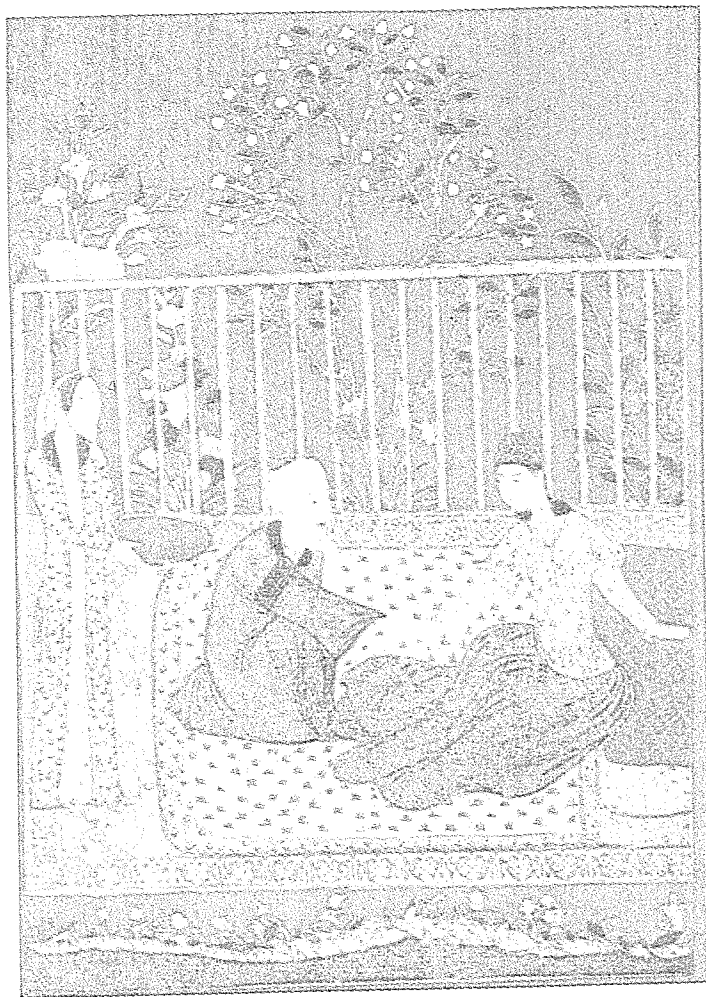


THE CANON OF MEDICINE
OF AVICENNA

AMS PRESS
NEW YORK



Reproduced by permission of the Trustees of the British Museum.

A physician and his patient.
From an early Persian MS. (Add. 27,261, f. 371b)

"A great sage—a reader of ancient books, Greek, Persian, Latin, Arabian, and Syriac; and skilled in medicine and astronomy, both with respect to their scientific principles and the rules of their practical applications; he was experienced in all that healeth and hurteth the body; conversant with the virtues of every plant, dried and fresh, the baneful and the useful. He was versed in the wisdom of the philosophers, and had compassed the whole range of medical science and other branches of the knowledge-tree."

(4th Night—Burton; Lane.)

A TREATISE ON
THE CANON OF MEDICINE
OF
AVICENNA

INCORPORATING A TRANSLATION
OF THE FIRST BOOK

BY

O. Cameron Gruner, M.D. (Lond.)



HACETERE UNIVERSITESI
LONDINENSIS

LONDON
LUZAC & CO.
46 GREAT RUSSELL STREET, W.C.1

1930

Library of Congress Cataloging in Publication Data

Avicenna, 980-1037.

A treatise on the Canon of medicine of Avicenna.

Original work has title: al-Qanun fi al-tibb.

Bibliography: p.

1. Medicine, Arabic. I. Gruner, Oskar Cameron, tr.

II. Title. [DNLM: WZ290 A957q bk. 1 1930Fa]
R128.3.A9732 1973 610 73-12409

ISBN: 0-404-11231-5

WZ

290

Avi

1973

79462

Reprinted from the edition of 1930, London
First AMS edition published in 1973
Manufactured in the United States of America

AMS PRESS INC.
NEW YORK, N. Y. 10003

PREFACE

THE purpose of the present treatise is two-fold :

(1) To furnish a translation of the First Book of the Canon of Medicine of Avicenna. The section on Anatomy has been omitted in favour of the first half of the *De viribus cordis*. This assists in the second object of this treatise. Distinctively large type is used for the translation.

(2) To present a study of its mystical philosophy (*tasawwuf*), especially showing where this and modern biological knowledge are reciprocally illuminative.

The words of the late Prof. E. G. Browne may be quoted here : " Even if we rate the originality of Arabian medicine at the lowest, I venture to think that it will deserve more careful and systematic study."

Furthermore, the Thomistic philosophy of human nature is specially discussed, and its applicability to the Medicine of the future is definitely enunciated.

A grateful acknowledgment is made to the School of Oriental Studies, London Institution (University of London) for signal help in the acquisition of the Arabic, Persian, and Chinese essential to the purposes of the treatise.

O. CAMERON GRUNER.

London, December, 1929.

CONTENTS

A. THE TREATISE

	PAGE
Preliminary Thesis: The Canon of Medicine in relation to modern thought - - - - -	I
I. The intellectual culture contemporary with Avicenna (§1-6) - - - - -	2
(a) In the central Saracen empire. (b) In the western Saracen empire. (c) Among the Chinese.	
II. The knowledge presented by the Canon, as compared with that of to-day (§ 7-18) - - - - -	5
(a) The Canon is a précis. (b) The word "Canon." (c) The word "knowledge." (d) Mystical insight.	
III. The basic difference between the Canon and Modern Medicine (§ 19-22) - - - - -	8
IV. Special differences between the Canon and Modern Medicine (§ 23-37) - - - - -	10
(a) Conceptions known to Avicenna; not now recognised. (b) Conceptions known to modern medicine, but not to Avicenna. (c) Knowledge common to Avicenna and modern medicine.	
V. Of interest to the Scholar (§ 38) - - - - -	18
VI. Brief survey of the Intention of this treatise (§ 40-44)	19
The doctrine of Matter and Form (§ 55-108) - - - - -	39
Death and Destiny (§ 111-115) - - - - -	72
The Humours (§ 116, 117) - - - - -	76
The basis of Anatomy in the Canon (§ 118-127) - - - - -	103
The doctrine of the Breath (§ 136-150) - - - - -	125
Scholastic psychology (§ 155-165) - - - - -	139, 143
Coloured Plate representing the corporeal and psychical Faculties <i>facing p.</i>	143
The Bath-house (§ 198, 199) - - - - -	232
Expiative causes of Disease (§ 201) - - - - -	255
Chinese sphygmology (§ 208-224, 234, 235)- - - - -	285
Table of Terminology relative to the Pulse (Latin, Arabic, Chinese) <i>facing p.</i>	289
The doctrine of the pulse (§ 218-220, 225-230, 231-233) - - - - -	293-308
Urinalysis, ancient versus modern (§ 238-239) - - - - -	349
Dietetics (§ 195, 248-253) - - - - -	219, 414
Ornamental Plate, with special portraits - - - - - <i>facing p.</i>	553
Concluding Survey (§ 267-300) - - - - -	553
Plate: Rembrandt, "The Raising of Jairus' daughter" - <i>facing p.</i>	567
Appendix: I. Progress; II. Facts—Knowledge—Truth - - - - -	569
III. The Materia Medica of the Canon - - - - -	571
References - - - - -	573

CONTENTS

vii

B. THE TRANSLATION	PAGE
Introductory words (1-5)	22

BOOK I

PART I

THESIS I. DEFINITION AND SCOPE OF MEDICINE (6-18)	25
THESIS II. COSMOLOGY (19-25)	34
THESIS III. THE TEMPERAMENTS (26-66)	57
THESIS IV. THE HUMOURS (67-113)	76
THESIS V. ANATOMY (114-135)	93
THESIS VI. GENERAL PHYSIOLOGY (136-173)	107
PSYCHOLOGY (174-183)	135

PART II

DISORDERS OF HEALTH

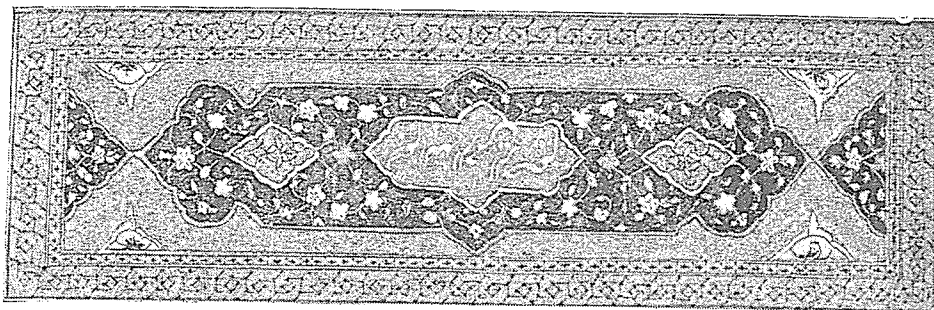
THESIS I. DEFINITION OF TERMS (191-230)	156
THESIS II. THE CAUSES OF DISEASE. ETIOLOGY (231-451)	173
<i>A.</i> —Unavoidable Causes	175
(i) Extracorporeal.	
The influence of seasonal changes on the body	183
Climate : (<i>a</i>) Latitude, (<i>b</i>) Altitude, (<i>c</i>) Mountains,	
(<i>d</i>) Seas, (<i>e</i>) Winds, (<i>f</i>) Soil, (<i>g</i>) Marshes	
(305-332)	195
(ii) Corporeal. Causes unavoidable because physio-	
logical.	210
Dietetics (347-360)	214
The various kinds of drinking water (361-392)	221
<i>B.</i> —Facultative Causes of Disease	230
Balneology (400-414)	232
THESIS III. THE EVIDENCES OF DISEASE.	
Semeiology (452-677)	257
Sphygmology (515-602)	283
Urinology (603-674)	323
The Alvine Discharge (675-677)	353

PART III

THE PRESERVATION OF HEALTH (678-904)	357
Dietetics (759-814, 855-859)	394, 432

PART IV

THE TREATMENT OF DISEASE (905-1085)	460
BOOKS II-V. BRIEF LIST OF CONTENTS	532
Translation of " De Viribus Cordis " (168-173, 1086-1130)	123, 534
INDEX	579



PRELIMINARY THESIS

THE RELATION BETWEEN THE CANON OF MEDICINE OF AVICENNA AND MODERN THOUGHT



CONSIDERATIONS are not wanting which entitle the Canon of Medicine of Avicenna to an esteemed position in modern thought. In the first place, there is the outstanding intellectual culture of the Saracen Empire during the period of history to which Avicenna belongs. Secondly, in the case of much of his teaching, it may be said that the difference from ours is largely only that his speech is alien, and is apt to be misunderstood. In these days, the great complexity of the language with which we express our scientific thought corresponds with the intricacy of the instruments wherewith facts are elicited. Thirdly, many of the advances of modern times offer the solutions to the very theorems and propositions of former times. Finally, ideas are to be found in his work which provide suggestions for useful research in the future.

§ 1. The importance of idea over material achievement is not to be forgotten. The achievements of any age are subject to decay with the lapse of centuries, but the ideas which gave rise to them remain living through all cycles. Therefore to propose a real place for Avicenna in modern thought is not to propose a return, as it were, to old architecture, or the costumes of long ago. It is rather to render accessible to-day the picture which he painted, and so enable it to renew its still vital message. It is to play over again the music which he expressed, and enable perhaps one or two to rejoice in it. And this without obscuring the issue by discussing nationality, or schools of thought, or evolution of ideas, or technical methods.

If it appear to some a fault that the master appears to have used passages from other works, and this without full acknowledgment, it should be remembered that after all a painter may use pigments which someone else has manufactured, and is allowed even to employ other persons (usually pupils) to execute certain portions of his picture. Indeed, even after his decease, it is not improper that some may have been entrusted with the delicate task of touching up faded portions of the canvas which he bequeathed.

The place for Avicenna in modern thought is gained when it is agreed that he shall be viewed as one who entered this world entrusted with a mission independently to express for that age, by means of those various tools which he then found in it, the wisdom which is unchanging and impersonal. So also there is the need to-day that this same wisdom should be re-expressed for this age by means of the new data which lie to our hands.

I

THE INTELLECTUAL CULTURE CONTEMPORARY
WITH AVICENNA

§ 2. (a) *Intellectual Culture in the Central Saracen Empire.* Carra de Vaux, in his monograph "Avicenne,"¹³ furnishes particularly striking comments, as follows (p. 156):—

"The more we investigate the enormous literary output of the Arabian empire, and come into intimate appreciation of the master minds of the middle epoch and of antiquity, the more we become aware of their sincerity.

"We should, we think, offer our salutations to these great personalities of that day, whose works and lives were equally encyclopædic. . . .

"Our own times do not show more worthy figures; we complacently assume that there are no more worthy than ourselves because science, so greatly developed to-day, cannot be held all within one single head. That may be. But it is only right to admit that science has less unity and harmony to-day than formerly it had; that it is less pure than it was under the grand peripatetic discipline. Our attitude towards that is neither humble nor sincere.

"In these days we are concerned too much to have our name blazoned forth than to grasp a great extent of science. We are more anxious to uphold the profession than to have a passion for study; we seek titles and reputation rather than real knowledge; and in order to appear more specialistic than our ancestors we expose ourselves to the judgment of posterity as having smaller minds, and fettered souls."

§ 3. (b) As to the state of civilization in *the western Saracen empire*, we have the very illuminating description of Ameer Ali in his "The Spirit of Islam"² (p. 392):—

"The Arabs covered the countries where they settled with networks of canals. To Spain they gave the system of irrigation by flood-gates, wheels and pumps. Whole tracts of land which now lie waste and barren were covered with olive groves, and the environs of Seville alone, under Moslem rule, contained several thousand oil-factories. They introduced the staple products, rice, sugar, cotton, and nearly all the fine garden and orchard fruits, together with many less important plants, like ginger, saffron, myrrh, etc. They opened up the mines of copper, sulphur, mercury, and iron. They established the culture of silk, the manufacture of paper and other

textile fabrics ; of porcelain, earthenware, iron, steel, leather. The tapestries of Cordova, the woollen stuffs of Myrcia, the silks of Granada, Almeria, and Seville, the steel and gold work of Toledo, the paper of Salibah, were sought all over the world. The ports of Malaga, Carthage, Barcelona and Cadiz were vast commercial emporia for export and import. In the days of their prosperity, the Spanish Arabs maintained a merchant navy of more than a thousand ships. They had factories and representatives on the Danube. With Constantinople they maintained a great trade which ramified from the Black Sea, and the eastern shores of the Mediterranean, into the interior of Asia, and reached the ports of India and China, and extended along the African coast as far as Madagascar.

“ In the midst of the tenth century, when Europe was about in the same condition that Caffraria is now, enlightened Moors, like Abul Cassem, were writing treatises on the principles of trade and commerce. In order to supply an incentive to commercial enterprise, and to further the impulse to travel, geographical registers, gazetteers, and itineraries were published under the authority of Government, containing minute descriptions of the places to which they related, with particulars of the routes and other necessary matters. Travellers like Ibn Batuta visited foreign lands in quest of information, and wrote voluminous works on the people of those countries, on their fauna and flora, their mineral products, their climate and physical features, with astonishing perspicacity and keenness of observation.

“ The love of learning and arts was by no means confined to one sex. The culture and education of the women proceeded on parallel lines with that of the men, and women were as keen in the pursuit of literature and as devoted to science as men. They had their own colleges (for instance, at Cairo, established in 684 A.M. by the daughter of the Mameluke Sultan Malik Taher); they studied medicine and jurisprudence, lectured on rhetoric, ethics, and *belles-lettres* and participated with the stronger sex in the glories of a splendid civilization. The wives and daughters of magnates and sovereigns spent their substance in founding colleges and endowing universities, in establishing hospitals for the sick, refuges for the homeless, the orphan and the widow.”

§ 4. (c) Cordova, the most celebrated western university of the Empire at the time of Avicenna.—This is well known as an instance of the high degree of culture of the day. Ameer Ali,² speaks of “ that wonderful kingdom of Cordova, which was the marvel of the middle ages, and which when all Europe was plunged in barbaric ignorance and strife alone held the torch of learning and civilization bright and shining before the western world.” The greatness of the city is indicated by its population, which is given by Haeser²⁶ (i. 662) as 300,000, and by Campbell¹² (p. 57) as one million ; and by the library of “ about 200,000 ” volumes. To see the city to-day, traversed as it can be from wall to wall, within half an hour on foot, and to read of an extent of “ 24 miles one way, and six in the other ” (Ameer Ali¹, p. 517) shows that the word “ kingdom ” conveys a truer idea of its greatness. To read of “ innumer-

able libraries, 3,800 mosques, 60,000 palaces and mansions, 200,000 houses inhabited by the common people, 700 baths, 80,000 shops, besides hostels and serais " is to wonder how so much can have come to be now represented by so little.* Nevertheless, the " grand mosque " alone, which is still at any rate externally intact (and interiorly is still surely one of the wonders of the world despite its mutilation) stands sponsor for the rest; and no doubt many of the existing imposing buildings—now devoted to very different uses—stand for the palaces and mansions. As to the literary treasures, these have been traced at least in part from Spain to Fez, as shown by Horne³³ (p. 32, 61), with the *Roud El Qartas* as his authority; and he then points to years of pilfering from the library of the great mosque of El Karouiyan at Fez, as having scattered these works for ever out of ken.

§ 5. A study of the street names, and even the place names and current dialect in " Moorish Spain " to-day also confirms the story of past greatness. But the mystical knowledge displayed in the dispositions of the decorative designs and their poetic inscriptions on the walls of the Alhambra halls, state-rooms, and private apartments can leave no doubt of unsurpassed artistic power, where every sense-impression was deliberately drawn on. Lights and shadows, and colours changing with the hours of the day; musical effects of simultaneous diversity of disposition of flowing water; perfumes; courting of the prevailing breezes; interior architectural form; and furnishings, animate and manufactured—all these were combined for the achievement of a perfect representation of (divine, over and above human) Beauty.

§ 6. (d) *Among the Chinese.* The bearing of Chinese philosophical thought on the subject of Avicenna lies in the fact that we here meet with a notable example of intimacy of relation between world-conception and Medicine. The writings which are so carefully studied to-day by so many sinologists were extant at the time of Avicenna, and are still held in the highest esteem by Chinese thinkers. The modern Chinese philosopher is supposed to say to the Westerner (Somerset Maugham⁵⁴): " What is the reason for which you deem yourselves our betters? Have you excelled us in arts or letters? Have our thinkers been less profound than yours? Has our civilization been less elaborate, less complicated, less refined than yours? Why, when you lived in caves and clothed yourselves with skins, we were a cultured people. . . ." The attitude towards western learning so displayed may be blamed by many, but is certainly praised by those who have studied the philosophy most deeply. As long ago as 1876 we read conclusive evidence (by Sir Henry Howarth³⁵) that much of our vaunted civilization actually came from that ancient race. If some students discuss their philosophy with a certain cynicism (Forke²³), others (Bruce¹¹, Wilhelm¹⁰¹) see into the justice of their conceptions. As Carus¹⁵ remarks: " We need not be blind to the many errors and absurdities

* " Every dwelling-place, even if it has been blessed ever so long, will one day become a prey."—(Old saying quoted by Ameer Ali,¹ p. 125.)

of the ancient occultism to understand and grant the truth that underlies its system." These words are exactly applicable to the Canon of Medicine of Avicenna.

It should be added that errors and absurdities are apt to be ascribed to ancient authors which really arose from misunderstandings and ignorance on the part even of contemporary pupils. The subsequent generations perpetuated the errors, and even in these days the attempt to represent the real meaning of ancient texts by translations exposes one to unexpected extraordinary pitfalls. Our idiom is so diverse from the technical Chinese.

II

THE NATURE OF THE KNOWLEDGE PRESENTED
BY THE CANON

§ 7. (a) *The Canon is a précis*, and not a sum-total of Avicenna's knowledge. Numerous passages occur in the Canon which show that this is the case, that it is a series of notes or skeleton outlines of thought not too lengthy to be memorized by his students (5)—much as they would memorize the Quran. Thus: (2) "to the full extent necessary, and yet with apt brevity," (16) "do not place in medicine what does not belong to it," (34) "having discussed the equable temperaments *sufficiently*," (80) "I purposely omit reference to certain other problems relative to the fluids of the body": "just as much as is necessary to enable you to practise medicine intelligently." Many passages also refer to others of his own works for further details, to avoid confusing the purely medical issue of the Canon. These (philosophical) works are gradually becoming more widely known.

"Generally speaking, the saying of the saints and sages are terse, presenting only the germs of truth; these are developed by later teachers and then expanded and added to. We must see to it, however, that we get at the original meaning of the saints and sages." (Chu Hsi¹⁰, p. 168.)

"Books are only words, and the valuable part of words is the thought therein contained. That thought has a certain bias, which cannot be conveyed in words, yet the world values words as being the essence of books. But though the world values them, they are not of value; as that sense in which the world values them is not the sense in which they are valuable." (Chuang Tzu, Giles trans. p. 170).

§ 8. To say that a work is the product of the age in which an author lives is certainly often an error, for it is to confuse the person's insight with the tools (the language at his command) available to express himself with. Similarly to work out the relation between a literary work and the religious belief of the author, as for instance to show the relation between Islamic science and the Koran carries the same fallacy with it. The Prophet says "every soul when born is a faithful follower; it is afterwards that he becomes unfaithful"—which is to say that the form of religious belief is a secondary implantation, whereas the spirit of a sincere life can be traced to the original being.

Avicenna's medicine, like Indian medicine, has been traced to the Greek system. But it has been proved that the great works of Charaka and Susruta were available in Arabic, under the title of *Kitab-Shawshura-al-Hindi*, from the seventh century ("Ayurveda," 1924, i. 1; and *see also* Weber, *Hist. of Indian Lit.*).—Similarly, the view that the Chinese borrowed their philosophy of the five elements from the Turks has been sufficiently disposed of by Forke. (p 242, 243).—It is beside the purpose of this treatise to take up such questions.

§ 9. The common notion that progress or stagnation in secular knowledge has a causal relationship with (a certain) religion is typically voiced in his address on "Medicine and the Church," by Sir Farquhar Buzzard¹⁰³ (1927). The comment to make is: "*post hoc sed non propter hoc.*" The advances in the science of medicine, as in all other sciences, are surely a part of the (divine) plan for mankind; whereas the collateral abandonment of religious fundamentals remains a human responsibility.

§ 10. (b) *The word "Canon" (Qanun).*—Equivalent words: code of laws; series of principles. Tao 道 (cf. Forke²⁴). Principle is defined as "something antecedent, which exercises a real positive influence upon the consequent" = Causes (four kinds, 13) = Reasons.

In view of this it is clear that the Canon is not properly to be regarded as an "encyclopædia" of the knowledge of the time, or to be contrasted, for instance, with the now classical "Osler."

§ 11. (c) *The word "knowledge."* Knowledge is not simply an assemblage of "facts"; nor is it to be made synonymous with "truth"—certainly not Absolute Truth, of which all human knowledge falls short (see diagram in Appendix), although one single word is capable of containing or implying all knowledge, as in mathematics a single term may be equated with an infinite number of terms summed together. But even the mathematical sciences can only afford approximate truth (Hume, quoted by Maher⁵⁰: p. 238). We may recall the words, "if he attain to all knowledge, he is far off still" (à Kempis⁹⁵, ii. 11).

§ 12. Facts, as S. Thomas⁸¹, (i. 53) explains, are what our intellect regards external objects as, and as we judge of them only in terms of our sense-organs, these objects may be different. God knows them as they are. Our intellect depends on our imagination, and that depends on our senses, and our senses only convey discrete fragments which we gather into one continuous impression regardless of intervening points." We live as it were in a network only the nodes of which are evident to the senses.

§ 13. (d) *Mystical Insight.*—There is a distinction between knowledge gained in the ordinary manner and that gained by "mystical insight" (*Kashf*). The writer of *Gulshan-i-Raz*²⁵ (couplet 299, p. 30) advises his readers to follow this, saying:

"Straightway lift yourself above time and space,
Quit the world and be yourself a world for yourself."

And:

"The moment we are enlightened within,
We go beyond the voidness of a world confronting us."
—Seng-ts'an, quoted by Susuki,²¹ p. 185.

As this "opens up all of a sudden a world hitherto undreamed of, it is an abrupt and discrete leaping from one plane of thought to another" (ib. p. 200).

"Real science is seeing the fire directly,
Not mere talk, inferring the fire from the smoke.
Your scientific proofs are more offensive to the wise
Than the urine and breath whence a physician infers."⁵⁷
—(p. 306.)