

# Fluid sinology

Johnathan Spence

Science and Civilisation in China: Vol.5, Part 5. Spagyric Discovery and  
Invention: Physiological Alchemy.

By Joseph Needham and Lu Gwei-Djen.

Cambridge University Press: 1983. Pp.572. £49.50, \$99.

THERE can be few things harder to study than the alchemical traditions of a particular society. Couched in evasive and ambiguous language, dealing by definition with complex transformations of matter and of mind, roving from precise laboratory experimentation to the wildest flights of cosmic fantasy, conducted often by marginal figures in the terms of conventional social mores, alchemical writings are at once mines of information and minefields for the unwary. Though thorough sifting of European alchemical materials for their scientific content was undertaken decades ago, Chinese alchemical writing proved — not surprisingly — all the more obdurate. Now with the appearance of the fifth part of volume 5 of *Science and Civilisation in China* Joseph Needham and Lu Gwei-Djen bring to an end their lengthy preliminary exploration of Chinese alchemical writing over the last two thousand years.

The previous three parts of volume 5 (on which Professor Nathan Sivin was a key collaborator) dealt with the tradition of what the Chinese called *wai-tan* experimentation, which Needham translates as "inorganic laboratory alchemy", in other words the making of elixirs of various types by the transformation of minerals (especially mercury), or the transformation of 'base metals' into silver or gold. In those remarkable volumes Needham explored the relationship between this *wai-tan* tradition and the development of experimental science in China. Now in the present volume he gives his attention to the inner or *nei-tan* branch of the Chinese tradition, which he translates generally as "physiological alchemy". Needham defines this as being the making of macrobiogens from living body juices, a process to which he gives the neologism "enchymoma". The purpose of making the enchymoma is to restore and preserve youth in the most fundamental of ways, by regenerating the tissue, returning to the pure state of infancy before decay. Needham refers to this deep "returning" with another neologism as being "anablastemic" — thus the phrase "anablastemic enchymoma" appears frequently in his key translations of Chinese passages as the topic of analysis by the Taoist practitioners whom, he believes, brought *nei-tan* alchemy to its greatest perfection.

Although some of the texts which Needham himself cites seem to incorporate in their descriptions of *nei-tan* such practices as the use of certain chemical elixirs, the development of health through solar and lunar rays, or esoteric diets served from unusual plants, Needham does not follow them. Instead he sees the pure *nei-tan* tradition as incorporating seven specific techniques, alone or in combination: bodily hygiene; respiration; fluid circulation; gymnastics; the preserving of



A *nei-tan* adept

internal secretions (especially saliva); certain sexual activities; and the state of trance. In the important and fascinating chapter four of the volume he explores these seven areas, offering an astounding range of textual examples, and examining them with thoroughness and — at times — with disarming wit. Thus he gravely declares that he feels he must let the "Chinese call a spade a spade, even if a jade one" (p.185) in lighthearted reference to the Chinese penchant for referring to the male sexual organ as the "jade stalk" ("jade flute" is often preferred in Chinese fiction and poetry); and he refers to the Taoist practice of trying to channel the male semen to the brain during intercourse with the wondrous phrase; *coitus thesauratus*.

Needham leads us into his analysis by way of a protracted examination of Jung's use of Chinese examples in the development of the theory of archetypes, a use that Needham rejects as ill-advised and

fundamentally inaccurate; and he accompanies it by reference to the traditions of European alchemy and to the Indian traditions of yoga, including the Hathayoga practices. In a final coda he discusses, as component to the *nei-tan* tradition, the uses of human urine or the placenta in Chinese medicine, which he interprets to show that the Chinese anticipated the Western development of urinary steroids and protein hormones.

The response of a historian without any extensive scientific training (such as myself) to this mass of data and argument is partly one of delight and awe — delight at having so many hitherto unknown texts brought to his attention, accompanied by the key terms in Chinese to help one check the accuracy of Needham's fluent but bold translations; awe at the hundreds of speculations Needham induces concerning the role of science within Chinese society, and those who practiced it. In part, however, the response is also one of scepticism and reserved judgement, as is proper with a work of this range and didactic purpose.

The reader has to ask himself, again and again, whether Needham is not over-translating, or at least giving the appearance of greater scientific specificity to the Chinese text than the Chinese text itself justifies. This argument will only be settled after decades of discussions between those qualified in both science and sinology, still a tiny number, but even in this present volume, and as an outsider, one can point to the fact that in discussing the beginnings of the *nei-tan* tradition Needham himself mentions that the text is a sixth century Buddhist one and the term appears as a "literary trope" (p.140), and at many other times he refers to the problems that arise from the cloudings of the *nei-tan* tradition by "symbolic language" or the use of

"parable and metaphor" (i.e., pp.211 and 219). Brilliantly ingenious though Needham is in explaining how certain types of "scientific" illustrations that one could have thought lay in the *wai-tan* realm are in fact *nei-tan*, one can never be sure that much of the language may not be employed in a literary and figurative way.

Needham suggests that from the T'ang dynasty onward "physiological alchemy" developed apace because it was so much "cleaner" than "...messaging about' with minerals, herbs and metals". (p.209). The judgment is tongue-in-cheek in tone, though seriously meant; one might add that just as *nei-tan* was a swerving away from *wai-tan* practices, so might a later generation have had excellent reasons for rejecting the *nei-tan* as well. □

Johnathan Spence is Chairman of the Department of History at Yale University. His book *The Memory Palace of Matteo Ricci (Viking)*, describing a Jesuit mission to China in 1783, is to be published shortly.