Review: Raising Questions

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# ESSAY REVIEW

# Raising questions

**Paul U. Unschuld.** *Medicine in China*. (Comparative Studies in Health Systems and Medical Care.) Berkeley/Los Angeles: University of California Press. Volume I: *A History of Ideas*. xi + 423 pp., figs., app., bibl., index. 1985. \$45. Volume II: *A History of Pharmaceutics*. xiii + 367 pp., illus., bibl., indexes. 1986. \$38.50. Volume III: *Nan-ching: The Classic of Difficult Issues*. viii + 760 pp., figs., apps., index. 1986. \$69.75.

These three diverse books make up the most substantial contribution to their subject from any scholar outside Asia. Paul Unschuld is the first to write the history of Chinese medicine in the way that the history of Western medicine has been written for some time. Instead of arraying primary sources in chronological order, setting out and validating the "achievements" of each, he identifies and explains intellectual and social changes in medicine as part of a changing China. He calls the reader's attention to a wealth of sources. The new questions he raises, and the case he makes for their cogency, place him in the front rank of European historians of Chinese medicine.

#### CONTENTS

Unschuld's first volume is not Anglo-American history of ideas but Ideengeschichte, "combining general cultural concerns, in particular the sociopolitical developments, with the more specialized field of medical thought." It is much less concerned with explicating the contemporary meaning of concepts than with detecting the ideology behind them. He begins in the eighteenth century B.C. with the first "rational preventive and therapeutic procedures," which turn out to be the offering of gifts to ancestors (p. 21). Out of early magical thought evolved "the medicine of systematic correspondence"—vin-yang, the Five Phases, and associated classical concepts that divide spatial or temporal configurations into sets of complementary, qualitatively distinct aspects. Through history, the ethical emphases of this "paradigm" reflected attempts to maintain a state orthodoxy underpinning social control (p. 5). Unschuld is convinced that because no ideology or medical sect could dominate its rivals, classical medicine, from the fourteenth century A.D. on, was "nothing more than a complex labyrinth, in which those thinkers seeking solutions to medical questions wandered aimlessly in all directions, lacking any orientation, and unable to find a feasible way out" (p. 197). The volume ends with a hundred pages of translated sources, from the first century B.C. to a 1980 newspaper.

The handsomely illustrated *History of Pharmaceutics* describes systematically about a hundred primary sources in the *pen-ts'ao* genre that give information about individual drugs, from earliest times to the pharmacopoeia of 1980. Some books are outlined chapter by chapter and section by section. Unschuld translates parts of prefaces that throw light on organization or motivation. Less often information is translated from the body of a book, notably descriptions of the same drugs from different treatises.

This book outlines the evolution of a "main tradition" that by the eleventh

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century was spawning bureaucratic artifacts so bulky, internally contradictory, and otherwise unfit for daily clinical use that later history was largely a losing struggle against these limitations. The introduction of Taoist and Buddhist elements and of the yin-yang and Five Phases concepts for analyzing body processes and drug action, and even Li Shih-chen's sixteenth-century attempt to expand and rationalize the tradition, were ignored by the reactionary seventeenth-century "Han school," which, as it returned to the most ancient classics, extirpated Neo-Confucian theoretical influences. The result, as in Chinese medicine generally, was moldering. The legal drug code of Republican China acknowledged traditional pharmaceutics merely as an outworn hindrance; only in the 1980 *Pharmacopoiea chinensis* of the People's Republic were traditional and modern drug ingredients given parity—while segregated in different volumes.

The third volume translates the *Nan ching* (The classic of difficult issues; first or second century A.D.) and selected notes by seventeen Chinese and Japanese commentators from the third century to 1969. Unschuld adds his own prolegomena and annotations. His is not the old-fashioned philologist's effort to sift from the opinions of early scholiasts the original meaning of the text. As a historian, he presents his predecessors as voices of their own times with their own points of view. Their notes are there to document long-term trends in understanding.

Until recently the Inner Canon of the Yellow Lord (*Huang ti nei ching*, probably first century B.C.) was considered the *fons et origo* of classical medicine. Unschuld is the first modern scholar to claim that the *Nan ching* is an even more important source. This is in part because older sources found by archaeologists since 1972 are forcing a consensus that the Inner Canon is not one book but a collection of texts. Some of these argue with others and some are in effect commentaries on others. The chapters of the Inner Canon, we now see, mark "transitory stages" in the evolution of theoretical medicine. Unschuld shows that the *Nan ching* created out of this hodgepodge a new and unified doctrine that greatly influenced the development of medicine.

# ASSUMPTIONS

The arguments in these three volumes are built on several assumptions set out in the first. These are meant to make possible an explanation of "therapeutic pluralism" and "changes over time which the 'medicine as cultural system' perspective cannot supply" (Vol. I, p. 12).

Faced with the challenge to uncover the connections between social phenomena and medical ideas, Unschuld makes these links short and direct. Every ideology—religious, economic, or sociopolitical—enforces behavioral norms "to be followed by all members of society in order to reach or maintain a state of peaceful coexistence." Ideologists strive not only "to reach each and every member of society" but "to adapt all aspects of knowledge or science to their central perception of harmony and crisis. Any knowledge which, in its consequences, may contradict this central perception and the behavioral norms derived from it, will be opposed and, if possible, eliminated." Thus Unschuld's evidence "suggested that social variables accounted significantly for the shape of the flexible elements of conceptualized systems of therapy" (Vol. I, pp. 10, 11, 9). "Dogmatists" shape medical norms directly. Some medical conceptions are merely influenced by "the logic of social existence. . . . The actual therapeutic value of specific ideas, that is, their efficacy with respect to illness, seems to be of only secondary significance. The basic validity of therapeutic concepts is primarily social." Unschuld disarms charges of reductionism by adding that "additional variables" may yet be found (Vol. I, pp. 12, 13).

Because their "socioeconomic facts and sociopolitical ideologies" differ, groups experience "different cultural realities resulting in cognitive differences in health care." These realities interpenetrate, since groups may tolerate each other's beliefs. A group is not a class or goal-oriented organization, but "a cohort of persons who experience similar or identical sociocultural realities," even if they live in different eras or parts of the world and are unaware of the similarity (Vol. I, pp. 13, 14).

Some of Unschuld's most striking theses depend on another bold assumption, namely, that in a given text anything that is not explicit is not implicit either. He makes a case that the *Nan ching*, although aware of the Inner Canon's practice of needling on one branch of the *ch'i* circulation to affect a disorder elsewhere, did not use it. He presents in testable form the hypothesis that the *ch'i* vessels discussed in sources prior to the Inner Canon did not imply a circulation throughout the body. This assumption is risky when applied to sources without attention to their purposes—for instance, when Unschuld deduces from the absence of acupuncture in the Inner Canon's predecessors that the practice did not exist in their time. But he exploits this assumption to raise worthwhile issues, and it is of small consequence that some of his answers need to be revised.

## GENERAL EVALUATION

Published within two years, these three volumes are only part of a large body of work by Unschuld. To evaluate them as attempts at definitive scholarship would miss the point of their contribution. They are reconnaissances, and Unschuld has done everything conceivable to help those ready to carry the exploration further. The critical evaluation that follows is meant as a reminder that these books will best serve those who test them as they read them.

Medicine in China is not for novices. Readers are expected to cope unaided with sentences such as "When one continually holds fast to the foundations of his origins and firmly supports the return of the true influences that constitute one's finest matter, then the triple burner will be fixed in its positions and the six robbers will lose their form" (Vol. II, p. 86). They are expected to identify ancient place-names without seeing modern equivalents, and to grasp the topics of Chinese and Japanese scholarly essays without being given translations of their titles. Anyone who needs help in understanding such phrases as "grain avoidance techniques" (Vol. I, p. 74), "the yin [month] is always set as the beginning of the year" (Vol. II, p. 38), and "metal is generated in ch'i [periods]" (Vol. III, p. 52) will not get very far.

On the other hand, the books provide some information that even neophytes will not need. The glossary of Chinese technical terms at the end of the *Nan ching* translation, for instance, is filled out with many everyday modern words, including those for "females," "singing," "white," and "year."

### CHOICE OF SOURCES

The first two volumes, despite their broad scope, cite a very small number of primary sources—forty-four medical and twenty nonmedical books in the first and thirty-eight books in the second—and a little of the most important scholarship. In the third, the author's claim for the paramount importance of the *Nan ching* ignores slightly later syntheses, differing in scope, content, and character, that also shaped classical thought. Two of these that explicitly wove together canonical ideas were the *Huang-ti chia-i ching* (A–B Canon, between 256 and 282) and the *Mo ching* (Pulse Canon, ca. 280). Unschuld notes in another connection that the *Shang han tsa ping lun* (Treatise on cold damage and miscella-

neous disorders; between 196 and 220) brought some of the Inner Canon's concepts to bear on drug therapy, but he does not recognize this as a fourth historic act of synthesis.

Unschuld's judgments about therapy are, with a few significant exceptions, built on the *pen-ts'ao* genre alone. He ignores the rich data on pharmaceutics in the much larger prescription literature. The information about and excerpts from the hundred pharmaceutical works in Volume II often come not from the books themselves but from standard Japanese reference works of 1819 and 1958. Not having read the originals, Unschuld is often unaware of what they have to say elsewhere about technique or context. Some of his other secondary sources are notoriously unreliable. A translation of a sixteenth-century source is reproduced without change from J. J. de Groot's *Religious System of China* (1892), which misquotes the Chinese text, misreads the author's name, and misses a main point of meaning (Vol. I, pp. 219–220).

The analyses of "socioeconomic and sociopolitical realities" are mostly not constructed afresh to meet the needs of this book, but come from university history textbooks of the late 1960s, supplemented by only a little recent scholarship. The distribution of secondary sources on medicine is very uneven: strongest in the work of a few first-rate Japanese scholars, sparing in citations of the best European and American publications on Chinese medicine, and largely oblivious of the most important scholarship published in China. For instance, Chung-hua i-shih tsa-chih \*\*E\*\*. the Chinese journal of medical history that has published more than seven hundred essays since 1947, is not cited once. This neglect leads the author to perpetuate old errors, and to give out-of-date bibliographical information for his primary sources.

#### HISTORY OF SCIENCE AND MEDICINE

The sweep of *Medicine in China*, from the eighteenth century B.C. to 1980, is unprecedented. Like most of the best current work, the book ignores the illusory boundary between social history and the history of ideas. Still, its methodology is problematic in several ways.

# Clinical Efficacy

Unschuld does not take up questions of clinical efficacy. And he is right, for how can it be measured in ancient circumstances, when even the value of traditional therapy in use today remains unknown? Caution is justified, in contrast with the tendency of many recent historians in China to assume, in the absence of hard and fast evidence to the contrary, that any classical therapy works.

But human therapeutic preferences do not remain an unknown quantity in these volumes. Unschuld explains almost everything. His explanations assume that the fortunes of therapeutic tendencies and schools depend on "social variables." Some readers may conclude—although the author does not go so far—that the various therapeutic systems were either a mass delusion of doctors unable to recognize their failures or were unrelated to actual health care. I doubt that one can avoid such reductionism without stressing that medicine was formed by the interplay between ideas, community values, and healing as experienced by therapists and patients. Unschuld offers instead a most curious metaphor: a "durable paradigmatic core" of explanation "formed by the different socioeconomic facts and sociopolitical ideologies," with a "soft coating" of specific medical knowledge (Vol. I, pp. 5, 13). The clinic does not enter his explanations. If it has a place in this candy-bar model, it can only be in the creamy milk-chocolate coating.

### Theory versus Empiricism

Unschuld is merely conventional when he divides the medical tradition into theory and practice. This convention is carried over from the history of Western medicine, in which a split between theory and practice from about 600 B.C. took nearly a millennium to overcome, and even then gave way to therapeutic nihilism. In China such a split never occurred. Physicians before modern times saw in the Inner Canon and other seminal works guiding principles that shape and are shaped by practice. In the past fifty years, as traditional medicine has claimed legitimation from the modern science that threatens it, these clinical doctrines have been reinterpreted as a distinct, autonomous body of theory comparable to that of Europe. But this new view is not of much use in making sense of the documents. For instance, Unschuld's discussions of arguments regarding which of the internal organs have "physiological priority" leave the reader curious about why sensible people should dither so over meaningless distinctions (Vol. I, p. 200). This is inevitable unless such arguments are related to the clinical circumstances to which they refer. The best present-day Chinese historians, not cited in the History of Ideas, do that with great skill.

Throughout Volumes I and II, Unschuld conveys his dissatisfaction with classical theories built on correspondences. He points out that they were never rigorous and that, as they became ever more elaborate, they could indicate almost any therapy that appealed to the physician.

Although the intellectual peregrinations of classical Chinese medical thinkers do not seem as aimless to me as they do to the author, I can only agree that yin-yang, Five Phases, and other central concepts were not defined objectively and did not lead to unique conclusions. In this respect they are not unlike the elements and humors of the European medical schools. At times the Chinese concepts nicely described complex somatic functions, but at other times their application was determined by associations of words, not of observed phenomena. Recognizing that this was so can lead to discovery rather than frustration. The secret lies in an old axiom of method: if the thinkers you are studying do not value what you expect any sensible person to value, but waste their time in a quest that leads them further and further from what you consider a sensible goal, your expectations are wrong.

In this instance, Unschuld's disappointment is rooted in his conviction that the purpose of medical concepts must be theoretical and that they therefore should be judged as inductive theories. He agrees with Manfred Porkert's oft-criticized assertion that correspondence "is a result of inductive reasoning" (Vol. I, p. 6). Many examples throughout this book suggest instead that correspondence concepts are based on a combination of deduction and clinical induction. It is precisely the freedom with which deduction is used that makes yin-yang and other concepts so protean. Unschuld considers this flexibility stultifying, but most of the authors of his sources found it quite satisfactory. Noting that Taiwanese practitioners today are still satisfied, Unschuld objects that "these theories, while suitable for providing a posteriori explanations, appear to lack the basis for developing objective criteria needed for predicting drug efficacy" (Vol. II, p. 127). But he does not show that either hindsight or objectivity was the end for which such "theories" were created.

It is all very well to be reminded that the ancient Chinese could not do what their European contemporaries could not do either. One hopes at the same time for an account of what physicians thought they were doing and why it made sense to them. Since they were no more stupid or perverse than Occidental historians of medicine, an alternative is to explore uses for schemes of corre-

spondences in which multiple meanings are a good rather than a bad thing. One possibility, which has not been studied because of modern preconceptions about the role of theory, is that yin-yang and other concepts were used essentially (and often arbitrarily) as mnemonics to impose order on programs of diagnosis combined with therapy—that these programs were formed and reformed by the interplay of reasoning, tradition, and clinical experience. That is what the primary sources say is the case. But Unschuld does not read them that way.

Unschuld's argument that the pharmaceutical literature of the first millennium A.D. is free of theoretical underpinnings ignores much evidence to the contrary. Two cases in point are the assertion in the preface to the oldest surviving *pents'ao* book, the *Shen-nung pen-ts'ao*, that drugs are combined in prescriptions according to their yin-yang relationships (Vol. II, p. 19), and discussions in early compendia of prescriptions that apply yin-yang and the Five Phases to drug therapy.

Unschuld is also forced by his thesis to reject the traditional interpretation of *ch'i* and *wei* as indications of yin-yang and Five Phases function, abstracted from sensuous qualities. He characteristically sees this as an either-or question, so that the empirical origin of these classifications invalidates the historical consensus that they ceased very early to be merely experiential. He translates the two terms as "thermo-influence" and "taste" and considers them empirical indications of, respectively, the heating or cooling effect of drugs on the stomach and their taste. This is not an interpretation that can be maintained consistently. Sometimes he weakens his position, as when he says merely that no theoretical links were explicit (Vol. II, pp. 81–82).

Near the end of his history of ideas Unschuld compromises his earlier conviction. First we are informed that "only a few of the drugs possessed a distinct flavor" and that empirically determining "thermo-influence" (i.e., ch'i) is an "even more formidable task." Then we are told that the authors of the last great period of pharmaceutics failed "to create a concrete pharmacology that represented anything more than an interpretation of known drug effects derived after the fact on the basis of a universally accepted conceptual framework" (Vol. I, pp. 187–188); this framework can be no other than systematic correspondences. This admission does not keep Unschuld from referring later in the same volume to "practical drug therapy" as though such a system could subsist without tacit notions of correspondence. Nor do his doubts recur in his history of pharmaceutics, a central thesis of which is that the first millennium of thought on materia medica was not theory-laden.

### SOCIAL SCIENCE

Unschuld gives social causation an overdue emphasis. But these books do not reflect an interest in current anthropology or sociology. The bibliographies cite about half a dozen social scientists, mostly ethnologists, and not a single leading theorist since Sir J. G. Frazer; nor do the arguments suggest an intellectual debt to any. The result is a rough-and-ready approach to analysis reminiscent of a long-past era.

For example, Unschuld reconstructs the Shang "medical system" from divinations about royal ailments. Records mention a few disease concepts, among them "the ancestor's curse," according to the 1951 source on which Volume I mainly relies for information about this fast-changing field. Why consider such curses a disease rather than, say, a cause of diseases? The author does not say.

What sociopolitical ideology forms this medical system? "A constant fear of one's fellow man, as well as a deep distrust of neighbors and even relatives."

From what evidence does this striking analysis of the Shang psyche emerge? From "ethnological analogy" to today's traditional agricultural societies, which because of "true zero growth" are doomed to mistrust and envy. The Shang needed nothing more than "social therapy," since the object of medicine was merely to harmonize "two large groups of society, the living and the deceased." The king was thus "the sole practitioner of ancestor therapy," and conceivably its only beneficiary (Vol. I, pp. 17–26). "Ethnological analogy" might be better applied to suggest that ordinary people in the second millennium experienced bodily suffering differently from the royal family, and perhaps even worked out distinct ways of thinking about it.

### SINOLOGY

Many of Unschuld's interpretations of Chinese history are percipient and well supported, especially those that bear on the Han period and the early twentieth century. But others seem to transform his assumptions into conclusions. Unschuld uses words such as *probably* and *may have* with due generosity. But his experiments are vitiated by the practice, conventional a generation ago but now being abandoned, of basing many of his analyses of Chinese thought on disembodied "isms," especially Confucianism, Taoism, and Buddhism, rather than on identifiable collectivities of thinkers.

Unschuld often uses the word *Confucianism* in remarkably vague ways. To account for "the Confucian aversion to drug therapy," he asserts that belief in drugs "releases man from a perceived necessity to follow a specific life-style as the basis of health" so that "the social order is no longer guaranteed" (Vol. I, p. 114). I find no sign of such an aversion, even in the writings of the few physicians such as Chu Chen-heng (1281–1358) to whom, as initiates, the Confucian label can be rigorously applied.

The explanations of ideology depend on views of Confucianism and Taoism that Joseph Needham pressed in the 1950s but that few in China, Japan, or the West have adopted. Unschuld depicts Confucianism as "oriented completely around the organization of earthly social life" (Vol. I, p. 65). It advocated the classification of each member of society into a rigid social structure. It aimed to maintain this hierarchy by enforcing appropriate attitudes and codes of behavior to limit individuality and freedom. Neo-Confucianism is the same coercive system, provided with a cosmology and a metaphysics to compete with those of Buddhism and Taoism.

For decades a large scholarly industry has been documenting the diversity of Confucian movements, the quest of some for freedom and the opposition of some to conventional norms. Unschuld mentions this diversity with respect to the Ming period, but he calls the major intellectual shift of the seventeenth and early eighteenth centuries a conservative movement. He makes it responsible for "a final moratorium on the change and expansion of ancient theories and paradigms—a moratorium that was not observed ubiquitously but that appears to have been effective enough to reverse the former Chinese lead in knowledge and technology" (Vol. I, pp. 208–210; Vol. III, p. 45). This is a novel solution to the "Scientific Revolution problem," one very much at odds with the best research of recent years.

As for Taoism, Unschuld describes it as partly "a churchlike organization" that demands conformity in return for collective defense against demons. The data on which this interpretation is built come largely from a 1954 article by Werner Eichhorn. It was limited by that scholar's lack of access to the Taoist



Figure 1. Production of salt from sea water. From Ch'ung hsiu Cheng ho ching shih cheng lei pei yung pen-ts'ao, the materia medica of 1249; also reproduced in Unschuld, Medicine in China (p. 268).

sources on which the rich discoveries of the last couple of decades, mostly ignored in this book, depend.

Following Needham, Unschuld depicts religious Taoism as a locus of scientific research. "For more than a millennium, its followers had been occupied with the detailed analysis and observation of natural laws; many of the insights that now proved useful [in the Sung] were derived from the discoveries and preliminary work of Taoist researchers" (Vol. I, p. 163). No Taoist text about the activities of initiates suggests an intent to discover "natural laws" in any accepted sense of the term, or gives detailed observation and analysis a place on the initiates' agenda. Taoist movements were oriented toward religious, not cognitive, goals. Despite the impression given here, only a tiny minority of important scientific and technological figures were members of any Taoist organization. The overwhelming majority were "Confucian" civil servants, or strove to be.

In the discussion of Buddhism, ideological norms and technological choices are confused. "In contrast to numerous other [Chinese] world views that supported a specific medical system because it manifested the same sociopolitical values proclaimed for the social sphere, the Buddhists were completely unconcerned about which medical practices relieved their physical suffering. Success—the release from suffering—was the decisive criterion and not, as in other systems, the specific methods that led to this success" (Vol. I, p. 153). But if we look at the enormous prescription literature by non-Buddhist authors, we find few that oppose the use of every available therapy.

## TRANSLATION AND ROMANIZATION

Readers of sinological reviews are aware that any expert can correct an occasional phrase or sentence of any other expert. With that in mind, I can only say

that Unschuld's translations, and the philology that underlies them, at their best are very good, despite the difficulty and frequent disarray of sources and the additional hindrance of translation via German to English. But as in Unschuld's previous publications, his translation in all three volumes is very uneven. Some translations pile up errors in a single paragraph (as in Vol. II, pp. 71, 172, and 174) and even ignore sentences of the original (e.g., on pp. 71 and 73). Linguistic errors affect interpretations, as when *Ch'i-Huang-chia* & , a late term for anyone formally educated in medicine, becomes "the Ch'i-Huang school" (Vol. II, p. 174).

To evaluate the book-length translation of the *Nan ching*, I chose at random two of the eighty-one problems, numbers 8 and 69 (Vol. III, pp. 130–139, 583–588). I compared the Chinese text copied into Volume III with its original and evaluated translations of the *Nan ching* text and eight of the commentaries. I found in both sections that the text is inaccurately transcribed. Bad guesses make the English meaningless in several places (e.g., "remove [the illness]" instead of "select [for treatment]" in no. 69). The translation is sometimes so literal that it is misleading (e.g., yu shih li hu 有是理步, translated "Is there such a principle?" on page 135, is actually a familiar way of asking rhetorically "Does this make sense?"). Such problems occur not only in classical but in modern Chinese texts (e.g., in the commentary published in 1961 in Shanghai, cited by Unschuld as "Nanjing, 1962," in Vol. III, p. 586).

Unschuld's translations of technical terms disregard convention, often but not always for the better. He claims that in the Inner Canon the two basic groups of internal organs were named tsang and fu and fu and "depots" and "palaces," to represent the Former Han era's "transformed state economy." But fu did not come to mean "palace" until the Later Han period; before that time tsang and fu both meant "storage facility." He argues that the paired concepts of ying ch'i  $\frac{1}{2}$  and wei ch'i  $\frac{1}{2}$  a must have originated in "demonic medicine and the political reality of the feudal period," when the vulnerable human body had to be given "guards' (wei) and 'army camps' (ying) to deal with intruders." But this sense of ying is also later than his source, as any Chinese reader before modern times would have known (Vol. I, pp. 67, 81). Early commentaries give ying two meanings, "to construct" and "to circulate," both pertinent.

Other English equivalents for words of medical art are less satisfactory than the usual scholarly translations. "Hole" for hsueh , literally "pit" or "cave," usually "locus or point for acupuncture or moxibustion," leads the reader to expect a physical opening from which body contents can spontaneously leak. "Soil" for  $t'u \pm$ , one of the Five Phases, carries connotations of impurity that the generally accepted "Earth" does not.

Unschuld chides "some Western (and Asian) authors" for customarily translating *ch'i* as "energy." But in certain contexts "energy" is as good a translation as any. So long as a common, qualitative sense (*Oxford English Dictionary*, defs. 1–5) is specified, it does not signal "a basic misconception." Efforts to find a

<sup>&</sup>lt;sup>1</sup> Volumes I and II are partly based on translations by Frank G. and Wahltraut Lehmann of Unschuld, *Medizin in China* (Munich: C. H. Beck, 1980), and Unschuld, *Pen-ts'ao: 2000 Jahre traditionelle pharmazeutische Literatur Chinas* (Munich: Heinz Moos, 1973).

single English equivalent for *ch'i*—air, breath, vapor, spirit, material force, energy, matter-energy, and many others have been tried—have inevitably added to the confusion. Many historians of science refuse to translate *ch'i*. Unschuld instead has struck out in a new direction. He substitutes "finest matter influence' or simply 'influence,' with a substance or matter connotation in mind," without explaining what that last phrase may mean (Vol. I, p. 72).

I find that more passages cited in the book are reduced to nonsense when *ch'i* is translated "influence" than when Englished as "vitality" or "energy." Why insist on "men whose finest influences are depleted and others whose finest influences are replete" (Vol. II, p. 95), when the text is just saying that some are run down and others full of vim? Why say that "superfluous remaining portions" of "external influences" are eliminated from the body (Vol. I, pp. 77–78)? How can feces be a portion of influence? What is the reader supposed to understand by "the appearance of the [influences in the] vessels is in a state of normal balance" (Vol. III, p. 130, Unschuld's brackets)? The physician is not looking at influences, but feeling the circulatory *ch'i* pulsating at the wrist.

Mistakes in romanizing Chinese words are frequent. To mention only errors in names of famous medical authors, we find Ch'a Shen-hsing for Cha 生 Shen-hsing (Vol. II, p. 166); Ch'en Wu-che for Ch'en Wu-tse 擇 (or Wu-chai) (Vol. II, p. 109); Ch'eng Wu-i for Ch'eng Wu-chi ਟ (*ibid.*); Ku Te-tao for Chia 費 Te-tao (Vol. I, p. 395); Ku Wei-ch'eng for Chia Wei-ch'eng (Vol. III, p. 17); Li Chungtse for Li Chung-tzu 梓 (Vol. I, p. 202); Li T'ing for Li Ch'an 梃 (Vol. I, p. 217); and Liu Wen-chu for Liu Wen-shu 将 (Vol. I, p. 172). Diacritics in Japanese transcription are sometimes random; Okanishi Tameto's important *Chūgoku isho honzō kō* is cited in Volume II as *Chugoku Isho Honzō-ko* (p. 310) and in Volume III as *Chugoku Isho Honzo-ko* (p. 56).

The translation from German is wooden and the editing slovenly. There are patches in which few sentences are in normal English, for instance the long quotation on pages 78–80 of Volume II. This will give the flavor: "In days worth thousands of gold each, a praiseworthy examplary period of rule has raised the virtue of the appreciation of life." As specimens of English usage we are offered "a female's first menstruation towel," "eye washings" for "eyewash," and "sea algae" for "kelp." A "not particularly extensive" book contains "37 general treatises" and "224 drug monographs" (Vol. II, pp. 15, 152, 204, 108). Standard translations are also freely ignored. We find "Library of parliament" for Tokyo's Diet Library; "Kanton" for Canton, Kuang-chou, or Guangzhou; and "moxabustion" for moxibustion.

#### CONCLUSION

These three volumes are remarkable for the originality of the questions that they raise and the breadth of disciplines that they bring to bear on them. Their usefulness as introductory reading is severely limited by Unschuld's intent to answer the questions he has raised on the basis of patchy research and hurried thinking. *Medicine in China* does not draw on the current state of the various arts that it applies, and there is a great deal of unevenness in the workmanship. Nevertheless, scholars prepared to approach these books critically will find them valuable tools.

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