

Texts and Documents

FOURTEENTH CENTURY MUSLIM MEDICINE AND THE *HISBA**

by

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INTRODUCTION

IN order to enlarge our understanding of Arabic medicine, it is of interest to explore areas which are tangential to medicine. These may at times impinge only slightly on science, but they nevertheless give us an entirely different slant on the history of the science and art of medicine. One of these areas is that concerned with the enforcement of the standard codes of commercial law and the regulations for the safeguarding of public morality and the faith, and for protecting Muslims against fraud, trickery, and charlatanry. The office of the *hisba* was established in the early part of the ninth century to compel the observances of these codes and regulations. The official in charge was the *muhtasib*.

The *hisba* originally had the specifically religious character of applying the censorship of morals. At first, the *muhtasib* was simply the appointed representative of the caliph in regard to morals but the duties soon were expanded. They became highly practical in that they penetrated the entire social and economic life of the people. The functions of the *muhtasib* do not seem to have been the same in different localities. Ibn Khaldūn¹ considered the *muhtasib* to be a religious official who ordered people to do good and forbade them to do evil. The burdens carried by porters were checked so that they would not be too heavy. Owners of dangerous buildings were compelled to tear them down for the sake of safety. Teachers were forbidden to beat their pupils beyond a certain point. Although a judge had authority over legal claims and certain crimes, the *muhtasib* was in charge of checking frauds in regard to food, weights and measures, and in simple cases of debt in which evidence of a court of law was unnecessary.

A treatise of al-Saqatī² devoted to the *hisba* covers various commercial matters such as weights and measures, manufacture of flour, bakery and liquid food products, restaurants, perfumery, pharmacy, slave merchants, and others. Two published works of which only parts are devoted to the *hisba* are by al-Māwardī³ (d. 1058) and al-Ghazzālī⁴ (d. 1111).

¹ Abū Zaid °Ar. b. M. b. M. b. Khaldūn (middle of seventh century H.), *Muqaddima*, Cairo, 1329, pp. 247-8.

² G.-S. Colin and E. Lévi-Provençal, *Un Manuel Hispanique de Hisba, Traité d'Abū °Abd Allāh M. b. Abi Muḥammad al-Saqatī de Malagá*, Paris, 1931.

³ R. Enger, ed., °Ali b. M. al-Māwardī's *Aḥkam al-Sultaniyah*, Bonn, 1853, chap. 20; cf. O. Rescher, *Das Kitāb 'Adab ed-dunjā wa'ddīn' Māwardī's*, Stuttgart, 1932-3.

⁴ Abū Ḥamid M. b. M. al-Ghazzālī, *Ihyā' °ulum al-dīn*, Cairo, 1326.

* This work was supported by the National Institutes of Health, R. G. 7391.

A work on the same subject by ibn al-Ukhuwwa⁵ is more generous in the attention given to topics devoted to various aspects of medicine such as regulations concerned with phlebotomists and cuppers, physicians, oculists, surgeons, manufacturers of syrups, and pharmacists who prepared drugs and resins. A later chapter is devoted to farriery. An interesting chapter discusses regulations which concerned physicians, ophthalmologists, surgeons, and bone-setters.⁶

Physicians

Medicine is a field which is theoretical and practical. The law allows its study so that health is maintained, and weaknesses and illnesses are repelled from this noble bodily structure. . . .

In spite of the fact that medical practice is one of the duties of the community, Muslims do not prefer to follow this profession. Many a town has no physician other than a *dhimemī*⁷ whose medical evidence is not accepted in matters of medical law. The Muslim not only does not concern himself with it but he concentrates on the study of law, disputes and disputativeness. The town is full of lawyers concerned only with decisions on sacred law and replies to that arising in legal queries. In regard to allowing this state of affairs by the faith where many are concerned with one duty while another is neglected, is there any cause for it other than the fact that judgeships and governorships are not attainable through medicine? Through these means, one may pretend to superiority over rivals and have the upper hand with enemies. Thus, knowledge of the faith is lost.

The physician is the authority on the structure of the body, humors of the organs and the ailments occurring in them, their causes, characteristics, and symptoms, useful drugs for them, ersatz drugs for those not available and methods of their extraction, and their manner of treatment so as to steer in a quantitative balance between illness and remedy, and to counter the illness with the drug's qualitative properties. Those who cannot do this should not be entrusted with treatment of the sick. It is illegal for them to treat a patient with a serious condition. . . .

It is essential that the physicians have their own chief physician. It is said that the kings of the Greeks appointed a medical authority famous for his knowledge in every city. They then presented the physicians of the city so that he would examine them. Whoever was found to be lacking in science was ordered to study and to read in his field, and to refrain from practice.

It is essential that, when a physician visits a patient, he questions him in regard to the cause of his ailment and of the pain he has. Then he makes up a prescription for him of syrups or something else containing drugs. He writes it out also for the close relatives in the presence those who are with the patient. When morning comes, he calls, looks into the ailment, inspects the [urine] flask, and questions the patient as to how the illness is going. Then he prescribes for him whatever the condition requires. He writes a copy for the family. This is done on the third day and the fourth day and similarly so until the patient recovers or dies. If the patient recovers from his illness, the physician receives his fee and his considerate reward. If he dies, the close relatives will go to the chief physician and submit the copies of the prescriptions which the patient's doctor had written for him. If he decides that the wisdom and art of medicine was practised correctly without any negligence or deficiency of the physician, then he declares, 'Death occurred at the termination of his allotted span.' If he decides oppositely, he declares to them, 'Demand blood money from the physician for your kin for he killed him by his lack of the art and his inadequacy.' By this excellent procedure they made certain that no one would practise medicine who could not qualify and that physicians should be learned in all areas of medicine.

It is a duty of the *muhtasib* that he exact from practitioners of medicine the oath of Hippocrates, that they will not administer a harmful drug, that they will not prescribe a poison for a patient, that they will not describe poisons to the people, that they will not inform a woman of a drug which aborts the embryo nor a man to avoid conception, that they will turn their eyes

⁵ R. Levy, ed., *The ma'ālim al-qurba fī aḥkām al-ḥisba of Diyā al-dīn M. b. M. al-Qurashī al-Shafī'i known as ibn al-Ukhuwwa*, London, 1938. (Abbrev.=Ma'ālim.)

⁶ Ma'ālim, fol. 74b ff. Cf. also p. 56ff.

⁷ A Jew, Christian, or Zoroastrian who is a protected non-Muslim.

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from the women's quarters when they enter them to visit a patient, that they will not reveal secrets and not tear away the veils, and that they will not be inquisitive in what should remain unknown.

Ophthalmologists

As to the ophthalmologists, the *muhtasib* must qualify them according to the book by Ḥunain ibn Ishāq [d. 873], *Ten Discourses on the Eyes*.⁸ Those are found to be qualified who have knowledge of the structure of the layers of the eyes, which number seven, the humors which number three, the ailments of the three, and divergencies of these ailments. He must know how to compound the collyria and to mix the drugs. It is the duty of the *muhtasib* to certify them in order for them to treat the eyes. He must not neglect anything in regard to the instruments of his art like the hooks for pannus⁹ and pterygium,¹⁰ lancets for bleeding, a case of collyrium applicators, and others.

As to the itinerant ophthalmologists, most of them are not trusted for they are dishonest. The *muhtasib* prevents them from rushing blindly to the eyes of men with scalpel and collyrium without knowledge and experience with the diseases and weaknesses which occur. No one should rely on them for treatment of his eyes nor trust their collyria nor their medicaments. Some of them prepare medicaments whose base is starch and gum; this is dyed in different colours as red with red lead, green with turmeric and indigo, black with acacia, and yellow with saffron. Some of them prepare a medicament from the horned-poppy which is made into a paste with gum. Some prepare collyrium from burned myrobalan seeds and pepper. All of the frauds of their collyria cannot be listed. The *muhtasib* must take steps to lessen these difficulties in treatment of the eyes.

Bone-setters

As to the bone-setters, no one is permitted to set bones until he is versed in the sixth chapter on broken bones of the *Thesaurus* of Paul¹¹ and knows the number of human bones, two-hundred-and-forty-eight, and the appearance of every bone as well as its shape and size, so that if one of them is broken, then it can be restored to its original position. The *muhtasib* examines them on all this.

Surgeons

As to the surgeons, they must know the 'Kata Genos' of Galen¹² which is on wounds and their dressings. They must know anatomy, the organs of the human body, and muscles, veins, arteries, and nerves in order to avoid them when abscesses are opened and haemorrhoids are removed. They must have a set of lancets with them, some with rounded tips, some square, and some cross-cut, knives, a cutting instrument for the forehead, a saw for amputation, a piercer for the ears, a set of leeches, a case of dressings, and olibanum to stop bleeding. Some of them practise deception on men when they bury a bone in the wound and then take it out in the presence of onlookers and claim that their drugs caused it to be expelled. Some of them use a dressing of lime washed in olive oil. It is dyed a red with red ochre, green with turmeric and indigo, and black with powdered charcoal. This is applied as a plaster.

Phlebotomists

Phlebotomy may be practised only by one who is well known for his learning and trusted for his knowledge of the anatomy of organs, veins, muscles, and arteries in their location and quantity so that the lancet does not strike a vein, other than the desired one, a muscle, or an artery. Otherwise, injury of the part is caused and also the part bled is destroyed.

If one wishes to learn phlebotomy, he practises the art on the leaf of the beet, that is, on the

⁸ M. Meyerhof, ed., *Kitāb 'ashr maqālāt fi'l-'ain*, Cairo, 1928.

⁹ *sabal*, a vascular opacity of the cornea.

¹⁰ *zafarah*.

¹¹ *Kunnāsh fi'l-ṭibb*.

¹² This is the *De Compositione Medicamentorum secundum Genera*, and was translated by Ḥubaish b. al-H. al-A'sam al-Dimishqī (end of third century H.), *Kitāb tadbir al-adwiyah*.

veins that are in the leaf until his hand is accurate. A slave must not be bled without permission of his master, a boy without permission of his guardian, nor a pregnant woman, nor a menstruating woman. He must not bleed in a public place. The instrument must be sharp. He must not bleed when he is in a nervous state.

It is incumbent upon the *muhtasib* that he exact a promise and agreement from them that in ten types of cases, bleeding is not practised except after consultation with physicians. Such cases are when the subject is less than fourteen years old, is in old age, is in extreme leanness, in a state of desiccation, when the body is trembling, or pale, in sufferers from anaemia, chronic disease, in cases of a very cold humor, and in cases of great pain. These are the situations in which bleeding must not be performed. There are five more cases like these, namely immediately following intercourse, after long bathing, in the case of fullness with food, when the stomach is full of solid food, and in the case of an attack of chills and fever. These are the symptoms when one refrains from bleeding.

Know that there are two kinds of occasions for bleeding, when there is a choice, and when it is absolutely necessary. In the former case, the proper time is in the morning after completion of digestion and evacuation. When it is compulsory, then it is at a time which allows no delay and no cause to hold it off.

After the bleeding, it is essential that the patient should not fill himself with food but that he be moderate in his diet. He must not over-exert himself and should recline on his back. He should take care not to go to sleep immediately following the bleeding for it weakens the organs. If the hand swells due to the bleeding, then the other should be bled to the same degree.

It is essential that the phlebotomist have many lancets, a string to tie the arm, and musk in a vesicle or pastille form in case the patient faints. A whiff of it restores him. The tip of the lancet is rubbed with good olive oil so that the incision does not hurt. However, healing is not so rapid. The lancet is held between the thumb and middle finger; the forefinger is left to feel the flesh so that it is not pricked.

Know that the incision must be wider in the winter so that the blood will not clot, and narrower in the summer so that it will not flow fast enough to cause unconsciousness and so his strength is maintained. If anything does happen to the patient, however, the phlebotomist has recourse to the musk.

Know that there are many veins which may be bled, in the head, arms, body and legs. The *muhtasib* must check the knowledge of the phlebotomists in regard to them and their relationship to muscles and arteries, and what should be made known as to the phlebotomized veins of the head. He must know the forehead vein which is vertical between the eyebrows. Its bleeding is good for heaviness of the head and eyes, and chronic headache. Then there is also the vein that is above the fontanelle the bleeding of which is useful for migraine on one side, and then the veins of the head, the two long very pretty veins on the temples. Bleeding of the latter two is good for ophthalmia, epiphora, and scab of the eyelids. Then there are two veins which are called *waswāq* behind the two ears. When these veins are bled, it induces sterility. The *muhtasib* must make phlebotomists swear that they will not bleed them since it causes this. It is strictly forbidden. Then there are veins of the lips whose bleeding is good for ulcers of the mouth, aphtha, pains of the gum and its swelling. Then there are the veins under the tongue. Their bleeding is useful for quinsy and swellings of the head.

The veins of the arms¹³ are the cephalic, median, basilic, exterior cubital, vena salvatella, and axillary which is a branch of the basilic. The soundest of these veins is the cephalic.¹⁴ When it is bled, it is necessary that the end of the muscle be turned toward a soft place. If it is desired to do it a second time, the cut is widened. As to the median vein, there is a great risk in its bleeding because of the muscle under it. Perhaps it is between two nerves or perhaps there is a round fine nerve above it like a bowstring. It is important to know this to avoid it in bleeding so as to remove the possibility of disablement.

As to the bleeding of the basilic vein, there is also danger because of the location of the artery below it. It is essential that this be avoided for if it is cut, its bleeding cannot be stopped.

¹³ Text has 'hands'.

¹⁴ For anatomical terms, see E. Seidel, 'Die Medizin in 'Kitāb Mafātīḥ al-ʿUlūm,' *Sitzungsberichte der phys.-med. Soz. in Erlangen*, 47, 1915.

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As to the vena salvatella, the proper way is to bleed it lengthwise, and the cubital is bled transversally.

As to the veins of the leg, there are four. The sciatic vein which must be bled is on the surface of the ankle or, if it is concealed a branch of it that is between the little and fourth toes is bled. This is very useful especially in cases of swelling.¹⁵ There is also the vena saphaena which is on the left side and comes from the sciatic vein. Its bleeding is useful for haemorrhoids, for premature menstruation, and for organs below the liver. Then there is the vein of the inner side of the knee which is like the vena saphaena in usefulness. Lastly, there is the vein which is behind the Achilles' tendon and is a branch of the vena saphaena. Its use in bleeding is like that of the vena saphaena.

Of the arteries permitted to be bled, these are the temporal arteries and the artery which is between the thumb and the forefinger. Galen ordered its bleeding during sleep.

Cupping

Cupping is very useful for it is less dangerous than phlebotomy. It is essential that the cupper have a light touch, be fast, and be well acquainted with the art. If his hand is light in the operations, then he is quick to apply the cup. If he has a light touch, the patient will experience no pain. The best time for cupping is the second or third hour of the day.¹⁶ There are many uses for cupping. It is good for heaviness of the eyebrows, scab of the eyes, and mouth foetor. It also produces, however, a forgetfulness. The Prophet said that the back part of the brain is the place of memory but cupping weakens it.

Circumcision

He must have with him instruments for circumcision which are the scalpel and the scissors because circumcision is a divine law necessary for men and women. In this, men of wisdom generally agree. Abū Hanīfa said that circumcision is a recommended practice but not a duty. Others say that it is a duty but not a divine law. . . . Circumcision in the male consists in cutting off the prepuce which hides the glans penis. As to the female, the place of circumcision in her is the skin that is over the vagina and above the orifice out of which the urine comes. Certainly, the lower [orifice] of the vagina is the channel for menstruation and birth; the higher is the one like the orifice of the penis out of which urine comes. Above that is a piece of skin like the comb of the hen. It is the place of circumcision. The upper part of the skin is cut off. . . .

*Syrup Makers*¹⁷

This chapter exposes many frauds. It is not possible to have a complete knowledge of these because drugs and syrups are of diverse natures and mixtures, and the cures are dependent on the type of mixed ingredients. Some are efficacious for a certain illness and humor. If additions are made to change them, it alters their proper mixture and causes harm to the sick. There is no stopping place for the answer to them. In that they should fear the exalted Allah. It is necessary that the *muhtasib* make them fearful, try them, and warn them against imprisonment. He must caution them with punishment. Their syrups and drugs may be inspected any time without warning after their shops are closed for the night. Conditions are imposed on them so that they make their syrups only with good Egyptian spotless sugar, and they do not cook with anything not clear nor with a gummy honey mixture. There is established for them what is in the medical regulations, that for every 10 rats of sugar $3\frac{1}{2}$ rats of fruit juice be used. If lemon is not added to apple syrup, nor to syrup of honeysuckle (?),¹⁸ nor to violet and similar syrups, the syrup makes one ill and harms the sick.

The syrups and their names are many. There are seventy names. We recall the most famous which are syrup of rosewater, syrup of nenuphar, syrup of fresh rose, syrup of rose bud, concentrated syrup of rose, syrup of Indian spikenard apple, syrup of apple dyed with blood, henna, light syrup of apple, flowing syrup of lemon, usual syrup of lemon, syrup of powdered lemon, syrup of malabathrum oxymel, syrup of seed merchant oxymel, Roman oxymel, syrup of plum,

¹⁵ Perhaps gout. ¹⁶ The hour count is begun with the break of day. ¹⁷ Ma'ālim, p. 115, Arabic.

¹⁸ L. Leclerc, ed., *Traité des simples par ibn el-Beithar, Notices et Extraits des Manuscrits de la Bibliothèque Nationale*, Paris, 1877-83, 23, 24, 26, no. 155.

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syrup of cherry, syrup of malabathrum,¹⁹ syrup of Medina quince medicine,²⁰ syrup of quince and musk, syrup of lemon and quince, syrup of red wine,²¹ syrup of roots (?),²² syrup of the rind of endive root, syrup of sweet pomegranate, syrup of the two kinds of pomegranates,²³ syrup of fumitory, syrup of white sandal, syrup of the two sandals,²⁴ syrup of aloeswood, syrup of dates,²⁵ syrup of tamarind, syrup of great plantain, syrup of barberry, syrup of grapes, syrup of poppy, syrup of myrtle, syrup of asparagus, syrup of French lavender, syrup of maidenhair fern, syrup of hyssop, syrup of narcissus, syrup of peach, syrup of bugloss, syrup of 'fruit', syrup of rhubarb, syrup of purified camphor, syrup of common polypode, syrup of mint, syrup of 'soft ones', syrup of vinegar, syrup of honeysuckle, syrup of sorrel, syrup of licorice, syrup of aromatic rush,²⁶ syrup of orange, syrup of couch grass, syrup of a strong wine made from grapes or dates, syrup of dodder, syrup of juniper,²⁷ syrup of fig, absinthe syrup, syrup of lycium, syrup of manna,²⁸ syrup of mulberry, syrup of squill, syrup of borage, syrup of honey, syrup of tamarisk fruit, syrup of the honey in the trunk of the date, syrup of squill oxymel, syrup of verjuice with mint, syrup of knotweed, syrup of emblic myrobalan, and syrup of silk cocoon. These are the names of the syrups commonly used. What is not used is not given in remembrance.

These syrups vary in character according to their purposes. Every syrup is a combination of a julep and juice of the fruit named with it, extract of the flower, or what you include of herbs and drugs. The julep is required in medicine. It is added only as a vehicle of administering the fruit juice, the flower, or drug. The deceit in its mixture lies in that it is converted to sweetness which makes more pleasant the taking of the syrup, so that its acceptance is quick. The rule which the ancient doctors made regarding the preparation of syrups is that one third of it is fruit juice as stated previously. Drugs, herbs, blossoms, and juices, are mixed with different syrups in equal amounts more or less. . . .

The list of syrups and drugs is interesting in that, unlike medical texts where many more remedies are usually listed, this text gives the customary and best known medicines. It thus gives a better perspective of what the most common materia medica were. Ibn Abil Bayān and ibn al-Ṭalmidh are mentioned in this connection in that their works on drugs are models for apothecaries.²⁹ The latter is mentioned as more valuable.

The *hisba* texts usually devote much space to the testing for adulteration of drugs. For example, al-Saqāṭi in his early twelfth-century work lists the adulterants for henna, nard, mastix, saffron, sugar, pepper, musk, aloeswood, acacia, Chinese ginger, balsam oil, almond oil, olibanum, and others.

Hisba and Medicine

It is clear from the *hisba* literature that, from the ninth century until the breakdown of the system, the practice of medicine in its various aspects had to

¹⁹ *al-maibah al-sadhajah*. *Maibah* was a special quince mixture used in medicine.

²⁰ *muṭṭayyah* a kind of perfumed mixture.

²¹ *dīnārī* (Steingass).

²² *uṣūl*.

²³ i.e. sweet and sour pomegranates found in materia medica.

²⁴ i.e. red and white sandal mixture.

²⁵ *Balḥ* is an ingredient of the *sukk* confection. Cf. Max Meyerhof, ed. 'Maimonides' 'Sharḥ asmā' al-*uqqār*, *Mém. Inst. Egypte*, 41, no. 290. Levy has *thalj* which is impossible.

²⁶ *Idhkhīr*, *Andropogon Schoenanthus* L. in M. Meyerhof and G. P. Sobby, eds., *Al-Ghafiṣī's 'Book of Simple Drugs'*, Cairo, 1932, no. 2.

²⁷ Text should read *rāsīn*.

²⁸ *shīr khashak*. Cf. ibn Beitar, *op. cit.*, no. 1380.

²⁹ Mc²ālim, p. 117 Arabic. Ibn al-Ṭalmidh (1073-1164) was a Christian physician in Baghdad. He wrote two treatises on compound remedies, abstracted Galen's *Simples*, and wrote notes to ibn Jazla's *Mīnhaj*. . . . Unfortunately, none of these has survived. The work of Ibn Abil Bayān (thirteenth century) meant is his *Addustūr al-bīnārīstānī* the text of which was published in *Mémoires d'Institut d'Égypte*, 15, 1933, 13-78. It includes the drugs commonly used in hospitals.

be placed under strict regulation. In the period of Islam, medicine became much more extensive as a profession reaching out to a much greater percentage of the people than ever before. The profession was highly specialized just as it had been in earlier periods of Mesopotamia, Egypt, and Greece. In addition, many people in Islam were engaged in the preparation of different kinds of drugs. It is evident from the texts that these were the ones to be watched most carefully.

The *hisba* also carefully regulated the physicians. A list of topics which were to be studied by the physician was given. His routine with the patient was also noted. Surgeons were similarly circumscribed. Penalties for physicians and surgeons were prescribed in case of malpractice. Those who performed circumcision were subject to liability if the operation was performed badly so that the patient was injured or died.

One of the primary aims of the *muhtasib* was the prevention of illegal acts. For this reason, the practitioner-to-be was well examined in medicine. The surgeon was also examined on the basis of *Kata Genos* of Galen well known in Arabic as *Kitāb tadbīr al-adwiyah* which had been translated by Ḥubaish, nephew of Ḥunain ibn Ishāq. The oath of Hippocrates, according to the *hisba*, was administered to all physicians. In effect, the *muhtasib* operated a licensing office for the various grades of medical men.

All in all, the description of the work of the *muhtasib* in regard to medicine gives the general picture of very common events in its practice. For example, there was evidently much adulteration of the materia medica. There must have been numerous charlatans in the various branches of medicine. Although the *muhtasib* was responsible for overseeing the hospital, little is known about it.³⁰

News, Notes and Queries

A SERIOUS SENTENCE PASSED AGAINST THE DISCOVERER OF THE LEPROSY BACILLUS (GERHARD ARMAUER HANSEN), IN 1880

IN 1873 after he had found the rod-shaped bodies in leprous nodules, G. A. Hansen was convinced that he had discovered the causative agent of the disease, but he was still of the opinion that this was incompletely proved. He therefore tried different approaches to find new and stronger proof. After his correspondence with Robert Koch in 1879, he was able to stain the bacillus so well that it could be demonstrated

³⁰ It was necessary for the *muhtasib* to investigate the effectiveness of the hospitals. He inspected their facilities. Cf. R. B. Serjeant, 'A Zaidī Manual of Ḥisbah of the Third Century (H)', *Riv. Stud. Orientali*, 28, 1-34, fols. 292a-292b. This contains the edited text of British Museum MS. Or. 3804 by al-Nāsir li-'l-Ḥaqq al-Ḥasan b. 'Alī al-uṭrūsh (A.D. 917). The title is *Kitāb al-iḥtisāb*. Cf. also Khalil Yohyā Nāmi, *Taqrīr Muqaddam*, on the work of al-Bi 'that al-Misriyah li-Taṣwir al-Makḥṭūṭāt al-'Arabīyah fi Bilād al-Yaman, Cairo, 1952.