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J.C.B. Mohr (Paul Siebeck) Tübingen

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Moshe Mizrachi on Popular Science in 17th Century Syria-Palestine

Gerrit Bos

Introduction

In my article dealing with Hayyim Vital's treatise "On Practical Kabbalah and Alchemy," I showed that this treatise is an example of a hitherto unknown genre in Hebrew literature, namely, that of the "catch-all-recipe-books" or "books of secrets," a genre that became very popular in the 16th-17th centuries. The material contained in such books covers a wide variety of recipes, mostly of a popular and practical character in the fields of magic, medicine, technology, chemistry, alchemy, and astrology. Only occasionally do we find expositions of theoretical issues. These recipe books are thus important for our knowledge of the popular sciences, culture, religion, and medical conditions of those days. They shed light on the vicissitudes of ordinary people, and give us an unexpected and surprising insight into what was occupying their minds. A few examples may suffice to illustrate this. The many recipes for strengthening memory, in a society and culture where printed books were rare, show that memorization was held in high esteem and was, moreover, of primary importance for the continuity of the religious traditions. Consequently, forgetfulness was much dreaded affliction, not only affecting one's individual health but also one's social position. For a learned man, a Talmud Hakham, had a very respected social position in Jewish society throughout the ages, a position which could be threatened by forgetfulness.

The different recipes for miraculous transportation, which always feature in the context of protecting the traveler from all kinds of dangers besetting him, remind us that travelling was a hazardous undertaking in those days. Consequently, all kinds of devices were resorted to for protection, as we also know from the well-known Responsa addressed to Hai Gaon, according to which believing Jews of Kairouan asked him "whether it is true that there are countless names by means of which the adept can perform miraculous deeds, such as making himself invisible to highwaymen, or making them captive?" His answer was: "A fool believes everything!"

The sections on medicine highlighting certain diseases show us from which diseases people were especially prone to suffer. Prominent are, for instance, eye and ear diseases, bleedings, and toothache. Moreover, we see that rational therapy with natural means and magical treatment go hand in hand.

Vital's "On Practical Kabbalah and Alchemy," I pointed out, is the only surviving example of this genre in Hebrew literature. This contention, however, should now be rectified in the light of Benayahu's reference to a treatise similar to that by Vital, which was written by Moshe Mizrachi, an acquaintance of Vital. Moshe Mizrachi, a scribe and Kabbalist, who was also interested in science, wrote this treatise, as Benayahu suggests, in the year 1627. Benayahu bases his surmise on the following colophon to fol. 8b of his treatise: "This treatise was completed with God's help and succor on Monday, Iyyar 3, 1627, in Damascus the protected [by God]; it was copied from an ancient, accurate, tested and true book by God's humble servant, Moshe Mizrachi, success is dependent on God." A more convincing interpretation, in my opinion, is that only the copying of a part of this treatise, namely, of al-Tifshis "Kitāb azhīr al-akār fir jāwāhir al-ahjār" (On precious stones) was completed on that particular date, since this colophon features at the end of this text, and since the author himself wrote "naqalāhu" (copied). The rest of Mizrachi's treatise was added gradually. Recently, Mizrachi's recipe book has been discussed by Raphael Patai. However, Patai has noticed neither the important information on fol. 8b concerning Mizrachi's authorship and date of transcription of this text, nor Benayahu's remark on this question, although Patai refers to Benayahu explicitly.


when dealing with Ḥayyim Vital. Consequently he mistakenly treats it as anonymous and dates it as having probably been composed in the sixteenth century.

In this article I will discuss representative selections from the major categories addressed by Mizrahi, and show that this treatise is of a similar structure as that composed by Vital. Both treatises consist of a selection of material derived from many sources. Mizrahi’s treatise is thus another example of the genre of “catch-all-recipe-books” in Hebrew literature. But a comparison of both recipes books shows important differences in size and contents. Vital’s recipe book is very sizable, comprising more than one thousand recipes; Mizrahi’s recipe book is very concise and fragmentary. In contrast to Vital, Mizrahi gives much attention to astrology and alchemy, while chemistry, so prominent in Vital’s treatise, is hardly discussed. Moreover, in Mizrahi’s recipe book many recipes are featured in Judeo-Arabic, whose use Vital limits in most cases to technical terms.

Unfortunately, Mizrahi’s treatise survives only partly and badly preserved in MS New York 2556, which consists of 47 folios, or according to a second numbering, 93 pages. Several pages are completely illegible since the text is completely obliterated, others are severely stained and thus only partly legible. Moreover, several pages are written in Judeo-Arabic, in a rather crude handwriting totally different from the major part of the text. One gets the impression from the MS that these particular sections were added later on and written over the obliterated parts. For this reason I will not consider these additions in my article. Benayahu reports in his article the existence of a similar manuscript in the possession of Mr. Abraham Shlisha in London. Unfortunately, I have been unable to trace this manuscript.

The following sources are explicitly referred to by the author: al-Tifāshi, ha-Rabad (Abraham Ben David),6 R. Abraham Av B *D, Hakhmei Ashkenaz,10 R. Ezra the Scribe,11 R. Akiva,12 R. Efazar ha-Kallir,13 R. Moshe ha-Darshan (11th cent.),14 R. Judah al-Ḥarizi (1170–1235),15 Issachar Ben Mordecai Susan.16 Implicit sources consulted by Mizrahi are partly Jewish and partly Islamic, this may also be inferred from the fact that Hebrew and Arabic recipes feature together in every major section.

Structure of the text

Fols. 1–8 (1–14): copy of al-Tifāshi’s, Azhār al-ḥukmā fi jawāhir al-ḥikmā,17 on the properties of precious stones; fol. 9a (15): Sha’ar le-haviv kinnah me’i yed’ot u-me’ora’ot; (Magical recipes); fol. 9b (16): Addition; fol. 10a (17): Sha’ar ḥokhmah gedolah ba-geshamim (Rain) and different magical recipes; fol. 10b (18): Addition; fol. 11a–b (19–20): Al-ḥawwāl fi ‘ilm ba’di al-haṣā’ir al-adhād yanfa’u fi ‘ilm al-kāf (On herbs useful for alchemy); fol. 12a (21): Sha’ar ḥokhmah me’i ha-mattakhtot (On minerals); fol. 12b (22): Addition; fol. 13a (23): Al-ḥawwāl fi ‘ilm al-asfar i‘lān al-khāsh (On the preparation of different kinds of ink); fol. 13b (24): Addition; fol. 14a (25): Sha’ar ha-haggaqah (On bleeding); fol. 14b (26): Addition; fol. 15a (27): Līqquqim (Chemical technology); fol. 15b (28): Addition; fol. 16a–17b (29–32): Sha’ar ha-laḵhashim (Adjurations); fol. 18a (33): Sha’ar rosh (Head diseases); Al-ḥawwāl fi ‘ilm al-sakkar wa-l-nabīdāt (On sugar and wine); fol. 18b (34): Addition; fol. 19a (35): Sha’ar ha-rosh (Head diseases); fol. 19b (36): Sha’ar ha-pa’nim (Cosmetics); fol. 20a–b (37–8): eye diseases; fol. 21a (39): Sha’ar ha-ʿaf (Nose diseases); fol. 21b (40): The following has been written over the wiped out original text: “Ahi ha-zā’ir u-ze’er Yahya Ma’aravi”; fol. 22a (41): Sha’ar ha-ḥeẓ va-ha-shmnayim (Mouth and toothache); fol. 23a (43): Sha’ar ha-ḥiznayim (Ear aches); Sha’ar ha-yadāyim (Pain in the hands); Bb ḫa’l ša’l wa-ta’l (Cosmetics); fol. 23b (44): Text completely wiped out; fol. 24a (45): Sha’ar ha-ro’o ṣe-er enir ʿeḥ (How to see without being seen); Al-ḥawwāl fi ḫalāt i-l-ašmānūt wa-ta’lāt i-l-nisḥāb (On opening abscesses); fol. 24b (46): Text completely wiped out; fols. 25a–26b (47–50): Sha’ar she ʿalat ha-lom (Recumancy); fols. 27a–b (51–52): Sha’ar petḥat ha-le-y (To strengthen memory); fol. 28a–31b (53–60): Astrology (28b–29a: drawing of the zodiac); fols. 32a–34b (61–66): Ramī (Geomancy); fols. 35a–36b (67–70): Līfthāḥat ha-le-y (To strengthen memory); fol. 37a: Qeṣṣa ha-rēdēk u-ṣeṭṭat ha-yām (On miraculous transportation); fols. 38a–39b (73–76): Goral (Geomancy); fols. 40a–45b (77–88): Astrology;

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6 Patai, ibid., p. 341.
7 Patai, ibid., p. 367.
8 See below Magic, sect. 4.
9 See below Magic, sect. 5.
10 See below Magic, sect. 5.
11 See below Astrology, sect. 3; chemical technology, sect. 2.
12 See below Magic, sect. 5.
13 See below Astrology, sect. 3.
14 See below Magic, sect. 5.
15 See ibid., sect. 2.
16 See ibid., sect. 3.
fol. 46a (89): Sha‘ar ha-tequfot (Astrological predictions); fol. 46b (90): Addition; fol. 47a (91): Fasī fi ma‘rifat i qewr i rosh hodesh Tevet (Astrological predictions).  

The contents of the treatise can be summarized into the following main categories: I. Magic. II. Astrology. III. Mineralogy. IV. Alchemy. V. Chemical technology. VI. Medicine.

I. Magic

Already in my article on Vital I pointed out that magic played an important role in the daily life of the people in the sixteenth century both in the Middle East and in Western Europe. 16 No wonder then that it occupies a central place in Mizrachi's recipe book as well, whereby the following major subjects are addressed:

1. To understand the language of the raven. This ability is part of folklore in general. Mizrachi introduces his account with the well-known story, featuring in Jewish and Islamic folklore, of Solomon's gift to understand the language of animals in general, 20 and then continues:

The woodcock (farnegol ha-bar) 21 started to speak to the king and to tell him secrets and words of wisdom about the black raven who speaks true things. He said: When you meet him (the raven) on the road and he comes towards you and speaks words beginning with the letter Qaf, it is a good omen. If you need a wife his intention is to inform you that you will have sexual intercourse and will have a relationship, for the letter Qaf [indicates] that you will overcome your shame and will marry. 22

Other examples of the interpretation of the speech of the raven by the woodcock are: If he begins with the letters Yud, Pe, Alef, it indicates that mourning will come soon. If he begins with Bet, Yud, Resh, it is an omen of something really good. When he speaks [words] with 'Ayn, Alef and

18 The description of this MS by Patai (op. cit., note 5 above, p. 368) is inaccurate.

To give one example. In his general description of the contents of the 25a-45b he omits astrology, which actually is the major subject of this section, covering the 25a-31b; 40a-43b.


21 L. Lewy, Die Zoologie des Talmuds, Frankfurt am Main 1858, pp. 216-8: "Auerbahn" (= heath cock); Marcus Jastrow, A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature, 2 vols., New York 1950, vol. I, p. 189, s.v. bar: "wood-cock (hen of the prairie)."

22 Fol. 9a.

23 Ibid.

24 TB Shabbat 67b; translation I. Epstein.


26 Ibid., p. 54.

27 Fol. 10a. For a different recipe by Vital see my article, note 1 above, p. 73. For a detailed discussion of ornithomancy see: Gerrit Bos – Eric Pellow, Jewish Traditions on Divination with Birds (submitted to AJS Review).

Dalet, something good will occur to you soon through someone unknown to you. Hereafter the woodcock interprets the speech and bodily movements of the raven. Some examples are: When he speaks and turns his tail towards his front, nothing good will come from his words. When he shakes his head while speaking, it is a sign of someone coming. When he presses his head into the dust while speaking, it is a sign that he who sets out on a journey will die. If you see three ravens, all of them speaking to each other and turning their bodies towards each other, it is a sign of men who have conspired against the king. 23 The raven was considered as an ominous bird in Jewish and Islamic folklore; in the list of forbidden Amorite practices (i.e. superstition) in the Talmud it is stated: "He who says to a raven: 'Scream,' and to a she-raven: 'Screech, and return me thy tuft for [my] good,' is guilty of Amorite practices." 24

The Arab encyclopedia al-Nuwayrī (d. 1332) has preserved a text attributed to al-Jāhiz (9th cent.), entitled "Bāb al-‘irāf wa-l-zajr wa-l-firāsā ‘alā madhhab al-Furs" (On divination, auguring, and physiognomy according to the Persians). 25 This text is similar to that of Mizrachi insofar as it interprets the croaking and different movements of the raven. But it is dissimilar insofar as it does not interpret its croaking in terms of human speech. This may be clear from the following quotation: "When you leave your house for business or to get engaged, and a raven croaks at your right and left side, go ahead, for you will attain your goal, God willing." 26 Mizrachi gives the following recipe for the actual acquisition of this supernatural talent: "If you want to understand the language of birds, bind a raven that is totally black, [and keep it like that] until he dies; cut him open, take his fat out, smear it on your face, and go outside." 27

2. Magical properties of a snake's skin. The following recipe is given for its preparation: "Take a snake's skin when the moon is waxing in the first degree of Aries, pulverize it into a fine powder, and keep it, for it has twelve magical properties." Some of these properties are: (a) If you put some of this powder on your head, you will not be afraid, nor will a
blow on your head cause you any harm. (b) If you put some of this powder mixed with water on your face, your enemies will flee before you, while your friends will associate with you. (c) If you are worried about something and want to know its outcome, sprinkle some of this powder on your head, cover it with a rag, go to sleep, and you will see in your dream everything that will be, and will be shown the truth. (d) If you want to know something from a man or woman, take some of this powder and sprinkle it on their chests while he or she is asleep and they will tell you truthfully. The last recipe is similar to one recorded by Vital: “If you put the tongue of a frog on the clothes of someone who is asleep, opposite his heart, he will answer all your questions.” This tradition was widely promulgated in different variations in ancient and medieval literature.  

At the end Mizrahi warns the potential client to be careful with these recipes, since they were used by kings.

Snakes’ skins are already mentioned in ancient medical literature for their healing properties. Dioscorides gives recipes of compounds containing snakes’ skins for diseases of the eyes and ears and for toothache. Recipes from the Arabian tradition are mentioned by Ibn Sinâ (980–1037) in his medical compendium K. al-Qānîn fî al-tibb30, by al-Qazwînî (13th century) in his scientific encyclopaedia31 and by al-Dámîrî (14th century) in his zoological dictionary.32 In medieval western Europe we find some magical properties of the snake’s skin recorded by Albertus Magnus in his Book of Secrets.33

3. Invisibility: Mizrahi mentions different magical recipes to achieve this supernatural talent in a section entitled “Sha’ar la-ro’eh we-eimo nir’eh”.34 An example is: “Take the eyes of a bat, put them in a linen cloth, hang them on your right arm, and take care not to speak. If people do notice you, put them back on the ground, and bind them again on your arm, for then nobody will see you.”35 A possible explanation of this recipe, belonging to the category of sympathetic magic, is that the procedure mentioned in it gives the client the same power as the bat, namely, to see during the night but not to be seen. Vital mentions different techniques to achieve invisibility; one of these is: “Go to the nest of a raven, kill one of its young without attracting the parents’ attraction, and bind it to the nest so that they cannot throw it out. The male raven will then fetch a stone to hide the dead bird from sight. Take this stone and place it under the tongue, for then one will see without being seen.”36

We have already seen above that incantations for invisibility had become so popular by the eleventh century that believing Jews of Kairouan felt themselves forced to ask Hai Gaon, the head of the academy of Pumpedîth, if these incantations were really effective.

4. Necromancy: One of the most popular techniques is called “she’elat halom,” in which one adjoins the dead to appear during one’s dream in order to answer a question. Mizrahi gives a list of different versions of this technique in a section entitled “Sha’ar she’elat halom.”37 One version is: “Fast on Tuesday, purify yourself, write in the evening on your left hand AFLGW AFLGW WMASPIWT ATMSL TNPH MASRTWT SWSH. Then go to sleep and you will receive an answer.”38 The requirement to fast is part of the preparatory ritual, which involved fasting, ritual cleaning, and the wearing of certain garments. Such preparations may have induced an altered state of consciousness. The Talmud states about “He who enquireth of an ob, or consulteth the dead”, that it is “one who starves himself and spends the night in a cemetery, so that an unclean spirit may rest upon him.”39 A similar preparation of an ascetic character called “riyâda”, is known from Arabic magical literature.40 The answer to a “she’elat halom” usually consisted of a Biblical verse which was interpreted according to certain rules. About the following technique Mizrahi states that it is a great secret, which one may only reveal in case of great need:

Go to the cemetery and when they dig a grave take a handful of earth from the first digging; go to a remote corner and say: In the name of ‘Aza-

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35 See op. cit., p. 1 above, p. 72.
36 See ibid., note 4 above, p. 73.
37 Fols. 25a-26a. One recipe (fol. 25a) is quoted by Mizrahi in the name of the Rabâd (12th cent.) Unfortunately the text has been obliterated.
38 Fols. 25b.
39 T.B Sanhedrin 65b.
ever, was opposed to this magical technique, and rebuked his student Hayyim Vital (1548–1610) for those two and a half years that he was involved in magic and used to visit fortune-tellers. Ari ordered him to perform rectifications (la-rasot Tikun) for that time. The term pe-hitha ha-lev features in many sources, and was the common term used for the ability to remember (and/or understand) as a result of different magical praxes.

A different procedure employed to achieve absolute memory consists of writing divine names on certain objects, which should then be consumed in order to 'incorporate' the potency of the formula. Mizrahi states: "Take a cup of wine, say over it in [the month] Nisan: I adjure you Pathi‘el, Rapha‘el, ‘Ami‘el, YHWH, ‘Arphithi‘el, open my heart quickly to learn the whole Torah without any strain or pain, so that I will never forget anymore everything that I will hear and learn, and it will be fixed in my heart and mind. Then drink the wine." The same technique has been preserved in mystical texts from the Cairo Geniza. Another magical technique closely related to the one just mentioned, recommends erasing the formula with a liquid and then drinking it. An example of this technique quoted by Mizrahi in the name of Ezra the Scibe is "to dress oneself in linen cloths, to fast for three days, to purify oneself, to write certain holy names on leaves of the Rubus sanctus (seneh), to erase the names with water and to drink it." A similar procedure recommending the use of three leaves of the Rubus sanctus and different holy names has been preserved in Vital’s “On Practical Kabbalah and Alchemy.” In Arabic magic we find a procedure of the same kind preserved in the K. Shams al-ma‘arif wa-lat‘if al-aw‘arif by al-Bänn (d. 1225). The author recommends writing certain letters on

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41 For Dumah, already featuring in Rabbinic literature (TB Berakhot 18) as angel of the dead, see Moise Schweb, Vocabulaire de l’angéologie d’après les manuscrits hébreux de la Bibliothèque Nationale, Paris, 1897, p. 101.

42 Fol. 25b.

43 Fol. 26a.

44 See op. cit., note 1 above, pp. 64–65.

45 Fol. 27a–b, 35a–36b.

46 Fol. 27a. I do not know the identity of R. Abraham Ab B‘D, unless the text should read “R. Abraham Ab B‘D” (= R. Abraham Ben David; see magie, par. 4).


48 See Schlemel, ibid. Lurianic Kabbaloth did not call this angel Pathah, but Purah.
the inside of a glass and drinking pure water from it for three days, while reciting certain verses.\textsuperscript{57}

About one recipe Mizrachi remarks that it is "a great secret hailing from the "Ishkei Ashkenaz". This recipe consists of the consumption of a smashed red apple into which some 'N'DW(f) oil has been put after it has been mixed with the powdered prepared from the umbilical chord of a boy.\textsuperscript{58} This kind of practice involving the use of human organs seems to have been exceedingly rare in Jewish practice, but was very popular in medieval Christian Europe. Christian magic prescribed, as Trachtenberg remarks, "the most various and obscene ingredients, such as human and animal blood, fat, hearts, sex organs, brains, excrement, etc., for internal and external application, largely because of their homeopathic virtues."\textsuperscript{59} About another recipe recommending the consumption of a cake inscribed with Ps. 111:4, and an egg inscribed with "Aspayam kisatam tarama ozen dikhaz[an] (\?)", he remarks that it was used by R. El'azar ha-Kallir.\textsuperscript{60} This recipe is mentioned in Geonic literature as one once used by R. Sa'adya Ga'on, on which he had found it in the cave of R. El'azar ha-Kallir.\textsuperscript{61} Trachtenberg refers to suggestions "that the name of El'azar ha-Kallir was derived from the collyrium or cake, which his father fed him as a boy, and to which he owed his accomplishments."\textsuperscript{62}

6. Miraculous transportation. This magical technique is called "Qefizat ha-derekh" (Path jumping) in the Jewish tradition and has been dealt with recently in an article by Mark Verman and Shulamit Adler.\textsuperscript{63} A technique recommended by Mizrachi is to write certain holy names on a piece of parchment, to take a reed four cubits long, and to ride on it while uttering a certain adjuration.\textsuperscript{64} A similar procedure can be found in an extensive interpolation in the Sefer Berit Menahah, attributed to R.

\textsuperscript{58} Fol. 27b.
\textsuperscript{60} Fol. 36a.
\textsuperscript{62} Trachtenberg, op. cit., note 2 above, 122–123.
\textsuperscript{64} Fol. 37a.

Abraham b. Isaac of Granada. This interpolation probably dates, as Verman-Adler remark, from the sixteenth century.\textsuperscript{65}

Vital mentions in his recipe book a procedure for travelling the distance of one year in one day or that of one month in one hour, consisting of the following main elements: (a) To take deer parchment and to write the names of ten angels on it, as well as the verse "And he came to a certain place etc." (Gen. 28:11). (b) To take a reed which is like a man four cubits long, to make a hole in the reed, and to put the amulet in it. (c) To cover oneself with a scarf and mount the reed. (d) To adjure the ten angels in the name of the 42-lettered Name of God.\textsuperscript{66} Vital adds that one should prepare oneself by means of a three-day fast and purification. The basic elements of this procedure recur, as Verman-Adler remark, in many traditions on path jumping.\textsuperscript{67} This magical technique is also known from Islamic magical literature where it is called "tayy a-lard" (the folding of the earth).\textsuperscript{68}

In the context of the path-jumping technique Mizrachi discusses, just as other medieval and Renaissance treatises, other magical techniques for the protection of the traveller. For instance, the name YeKaSaHoWYoYoH written on a wolf's skin and hung on the arm, makes one invisible for everyone. Other recipes are for travelling without getting tired, for obtaining water in arid places, and for protection against a stormy sea. Similar recipes can be found in Vital's recipe book.\textsuperscript{69}

7. Geomancy. This divinatory art was very popular in Islam, where it was called khatt al-raml.\textsuperscript{70} Its claim to fame lies, as Fahd remarks, in a saying attributed to Muhammad: "Among the prophets there was one who practiced khatt; whoever succeeds in doing it according to his example will know what that prophet knew."\textsuperscript{71} As its name already indicates, it was originally practiced by drawing certain figures in the sand which were then interpreted by the diviner for his client. Instead of sand,
one could also use a piece of paper on which pencil dots were marked in four ranks in different combinations. These combinations differ in that the four ranks are made up of different or identical even or odd arrangements. Thus we have altogether sixteen combinations. Instead of two dots one may use a line. These different combinations were given different names by the diviners and were classified as lucky or unlucky, depending on the astral influences which were brought to bear on them, for these sixteen combinations were thought to be dominated by the twelve signs and the four cardines of the zodiac. This divinatory art is described by Douët as still popular with the Arabs of the Maghrib in the 19th and beginning of the 20th century. But it was also well-known to the Jews and Christians in medieval western Europe, as Trachtenberg has pointed out. Its popularity in Jewish circles is also attested by many surviving texts – all of them still in MSS – dealing with it.

Mizrahi gives an extensive description of this art, and gives some practical examples in a section entitled “Teshuvat ha-shel’ot”. All these expositions are illustrated with drawings consisting of the different combinations described above. Some questions for which Mizrahi provides answers by means of this art are: If the love one experiences is real; if one will be successful in one’s undertakings; if someone who is in trouble will be all right; if someone’s fear is real; and if someone who is in prison will be released.

II. Astrology

Especially this area is characterized by extensive theoretical expositions, mostly of a conventional nature, and featuring in the basic medieval textbooks on astrology. Some prominent subjects are: (a) the seven planets, their qualities, and positions in the different celestial spheres; (b) the 12 houses, their rulers, and their qualities; (c) the different stars; (d) the different phases of the sun in the zodiac throughout the year, derived, as Mizrahi remarks, from the book of Daniel; (e) the correspondence between the planets and parts of the human body. Referring to the scientists (hakhamei ha-mehqar), Mizrahi mentions the similarity between the planets and the parts of the human body in the basic qualities of warm, cold, dry, and moist. The moon, for instance, is similar to the brain in coldness and moisture; the sun is similar to the heart in balanced heat and dryness; Mars is similar to the gall bladder in extreme heat and dryness; and Saturn is similar to the spleen in cold and dryness.

This kind of description is a common feature of medieval astrological literature in the context of the discussion of the seven planets and their characteristics. It occurs, for instance, in Ibn Ezra’s Reshit hokhmah (Beginning of wisdom), and in The Mandic Book of the Zodiac. This last book states of Saturn: “Saturn is cold and dry, it is inauspicious. It is masculine and of the day. It [governs] the belly and the spleen.” Ibn Ezra remarks: “Et en sa partie du corps de l’homme sont les os et la rate et l’oreille dextre le lieu de l’urine et la coile rouge (bile jaune).” Besides a theoretical discussion of astrology, Mizrahi deals with its practical application in the following areas:

1. Divinatory hemerology. This art aims at ascertaining the auspicious or inauspicious character of the future, expressed in hours, days, months, and years. It was, as Fahd remarks, “already known to the early Arabs, as to all people of antiquity.” The Rabbis of the Talmud were familiar with hemerology as we can derive from R. Akiva’s definition of the Biblical term me’on (observer of times) as: “one who calculates the times and hours, saying, To-day is propitious for setting forth; tomorrow for making purchases.” The Talmud also makes a direct connection between the signs of the days of the week and the character of the persons born on those days. A person born on Sunday would have one perfect attribute, either good or bad; someone born on Monday would be irascible etc. According to another opinion expressed in the Talmud, it is not the sign of the day, but the sign of the hour that is

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81 Fol. 28a.
84 Ibn Ezra, op. cit., note 82 above, p. 143.
85 See E.I., vol. 3, p. 1064, s. v. "ikhiyyarit (T. Fahd); see as well ibidem, op. cit., note 39 above, pp. 483-488.
86 TB Sanhedrin 65b.
determinantal. For instance, someone born under Venus will be wealthy and unchaste.  

The Syriac Book of Medicines deals extensively with lucky and unlucky hours of the days, and lucky and unlucky days of the week and month. Under Islam, already the Umayyad rulers appointed an official astrologer with the task to ascertain the auspicious and inauspicious character of the years, months, days, and hours. Under Persian influence this divinatory art became highly developed under the Abbassids. An example is the regulation of the ruler’s agenda for every hour of the week. In the same period a rich literary corpus of mainly short texts dealing with this art came into existence.  

Mizrachi gives a detailed hemerology, dealing with the different days of the week, their hours, ruling planets, and interpretation. About Friday, for instance, he remarks:  

The first hour is ruled by Venus; have sexual intercourse and wear new clothes. The second hour is ruled by Mercury; it is good for enterprise. The third hour is ruled by the Moon; buy but do not sell. The fourth hour is ruled by Aries; it is good for the confrontation of your enemies without any fear. The fifth hour is ruled by Jupiter; it portends peace and happiness. The sixth hour is ruled by Mars; it is good for new enterprises. The seventh hour is ruled by the Sun; satisfy your needs concerning women, but not men. The eighth hour is ruled by Venus; seek the company of women and wear new clothes. The ninth hour is ruled by Mercury; avoid women, servants and boys. The tenth hour is ruled by the Moon; it is good for enterprise. The eleventh hour is ruled by Aries; do not have intercourse with women, and do not meet with peasants. The twelfth hour is ruled by Mercury; do whatever you want. God is all-knowing and all-wise.  

In view of the kind of advice and warnings given in this quotation, and in other texts dealing with the other days, it seems reasonable to suggest that it is a kind of ruler’s agenda regulating every hour of the day, mentioned above. Another hemerology, mentioned by Mizrachi, is introduced with a theoretical discussion on the nature of the moon-month in the name of R. Judah al-Harizi. This hemerology only deals with the prospects for the different days of the month. Referring to  

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Daniel again, Mizrachi gives a range of 14 days following the new moon, and their auspicious and inauspicious aspects. In Islamic literature we find several lunaries called “apocalypses” or “visions” ascribed to the Prophet Daniel, usually under the name “K. malḥamat Dānīyīl.” The Arabs had a predilection for this tradition, especially since Daniel played an important role in Islamic folk literature. About the first four days following the new moon Mizrachi remarks:  

The first day following the new moon is considered to be an auspicious day in every aspect; someone born on it will have a good fortune. . The second day after the new moon is auspicious to appear before kings and bring success when one appears amongst people. Someone born on it will have a good fortune and wealth . On the third day one should be on guard for everything; someone born on it will not have a good fortune . The fourth day after the new moon is good for enterprise, for the acquisition of riding animals. Someone born on it will be intelligent, mild-tempered and wise .  

The Islamic origin and character of this text is borne out by what is said about the seventh day, namely, that it is good for sitting and teaching in the kuttat (Koran school).  

2. Calamities caused by the eclipse of the sun or moon. From the earliest times the eclipse of the sun and moon has drawn universal interest and exerted tremendous fascination. Ptolemy, following Hipparchus, studied the theory of eclipses, and following him, the Arabs, Syrians etc. Various early astronomers observed that sometimes the whole of the eclipsed moon does not appear quite black but shows different colors. These colors were described in detail by the Arab astronomer Ibn al-Haytham (c. 965–1041), and then further studied by al-Bīrūnī (973–1048). The main colors discussed by him in his critique of the astronomers are black, green, red, yellow, and dust-gray. The astrological interpretation of the eclipse of the sun and moon as portending disaster and misfortune, can be found among many nations and goes back to ancient times as well. According to the Talmud,
eclipses were thought to be particularly bad for Jews “because they are accustomed to calamities.” According to another opinion, a solar eclipse was a bad omen for the Gentiles, a lunar eclipse for the Jews, since the Jews based their calendar on the moon, and the Gentiles on the sun.\textsuperscript{97} The same passage from the Talmud gives some details about the kind of disaster that will occur, depending on the colour of the eclipse. If it is red as blood, war will come; if it is “like sack-cloth” (i.e. dark and overcast), famine will occur; and if the eclipse is both red and dark, war and famine will come to the world.

The Syriac Book of Medicines gives a detailed description of the different calamities according to the different colors of the moon during its eclipse: (a) Black with redness portends pestilence, slaughter, and famine. (b) Yellow; it indicates corruption of the fruits of trees and crops, and death of animals. (c) Dusty portends want, snow, ice, and frost, and death of cattle. Other distinctions made are according to the place of the eclipse in the sky and the sign of the zodiac.\textsuperscript{78} The Mandaic Book of the Zodiac describes the different calamities that will befall the world according to the different signs of the zodiac, different months of the year, and different times of the day.\textsuperscript{99}

Mizrahi deals extensively with the eclipse of the sun or moon in his recipe book.\textsuperscript{100} A central topic is which country or region will be affected by an eclipse, and this, according to him, depends on the planet ruling the eclipse. In order to determine the ruling planet, one should, he says, look at the different colors of the eclipse. For if the eclipse is black as lead, harm will hail from Saturn. If it is green or yellow or similar to dust, it hails from Jupiter, and if it is reddish, it hails from Mars. If it is golden, it hails from the sun, and if it is white or blue, it hails from Venus. If one knows from which planet the eclipse comes, one also knows, according to Mizrahi, which country will be afflicted by it, since already the ancient astrologers established that every country has its ruling planet and sign of the zodiac. Saturn (Shabbetai), for instance, rules Israel, because Israel keeps the Shabbath, and its zodiacal sign is Gemini. The Sun and Jupiter rule the Christians, since they keep Sunday; their signs are Aries, Leo, and Sagittarius. Mars, Venus and the Moon rule the Turks and Tartars; their zodiacal signs are Cancer, Virgo, and Pisces.

\textsuperscript{97} TB Sukkah 29a; Encyclopaedia Judaica, vol. 3, col. 789.  
\textsuperscript{100} Fols. 30a-b.

The theory that countries have their own ruling planet and zodiacal sign was widely disseminated in a variety of systems in ancient and medieval times. It originated from the mythological concept of the seven planets or planetary gods ruling the seven chief nations of the world, which was also the prototype of the theory of the seven climates. According to an ancient system adhered to by the Arabs, Saturn governs India, Jupiter Babylonia, Mars the country of the Turks, the sun Rome, Mercury Egypt, and the moon China. Subsequently, Saturn became the planet of Rom, and Mercury that of India. The variety of opinions on which zodiacal sign belongs to each nation was even greater. Al-Kindi, (9th cent.) for instance, followed by Abū Ma’shar (787-886), held that Cancer belongs to al-‘Irāq, Scorpio to the Arabs, Leo to the Turks, Aries to the Indians, Virgo to the Turks.\textsuperscript{101} Yet other systems can be found in The Mandaic Book of the Zodiac,\textsuperscript{102} The Syriac Book of Medicines,\textsuperscript{103} and Ibn Ezra.\textsuperscript{104}

3. Agricultural prospects. In a section entitled “Sha’ar ha-tekuftot” Mizrahi quotes from the Tikqun Yissachar,\textsuperscript{105} composed by Issachar Ben Mordecai Susan (16th cent.). He gives a detailed account of these prospects according to the particular planet ruling the hour in which the [autumnal] equinox (ha-tekuftah) takes place:

If the Sun is ruling in that hour, the whole following season of ninety-one days and seven and a half hours will be one of draught; if it is Venus, there will be some rain; if it is Mercury, there will be plenty of rain; if it is the Moon, there will be snow and cold; if it is Saturn, there will be winds, clouds, and vapours arising from the earth; if it is Jupiter, there will be an eastern wind and sunlight in the world; if it is Mars, there will be heat in the world and warm rain. It is taught in a Baraita: The vernal equinox never begins under Jupiter but it breaks the trees, nor does the winter equinox begin under Jupiter but it dries up the seed. This, however, is the case only when the new moon occurred in the moon-hour or in the Jupiter-hour.\textsuperscript{106}

\textsuperscript{102} Op. cit., note 83 above, pp. 120-122.  
\textsuperscript{104} Op. cit., note 82 above, pp. 266-275.  
\textsuperscript{105} The Tikqun Yissachar, printed in Constantinople in 1564, is a summary of the author’s research into synagogue customs both in Erez Yisra’il and the Diaspora; see Encyclopaedia Judaica, vol. 15, cols. 531-2, s.v. “Susan, Issachar Ben Mordechai” (N. Fried).  
\textsuperscript{106} Fol. 46a; the Baraita is from TB Eruvin 56a; for another quotation from the...
Some other signs referred to by Mizrachi are: if Pesah comes for two consecutive years without rain, there will be famine; if it rains on the 17th of Tammuz, food will be expensive in the beginning of the year, but cheap later on. Quoting a tradition from Ezra the Scribe, he remarks that the agricultural prospects of a year can be derived from a calculation of the autumnal equinox in that year. If it occurs between the 20th and 30th day, there will be plenty of grain; if it occurs between the 6th and 10th day or between the 10th and 15th, grain will be very expensive; if it occurs between the 15th and 20th, it will be rather cheap. A similar tradition, based on a calculation when the winter solstice occurs during the month, is quoted by Mizrachi in the name of R. Moshe ha-Darshan.

According to Trachtenberg, "the days near the summer and winter solstices were similarly regarded as portentous; the 13th of Tammuz indicates the weather that will prevail during Tammuz, Ab, Elul and Tishri, the 14th corresponds to Heshvan, Kislev, Tebet, Shevat, etc." Some other signs referred to by Mizrachi are: if Pesah comes for two consecutive years without rain, there will be famine; if it rains on the 17th of Tammuz, food will be expensive in the beginning of the year, but cheap later on. Trachtenberg refers to a late, but probably authentic tradition ascribed to Judah the Pious:

When it rains on the 19th of Tammuz and not on the 21st, the price of foodstuffs will be high until the spring, and then will fall; if it rains on the 21st and not on the 19th, prices will be low until spring and then rise; if it rains on both days, prices will be high all year; but if it rains on neither day, food will be abundant and cheap throughout the year.

Astronomical meteorology was widely spread in antiquity and the Middle Ages. Apart from the internal Jewish tradition, an important role in the diffusion of this "science" in Jewish culture may have been played by two letters by al-Kindi which only survive in Hebrew translations and in many manuscripts, namely, his Iggeret ba-ladu yaqut u va-ma-at and his Iggeret ba-illot ha-meyyadosef el ha-issim ha-elyonim.

This section is, as stated above, a copy of the "Kitāb azhār al-iskār fi jawāḥir al-aljār", a book on precious stones composed by al-Tifāshī. This subject enjoyed great popularity amongst Muslim authors. Minerals and their properties were described in medical, commercial, technical, and chemical literature, and especially in a variety of books, primarily magical in content, which were devoted to the subject. One representative of the latter genre was ascribed to Aristotle. Al-Tifāshī describes a total of twenty-five precious stones, always proceeding according to the following scheme: (a) their formation; (b) their finding-place(s); (c) criteria for their purity, genuineness, and spuriousness; (d) their medical and magical effects; (e) their worth and prices, sometimes in a detailed form. The author also mentions blemishes and different kinds of material useful for the restoration of these stones.

It is probable that precisely the practical aspects of this book were the main reason for Mizrachi’s decision to copy it and include it in his recipe book. Take, for instance, al-Tifāshī’s discussion of the turquoise. It originates, he says, from copper vapours arising from copper mines in the mountains of Nishāpur. The best kind is the pure blue one, brilliant and very hard. Oil, sweat and musk are very bad for it, since they affect its brilliance and colour. When pounded, it is good for the eyes in a collyrium, and ingested, it is good for the bite of insects. The price of the turquoise, which is mostly found set in a ring, varies greatly with its quality; sometimes it costs one dinar. The kind called “bushqāt” is most expensive, while the “fajanaj” is half of its price. It is much sought after by eminent Berbers of the Maghrīb, who give very high prices for it; sometimes as high as ten Maghrībein dinars for a stone set in a ring. They use it as an ornament on their weapons, because it is said to protect its bearer on the battlefield.

Another example is al-Tifāshī’s discussion of pearls. Referring to their formation, finding-places, good or bad qualities, medical use, and value, he pays much attention to different recipes to improve their quality, which, according to him, depends upon whiteness, purity, roundness, and brilliance. That Mizrachi was especially interested in the practical
aspect of al-Tifāshi’s treatise becomes clear from another section where he quotes a technique for the restoration of discolored pearls: “Take equal parts of salt and turpentine, put this in an alembic on a low fire, put the pearls in the oil that will come out of it for about one hundred counts.” This technique is similar to one given by Vital in his recipe book for the same blemish and possibly derived from this source.117

IV. Alchemy

Following the ancient Greeks, the Arabs took a lively interest in alchemy, leading to manifold activities of translation, adaptation, and original composition. Between the 9th and 10th centuries two large alchemical opera came into being, namely, the Corpus Jabirianum traditionally ascribed to Jābir ibn Hayyān, and the writings of Muḥammad b. Zakariyā’ī al-Rāzī. In the following centuries a number of writers partly continued the ancient traditions, partly composed original writings. But also in western Europe the subject of alchemy became very popular after the translation of Arabic alchemical works into Latin in the 12th and 13th centuries.118 A contemporary of Mizrachi in 17th-century Italy, namely, Leone Modena (1571–1648), Italian rabbi, scholar, and writer, dealt in alchemy for a profit and lost his son Mordecai as a result of the latter’s alchemical experiments.119

Mizrachi gives a list of herbs in Arabic which are useful for the art of alchemy (šīr al-kaff). Some of these herbs are: al-qamar herb; al-qamar tree; Celtic valerian (šārid); al-zahra, also called qaṭariyān (cen-

117 Op. cit., note 1 above, pp. 98–9. As to the translation by Patai (op. cit., note 5 above) of Mizrachi’s text on the crystal I would like to note: “bawraq abyad” (fol. 8a) is not “shining white”, but “white boracic”; the “illigible” word is “a’rād”, “ll-a’rād alladhi ‘aradat lībi” is not “which is found in it [the mine]”, but “because of the accidents that occurred to it.”


120 For the term “kaff” see Wörterbuch der klassischen arabischen Sprache, hrsg. durch die Deutsche Morgenländische Gesellschaft in Verbindung mit A. Spitzer, bearb. v. Jörg Krämer u. Helmut Gütte (Ab Lief. 3 bearb. von M. Ullmann), Wiesbaden 1976/77, vol. 1, p. 439: “pseudonym for alchemy” (cf. Dony II, 500 a). The translation by Patai (op. cit., note 5 above, p. 365) of the title of this particular section as “the Science of Wellbeing” is wrong. The Arabic term “kaff” is not derived from a root KFY, but from KWF.

121 The al-qamar122 recipe reads: “Its leaves are like herval, its seed is like hen’s eggs, its smell and taste are like that of saffron. If you break it, white milk streams out of it; it grows in the mountains and valleys. Once you have found it, take it, extract its juice and put it in a pot. Take beef, put with one part of the juice and one part of mercury in it (i.e. in the pot), and insipitate it on hot ashes. Once it is coagulated it will be white silver.” In Vital’s recipe book, alchemy plays no role in the central section on chemical manufacturing processes, except for his quotation of the theory of transmutation.123

V. Chemical technology

1. Precious metals: In a small section entitled “Sha’ar hokhmat minei ha-mattakhōt” (On minerals), Mizrachi gives a small list of different processes.124 Most techniques, however, describe different ways to add extra weight to gold. For instance, the author recommends that one “take sal ammoniac (nīshādir), pulverize it, put some of it on the gold, immerse it in strong vinegar, and let it stand for half a day.” The adulteration of gold and silver was common practice in the Middle Ages. Vital’s recipe book describes various techniques to defraud the public by increasing the weight of gold coins or altering the appearance of coins.125 One technique described by Vital for the improvement of the colour of gold is similar to that mentioned by Mizrachi for increasing its weight: “Take pulverized sal ammoniac, put the gold in water or in vinegar; sprinkle the sal ammoniac over it; put the gold into the fire until the sal ammoniac is completely burned; then extinguish it with water.”126

2. Inks: Just like Vital, Mizrachi may be presumed to have been intimately familiar with the materials of the scribes, since he himself was a scribe by trade. Mizrachi offers formulae in Arabic for different kinds of tannin inks and for gold-colored ink.127 For the preparation of gold-colored ink he recommends taking white Iraqi sarsocol, pulverizing it

122 I have not found this name in the Arabic botanical dictionaries. Douté (op. cit., note 2 above, p. 72) interprets “el ‘oud al-qamar” as “bois d’aloès”

123 See op. cit., note 1 above, pp. 107–8.

124 Fol. 12a.

125 See op. cit., note 1 above, pp. 105–6.

126 Ibid., p. 103.

127 Fol. 13a; one formula is mentioned in the name of Ezra the Scribe.
with extract of fenugreek, and strewing some saffron on it. The use of
gold-colored inks, prepared from the various pigments of botanicals,
was very common. Formulae for their composition can be found in
papyrus Leiden X, a third-century Egyptian text, 128 and in the Middle
Ages in the Arabic Zubritian Corpus 129 and in al-Mu'izz ibn Baidi's
monograph on bookbinding. 130 Next to gold-colored ink, mention is made of
"real" gold ink, usually consisting of finely pulverized gold, from leaf or
filings, in various media. It is attested in the papyrus Leiden and in Ibn
Baidi's monograph. Ancient Jewish sources refer to the custom, later
forbidden, of writing Torah and the name of God (i.e. the Tetragram-
maton) in gold, rather than in the traditional black ink. 131 Formulae for
real gold ink are also mentioned in Vital's recipe book, which distin-
guishes between ink proper (visible ink), invisible inks, and other kinds
of ink, and contains several formulae for their composition. 132

3. Cosmetics: The use of cosmetics for the care and adornment of
the body was universal in the ancient Near East. Men used oil for the
anointment of their bodies and for spreading it over the hair of their
head and beard. Sometimes they used creams and lotions to protect
their skin against the heat of the blistering sun. Women used different
kinds of preparations for the care and beautification of hair, eyebrows,
face, lips, skin, and nails.

The Rabbis of the Talmud had a positive attitude to the use of cos-
metics, as long as one did not use them for immoral purposes. Rabbinic
literature is a rich source of information on the manufacture and mar-
keting of cosmetics. The perfume dealers were concentrated in the
Market-Street of the Perfumers in Jerusalem, and often such shops could
be found in the "Market [street] of the Prostitutes." 133 The use of cosmetics
was universal in Islam. A wealth of different formulae can be found
in Arabic literature in a special literary genre, namely, that on perfumes. 134

128 See Earle Radcliffe Cayley, "The Leiden Papyrus X. An English Translation with
129 Paul Krauss, Jābir ibn Hayyān, Contribution à l'histoire des idées scientifiques
dans l'Islam, Volume II: Jābir et la science grecque, Cairo 1942, p. 78.
130 Martin Levey, Medieval Arabic Bookmaking and Its Relation to Early Chemistry
and Pharmacology (Transactions of the American Philosophical Society, New Series,
133 See Encyclopædia Judaica, vol. 5, cols. 978-982, s.v. "Cosmetics" (Z. Yeivin);
Preuss, op. cit., note 59 above, pp. 357-374.
134 Cf. Manfred Ullmann, Die Medicin im Islam (Handbuch der Orientalistik I,
Ergänzungsband VI, 1), Leiden-Cologne 1970, pp. 313-316.

But also medical encyclopedias, above all al-Zahrāwī's K al-nafsī
gi, are a rich source of information. 135

Hayyim Vital offers a wide variety of formulae for cosmetics for light-
ening a woman's skin, removing freckles, making one's face more radi-
ant and beautiful, stimulating and inhibiting hair growth, dyeing one's
hair, and making eye shadows. He also deals with spurious cosmetics
and authenticity tests. Since traditional perfumes were very expensive,
there were many attempts to substitute cheap concoctions for authentic
ingredients like eivet and ambergins. 136

Mizrahi's discussion of cosmetics covers two sections in his recipe
book, one called "Sh'ar' ha-panim", 137 and the second "Bab fi l-sha'ar
wa-l-wajh." 138 Unfortunately the text of the first section is completely
obliterated, except for two formulae. To whiten the face and remove
freckles, Mizrahi recommends a salve consisting of doves' excrements
mixed with vinegar. For protection against the sun he recommends a
lotion consisting of lemon juice with an equal amount of rose water. A
formula for beautifying one's hair and dyeing it golden is to wash it with
water in which lupine has been macerated. To make one's face radiant
(la-haghtha ha-panim) one should use a powder prepared from beans, len-
tils, peas, lupine, and fenugreek that has been mixed with egg yolk, then
dried in the shade and mixed with the root of the lily and some sugar. A
hair tonic recommended by Mizrahi consists of the powder obtained by
burning dead bees with honey.

4. Wine: In a section entitled "al-qawl fi l-sukkar wa-l-nabidh" Mizrahi
gives some recipes for making vinegar or sweet wine. 139 One recipe for
sweet wine is: "Take seed of leek, pulverize it thoroughly and sprinkle it
in a jar with vinegar and leave it like that for two or three days." To
make wine sour one should take green, unripe strawberries and put them
in the wine. To get strong vinegar within three days one should put a
attention to wines, and contains recipes for the preparation of vinegar
different from those mentioned by Mizrahi. 140

135 S. K. Hamarneh, "The First Known Independent Treatise on Cosmetology in
Spain," Health Sciences in Early Islam, Coll. Papers, ed. by Munawar A. Anees, 2
137 Fol. 19b.
138 Fol. 23a.
139 Fol. 18a.
Some other subjects, of a secondary nature, in the field of chemical technology are discussed by Mizrahi in a section called “Liqquitim.”¹⁴¹ Some recipes are for: (a) the removal of spots from clothes and paper;¹⁴² (b) to prevent the fruits of a tree from falling prematurely; (c) to prevent ants from entering a pot with honey.

VI. Medicine

In accordance with the nature of a recipe book, Mizrahi only discusses therapy, while omitting physiology, aetiology, and nosology. His therapy is characterized by the prominent role of magic and by the frequent use of animal parts and excrements. Magic played an important role in the medical discussion from the very beginning. It features prominently in The Syriac Book of Medicines.¹⁴³ In Islamic medicine magic plays a central role in the so-called K. al-mujjarrabat (experimenta),¹⁴⁴ contrary to the classical medical encyclopedia as composed by Ibn al-Jazzâr (10th cent.),¹⁴⁵ al-Mâjîsî (10th cent.),¹⁴⁶ and Ibn Sinâ (980–1037), which are almost completely free of magic. In the Jewish medical tradition magical therapy plays an important role in the popular medicine as featured in the Talmud. Recognizing the popularity of magical healing and the futility of any attempt to suppress it, the Rabbis formulated the fundamental rule: “Kol mah she-yesh bo mi-shum ha-refu’ah eyn bo mi-shum darkhei ha-Emori” (Anything that heals does not fall under the head of “ways of the Amorite” i.e. superstition).¹⁴⁷ Other preserved sources of popular magic medicine, are Palestinian amulets and Babylonian incantation bowls.¹⁴⁸

¹⁴¹ Fol. 15a.
¹⁴² Vital discusses this subject extensively in his recipe book (op.cit., note 1 above, p. 96).
¹⁴⁶ For his medical encyclopeda called Kāmil al-Sinâ’a see Ullmann, op.cit., note 134 above, pp 140–146.
¹⁴⁸ See Joseph Naveh-Shaoul Shaked, Amulets and Magic Bowls of Late Antiquity, Leiden 1985; idem, op.cit., note 52 above.

¹⁵⁰ Fol. 18a–22a.
¹⁵¹ Fol. 37a; cf. op.cit., note 1 above, p. 78.
ferent holy names, such as Rapha'el and Gavri'el, elements of nature, such as day and night, sea, fishes, Nile grass (ahu), and products of human activity, namely, bread, wine and salt. The Babylonian Talmud refers to an incantation against the demon of blindness, called 'Sha-bribe': "Sha-bribe, beire, rire, ire, ire."153

3. Nose diseases: Especially prescriptions for nose bleeds are prominent.154 According to one prescription, the patient should put into his nose the powder obtained by burning eggshell with the blood of a nose blee. Several prescriptions, of a magical nature, involve the writing of holy names on the patient's forehead with the blood streaming from the nose. Some of these names are: QYTHR (to be written twice); BRQY'T; SWLIK' (to be written three times); FFRWNYQSW, BRWNIQSW, and in case of a woman FRWNYQ'S, BRWNIQ'S.

4. Mouth diseases and toothache: The cures recommended by the author consist of a variety of natural and magical remedies.155 For bad breath one should chew costus every morning; in the case of a teething child one should take a dog's tooth and hang it around his neck. If a bone is stuck in someone's throat one should take the excrement of a cat, mix it with spittle and smear it on the jaws.

5. Ear diseases: In the case of deafness Mizrahi recommends taking [some] ants, putting them in sweet olive oil and dripping this into the ear. According to another recipe one should put the entrails of a sheep on the fire, and put something of the rising froth into the ear. Ear diseases resulting from extreme fluctuations of heat and cold, as well as from strong hot and cold winds were, as we know from medical literature and travelers' diaries, very common throughout the Middle East until recent times.156

Besides these recipes, Mizrahi discusses one therapy in particular, namely, bloodletting.157 Bloodletting as a means to expel harmful superfluities from the body, was widely applied in ancient and medieval medicine. The Hippocratic writings recommend it for removing fluids that cause sickness, such as phlegm, yellow bile, black bile, etc.158 Galen assigns a central role to those cures which aim at the evacuation of the superfluous, corrupt fluids; these cures are bleeding, laxatives, emetics, etc.159 Byzantine and Islamic medicine, following Galen, also adopted his therapy of evacuation.

Mizrahi's discussion of bloodletting is derived from the Talmud. He quotes Samuel's statement of the hours of the day and the days of the week or month which are good or bad for bleeding. Especially the even hours of the day are thought to be dangerous since they are ruled by the planet Mars.160 The combination of medicine and astrology is an ancient tradition which can be found in medieval sources as well.161

Conclusion

Mizrahi's recipe book is another representative of the genre of "catch-all-recipebooks", so popular in the 16th and 17th century, and was hitherto only known through Vital's "Practical Kabbalah and Alchemy". Although Mizrahi's recipe book has unfortunately only been partially preserved and is in bad shape, and although it is much more concise than Vital's work, it still enriches our knowledge of the popular culture, religion, and medical conditions of his time. It sheds light on the vicissitudes of daily life in the 17th century and reveals the fears and anxieties of ordinary people in an age of many fatal diseases and short life expectancy. No wonder then that different kinds of magic and astrology were often resorted to for answers and solutions science was unable to give.


Patai's chapter deals with Vital's "Kabbalah Ma'asit ve-Akhimmih;"162 a text which I have discussed in my article "Hayyim Vital's 'Practical Kabbalah and Alchemy': A 17th century Book of Secrets."163 His survey of Vital's recipe book is mostly of a descriptive nature; he has not attempted to analyze the material. Most of the alchemical material in Vital's recipe book is, in fact, not alchemy proper, but chemistry,

154 Fol. 39a.
155 Fol. 41a.
156 See for an extensive treatment of ancient and medieval Arabic sources op. cit., note 150 above, ch. 5.
157 Fol. 14a.
159 Ibid., vol. 1, pp. 393–394.
161 See op. cit., note 1 above, p. 93.
163 See note 1 above.
showing Vital as an “experiential chemist.” Patai should have recognized Vital’s role as a forerunner of modern chemistry. Patai does not deal with Vital’s recipe book in its proper historical context, as part of a genre called “do-it-yourself formularies” which became so popular during the 16th and 17th centuries. Nor has he studied the work in its proper social and economical context, that is, as a source providing valuable contemporary religious, socio-economic and medical data. Relevant bibliographical information is lacking more than once. In his discussion of research so far Patai does not mention Scholem’s article “Alchemie und Kabbalah”, written in 1922. Scholem remarks in this article that it might be worthwhile to do further research on the section dealing with chemistry from Vital’s recipe book. When Patai mentions Vital’s quotation from the “Mar’ot ha-Šo’vot” (p. 358), he neither mentions its author, David ben Yehudah he-Hasid, nor the edition by Daniel Chanan Matt. And when referring to the “Sod Y’sharim” (p. 358), he does not refer to its author, Judah Arech of Modena.

As to the date of composition of Vital’s treatise, Patai states that it was probably written soon after Luria’s death when Vital was in his early thirties. Patai bases his argument on the words written on top of fol. 110a of the MS: “I, the youth, Hayyim Vital.” In my opinion, however, it is very unlikely that it was written that early; the amount of material assembled in it; the many experiments recorded in it, and Vital’s own remark that he wrote more than two thousand amulets against Lilith, indicate that this work is the result of a lifetime of practice and study. It is therefore much more reasonable to suggest, with Benayahu, that it was composed in his old age in Damascus. The note on top of fol. 110a can easily be explained as only referring to that particular recipe.

Patai remarks that Vital wrote his book in Hebrew, switching to Arabic in some minor parts of it, and that he translated many medical, botanical, and alchemical terms into Arabic. Although generally the treatise was indeed composed in Hebrew, Vital did not translate many technical terms from the Hebrew into the Arabic. On the contrary, he translated some of these terms from Arabic into Hebrew, for most of the technical terms in his treatise are in Arabic, the language in which he was familiar with these terms. In some cases he translated them into Hebrew, when possible, or into Ladino.

Patai’s transcription of many Arabic terms is not according to the standard vocalization. For instance, “nishādir” (ammonia; pp. 346, 356, 362) should be “nīshādir”; “alum yamini” (Yemenite alum; p. 346) should be: “alum yamani”, a Spanish-Hebrew/Arabic combination; “tutia hindia” (Indian zinc oxide; p. 352) should be: “tūtiya hindiya”; “mordisene” (pp. 352, 354) is Arabic “murdasān” (litcharge); “rahj al-ghār” (cave-dust, p. 355) should be “rahj al-fār” (mice-dust); “wayadhbahutu” (and gild it, p. 360) should read “wayudhibhuhu”; “Bil-bid” (with eggs, p. 360) should be “bil-bayd.” Instead of “R. Yosef Šiah” (p. 359), it is better to transcribe this name as “R. Joseph Zayyah,” the well-known 16th-century Rabbi and Kabbalist. Patai’s transcription of ṬWQI (touchstone, p. 345) as “toqe” from Spanish “piedra de toquel” is a welcome correction of my faulty “tuqi.”

Patai’s conclusion that the frequent references to cosmetic prescriptions in Vital’s recipe book indicate that attractive appearance was evidently an issue in Vital’s circle (p. 358), disregards the general demand for cosmetics by men and women throughout the Middle East. Vital’s many recipes for cosmetics are thus no indication that these cosmetics were especially important for his circle. It rather reflects the wide public interest in his days.

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164 The only exception is his remark on p. 345 about Vital’s recipe for embroidering gala clothes with gold and silver, indicating a society of rich people who could afford such clothes.


166 ibid., p. 67.

167 Chico, California 1982.


169 P. 343.


172 See above sect. 5, Technology.