

The first part of the introduction gives a history of ophthalmology in China, in the context of the development of medicine, beginning with the oracle bones from the Shang/Yin period. It seems that there was no interruption in the Chinese written medical tradition owing to the Qin burning of books (as it is assumed for political and philosophical texts). The authors draw a parallel between the political situation in the Zhou period (especially the Warring States) and the development of medical concepts:

During the Zhou era itself, the social reality of <all against all>, of the necessity of defense against an ever-imminent threat of attack not only among states and city-states but also among smaller social groups and within families, resulted in the rise and dominance of demonological notions in health care. Health, in this perspective, is an outcome of successful defense against the onslaughts of demonic beings. [... A] holistic understanding of eye afflictions as integrated pathological conditions of a larger organism was paired with outright militaristic notions of an intrusion of pathogens into the organism, where they attack or form alliances with one another, or struggle with the body's organs or defense system.(p.11)

The Han period was characterized by a linking of physiological, pathological and etiological notions on the basis of yin yang and the five phases with acupuncture, a new therapy mentioned for the first time in the *Shiji* 史記 (90 BC). This system of systematic correspondence involved the viscera (*zang* 藏) and bowels (*fu* 府). The authors investigate ophthalmological aspects in individual works like the *Huangdi neijing*, the *Zhubing yuan-hou lun* 諸病源候論 (by Chao Yuanfang 巢元方, 610), the *Qianjinfang* 千金方 (by Sun Simiao, 581-682?) and the *Waitai biyao* 外台秘要 (by Wang Tao 王燾, ca. 670-755), the latter already showing Indian influence. The Song dynasty shows a marked influx of Indian concepts, usually linked to the name of Nāgārjuna (Longshu 龍樹); there is the doctrine of the *wu-lun* 五輪, five spheres: wind-sphere (the black part of the eye), water-sphere (the pupil), *qi*-sphere (the white part of the eye), flesh-sphere (the lids), and blood-sphere (the canthi [in the Indian original: the eyelashes]), which were associated with the five phases and the five viscera. In contrast, the doctrine of the eight boundaries, or bulwarks (*ba*

kuo 八廓) became less popular, perhaps also because of the difficulty of integrating it in the Chinese system of numerological correspondence – only the *ba gua*, eight trigrams were an obvious link. Then the *Shengji zonglu* 聖濟總錄 (1111-1117), as an example of a major Song encyclopedia, with little Indian influence is discussed. As the Jin/Yuan periods offered little in the field of ophthalmology, the discussion leads directly to the *Yinhai jingwei*. The question is raised why the Chinese paid comparatively little attention to anatomy, and the anatomy of the eye in particular. While Chinese physicians were no doubt not completely ignorant as to the anatomical aspects of the eye as can be seen from numerous details in ophthalmological literature (though they were not aware of the lens, for example), "[no] convincing answer has been formulated as to why in China, that is, in a culture certainly not lacking in intellectual nonconformists and even less lacking in highly skilled observers, for two thousand years no <outsiders> emerged to develop an alternative medical perspective focusing on morphological pathology." [The reviewer took the liberty of inserting the "no" which seems to be lacking.] The authors point out an "idiosyncrasy" in Chinese medicine where the concept of obsolescence is absent. An old concept is not replaced by a new one, but there are many undecided controversies.

The authors explain the Chinese notion of eye "afflictions," a term intentionally used because the concept stipulates a *primary illness* to be the reason for a *pathocondition* (a term coined by P. Unschuld; the Chinese term is *zheng* 症); in the case of the eye it is often a disorder of the liver that may cause such a condition. Pathoconditions may result from personal lifestyle, like alcoholism ("blockages in the spleen and stomach and accumulation of heat in the liver," greed, licentiousness ("exhausts the kidneys"), too much eating and drinking, etc.. Malnutrition may be the problem, not only with the poor but also with the rich who do not pay attention to a balanced diet for their children. Too much studying at night under lamplight might cause "fatigue in the liver." Suppressing any of the seven emotions may result in liver-wind and accumulations of heat as signs of an exhaustion of the liver.

The accumulated wind or heat, or evil *qi* will then move upward into the head and attack or fill the eye. The authors point out that there is no reason to assume that such processes were considered symbolic, or virtual. This is quite clear in the case of eye afflictions in women caused by a menstruation problem, where blood instead of flowing downwards would flow upwards, "pour into the pupil, causing the eye to become red and rough."

The *Yinhai jingwei* is unique in Chinese traditional literature insofar as it is illustrated; these drawings cannot compare, however, with European medical illustrations of the time. One of the reasons may be the limited potential of the block-printing technique, and it is possible that on the manuscript level there were colored drawings of higher quality – but this is only speculation. Owing to the insufficiency of the illustrations much emphasis is laid on the descriptions, especially the metaphors.

The treatment suggested by the *Yinhai jingwei* is medicine to cure the primary disease and drugs or surgery to relieve the eye affliction. It is remarkable that acupuncture, nowadays considered an epitome of Chinese medicine, is not mentioned at all. There is reference, however, to moxibustion, so there is a relation at least to the acupuncture points. While pharmaceuticals play a very important role in the *Yinhai jingwei* we also have some information on surgical treatment. The eye, seems to have been the only organ in traditional Chinese medicine to be considered suitable for the application of a knife, a hook and a needle. The methods comprise puncturing to let bad water out, cauterization of the eye-lid, etc. Quite remarkable, and slightly enigmatic, is a section the "surgical method with the golden needle," which recommends Buddhist rituals in connection with cataract couching. It turns out that the techniques described were obviously borrowed from India, and chapter 17 of the Uttarantra section of the *Śūta-saṃhita* is quoted for comparison. It does not become quite clear whether the Chinese author actually was really familiar with operations that may have been the domain of Buddhist physicians. The last chapter of the introduction discusses the 81 nosographies in 13 groups from a pathological perspective of today.

The main body of the book consists of the extenso translation of the *Yinhai jingwei* of which the 81 nosographies are most interesting: "Helical protrusion," "Protrusion of the eye," "Rigid lids and rigid eyes," "White dimples with fish-scale pattern," "Patterned shade with white dimple" are a few examples of titles. As mentioned, the whole translation is accompanied by the collated Chinese text and is carefully annotated.

The editors of the *Siku quanshu* gave the following comment on the *Yinhai jingwei*: "The discussion of all the symptoms in this book is very clear. It applies the [therapeutic] methods of supplementation as well as draining, and employs both cooling and warming [drugs]. [The book] has the advantage of not [advocating merely] a one-sided [therapeutic] approach. Many prescription specialists rely [on this book]. Still, if one intends to apply the techniques of this [book] in practice, it is of no use to deliberate whether it is truly an authentic [work of Sun Simiao]. [.....] Since the prescriptions for the treatment of the eye written down in this text are quite useful, we record this book here for its own value."

Kovacs and Unschuld have provided not only a good edition and translation of another important Chinese text, much more, they have opened the field of Chinese ophthalmology to the Western medical historian. Even more important is the methodological concept, namely to link the research results from the study of such "general" classics as the *Huangdi neijing* and the *Nanjing* with the study of individual medical disciplines, and we hope that other scholars will follow suit, and study, for instance, the important works in other fields.

The present work shows a rare combination of sinological, medical and pharmaceutical expertise, and it may be justly considered a breakthrough in the study of traditional Chinese medicine.

