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6.1. Cross-communal scholarly interactions

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The current chapter is concerned with particular fields that held a special position in cross-communal scholarly interaction: medicine, the natural sciences and mathematics. These constituted domains of knowledge that did not directly overlap with scriptural disciplines such as exegesis or law (and so are in what Goldstein [2002] calls a “neutral zone”). As a result, these were perhaps the domains where the most wholesale exchange of knowledge could take place among different communities. We attempt here to understand in concrete terms where and in which contexts cross-communal scholarly interactions took place.²

6.1.1. Introduction and state of research

“Creative symbiosis” is the irenic term that was coined by Shlomo Dov Goitein (1900-1985) to describe various forms of cross-communal interaction among the members of different religious groups in the Near East.³ His research was based on the Cairo Genizah documents, which provide an unparalleled insight into everyday life, being a particularly fertile source for examining social and economic history. The “Genizah people” or “Mediterranean people,” as he would call the protagonists of his documents, were – it appears – members of a pluralistic Islamicate society and encompassed Jews, Christians and Muslims alike. Unlike in Europe, Jewish communities in the Islamicate world, as people of the book (*ahl al-kitāb* in Arabic), enjoyed the protection to exercise their faith, with similar protections extended to Christians and Zoroastrians.⁴ This freedom was based on the concept of *dhimmah*, which can be translated as “contract of security,” granted by Muslim rulers on the condition that protected

people (*dhimmī*, collectively *ahl al-dhimma*) respected certain rules of conduct and paid a poll tax (*jizya*) and a collectively levied tax on agricultural land (*kharāj*). Furthermore, Jews and Christians were not subject to limitations or professional restrictions in the economic sphere and were given the right to self-govern. The Genizah texts give evidence that Jews, Christians and Muslims lived in very close proximity, were business partners and even owned houses jointly.⁵

It seems a somewhat abstract commonplace in modern scholarship that these everyday social relationships were echoed in scholarly exchanges (Freidenreich and Goldstein 2012; Ben-Shammai, Shaked, and Stroumsa 2013). There is a consensus that confessional boundaries seem to blur in intellectual pursuits. The permeability among the learned elite – that is, the mutual exchange among all societal components that Hodgson (1974) has termed *Islamicate* – naturally follows from the fact that these communities shared a language. After the Islamic conquests in the 1st/7th and 2nd/8th centuries and following the practices of the chancelleries of the newly installed rulers, Arabic slowly became the common language of the entire region and the spoken tongue of most of its non-Arab inhabitants (with the exception of those living in Iran and central Asia and regions only later coming under Muslim rule in Africa, Asia and Europe). By virtue of this paradigmatic shift, by the 3rd/9th century a unifying Arabic literacy had come into being that encompassed both Muslim and non-Muslim writers. The educated elite and the common people, who partook much less actively in the realm of intellectual high culture, shared a similar cultural background, speaking and writing in the same language.

All texts, terminology, innovative literary models, textual practices and genres composed in Arabic could easily travel

beyond communal barriers. Examples can be adduced from almost all fields of learning (which, of course, partly overlap): exegesis (Zucker 1984; Ben-Shammai 2003), philosophy (Ben-Shammai 1997), theology (*kalām*; Bertaina 2014; 2015; Griffith 1994), grammatical thought (Becker 1993; 1995; Basal 1988; 1999), legal reasoning (Freidenreich 2014; Libson 2003; Salaymeh 2015), medicine (Pormann and Savage-Smith 2007[CB]) and the mathematical sciences (Goldstein 2002). Hava Lazarus-Yafeh (1992, 4) described the result as “a palimpsest, layer upon layer, tradition upon tradition, intertwined to the extent that one cannot really grasp one without the other, certainly not the later without the earlier, but often also not the earlier without considering the shapes it took later.” Different terms have been used to conceptualize this entangled textual commonality shared by Jews, Christians, Muslims and others inhabiting the same space. Terms such as “impact” and “influence” stress the agency of the donor community, and “acculturation” and “appropriation” stress the agency of the receptor community (Freidenreich and Goldstein 2012, 1). However, all these terms exhibit explanatory models that reduce complex forms of interaction to static binary encounters. Even the images of “cross-pollination” (Goodman 1995; 1999; Montgomery 2007) or “intertwinement” (Lazarus-Yafeh 1992), which profess reciprocity, struggle to fully capture the multiple, simultaneous dynamics of cross-communal engagement.

This chapter begins by discussing interactions that occurred primarily through texts, as scholars shared books and exchanged ideas, terminology and concepts (section 6.1.2). But the chapter goes beyond this textual sphere, asking questions about the personal and professional networks that underlay the textual encounters and the spheres in which scholars met. Further themes concern particular venues or occasions and social factors that encouraged cross-communal

interactions. To address a much-needed area of research, we pursue those questions in a preliminary way in three sections (6.1.3–6.1.5).

In previous research, one very particular type of interaction has been heavily emphasized – the *majlis* (plural *majālis*). The *majālis* were public or semipublic meetings, sometimes at a caliph’s or emir’s court, that included disputations on a variety of religious topics. Jewish, Christian and Muslim sources provide ample details on such debates (Lazarus-Yafeh *et al.* 1999). For example, the historian al-Mas‘ūdī (d. 345/956) mentions in his *Book of Admonition and Revision* (*Kitāb al-Tanbīh wa-l-ishrāf*) that he had been involved in many debates with Abū Kathīr al-Kātib, the scribe, of Tiberias (d. 319/932) on the subject of the abrogation of law (*naskh*; on identifying al-Kātib, see Polliack 1997, 12 no. 39; Zucker 1984, 253 no. 266). Al-Mas‘ūdī also reveals that Abū Kathīr was the teacher of Sa‘adia Ga‘on (268-330/882-942) and relates that the latter attended the *majlis* of the vizier Ibn al-Jarrāh (245-335/859-946) and his entourage (al-Mas‘ūdī 1894, 112-4). As fascinating as it is to trace these cross-communal *majlis* connections, they show only a sliver of the spectrum of scholarly interactions. *Majālis* appear to have been highly formalized and performative encounters among specially-chosen, distinguished scholars, who followed a strict protocol and sometimes used polemic for effect.

The following discussion also wrestles with three basic difficulties underlying the topic of cross-communal scholarly interactions, which can be noted here but not fully resolved. The first is holding in tension the fact that medicine, the natural sciences and mathematics were considered faith-neutral and rational, as mentioned above, while grasping that they were not really “secular.” On the one hand, the need to reconcile Galenic and Aristotelian views with belief systems

stemming from the Bible or the Qur'ān seems to have hardly hindered an active interchange and sometimes synthesis across communal boundaries. On the other hand, it was very often the case that scholars who were involved in these areas led their respective religious communities and engaged in apologetic and polemic discourse rooted in the same philosophical systems that undergirded their work in the natural sciences. With the important exception of “prophetic medicine,” which was based on *ḥadīths* (Pormann and Savage-Smith 2007, 71-5; Bürgel 2016[CB], 34-47), these sciences were neither separable from theological disciplines nor wedded to them.

The second difficulty concerns the language of borrowing, which presumes that *one* group borrows from or is influenced by the *other* (Salaymeh 2013, 412-3). Underlying such language is the notion of intellectual authenticity, that only the latter group can claim ownership over a particular scholarly practice, whereas it enters the former group as an alien influence. Thus, this practice must inevitably pass an imagined border. It is the modern interpreter who presumes to reify here a certain directional vector and the moment it passes such a border. Such language obscures, and actively ignores, the historical reality of hybridities in the Islamicate world. Sarah Stroumsa (2011) offers an alternative model, in which she suggests that the flow of ideas was never unilateral or linear, originating in one community and being transmitted to another, but rather went back and forth. This movement created something she proposes calling a “whirlpool effect.”

This brings us to the third difficulty, somewhat connected to the previous, which is the slipperiness of these scholars’ religious affiliation in both primary sources and research literature (Salaymeh 2013, 413-4). Almost all medieval scholars seem to have been associated with some religious

community on a social level, and some important social categories were defined in religious terms (for example, Muslim and *dhimmi*). What this association actually meant regarding their beliefs or practices, however, could cover a very wide spectrum and should never be assumed on the basis of a label alone. For example, the scholar of mathematical sciences Ibn al-Haytham (Alhazen in Latin; [354-c. 430/965-c. 1040]; Vernet 1986b) might superficially appear to have been a Muslim – indeed, he wrote a treatise on finding the *qibla* – but he claimed to have set aside confessional disciplines deriving from scriptural revelation in order to reach epistemological certainty:

I became engrossed in the variety of views and creeds and the kinds of religious knowledge, but I did not have the good fortune to benefit from any of them. They did not help me recognize the path of truth or follow a renewed course to certainty. So I saw that I could not get to the root of truth except by conceptions whose origins are sensory and whose forms are intelligible (Ibn Abī Uṣaybi‘a 1884[CB], 2: 92; 2020[CB], 14.22.4.1).⁶

He proceeds to explain that the only approach he found adequate was an Aristotelian one, beginning with classification and logic and ending with a metaphysical account of God.

Another example is Yūḥannā ibn Māsawayh (d. 243/857), who is called a “Christian” but who reportedly insulted the Catholicos-Patriarch with obscenities and shooed away monks from his sickbed with the remark, “A bit of rose perfume is better than the prayers of all Christians” (Ibn Abī Uṣaybi‘a

1884, 1: 186; 2020, 8.26.7). Similarly, it is difficult to know how to concretely interpret supposed “conversions” (Stroumsa 2015). In addition to these issues regarding the spectrum of connotations for affiliation labels, one also has to question the accuracy of the sources that use them. A classic case is that of ‘Alī ibn Rabban al-Ṭabarī (3rd/9th century), who is known to have been a Christian convert to Islam, but whom the Muslim biographers Ibn al-Qifṭī (568-646/1172-1248) and Ibn Abī Uṣaybi‘a (d. 668/1270; Vernet 1986a) label as originally Jewish due to confusion over his father’s title, “al-Rabban” (Thomas 2000). In the following, then, it should be understood that these factors make it impossible to use confessional labels such as “Jewish,” “Christian,” or “Muslim” with consistent or certain meaning – the biography of each scholar must be consulted individually.

6.1.2. Textual production and migration

At the level of texts, it is clear that there was interaction between the scholars of different communities. The presence of Christian and Muslim books on Jewish bookshelves, for example, is well attested in medieval Jewish book lists from the Cairo Genizah that document private catalogues, booksellers’ lists and library inventories (Allony 2006).

The fields of natural science and medicine feature prominently in these lists. Miriam Frenkel (2017) has shown that many of the buyers and owners come from a well-defined social circle. Some were physicians and held public office in the Muslim administration; others were judges or cantors in the Jewish community. One list, recording the sale of books from the estate of Rabbi Abraham the Pious (Abraham he-Ḥasid, 7th/13th century), notes explicitly that a number of medical works were sold to Muslim colleagues (Frenkel 2017, 240; Allony 2006, no. 67) – for example, copies of Ibn

Rushd's (520-595/1126-1198) *General Principles of Medicine* (*al-Kulliyāt fī l-ṭibb*), a multiple text manuscript with Hippocratic medicine and a separate book on ophthalmology were sold to a certain Ḥājj Bu Muḥammad. These transactions indicate that books circulated among equal-ranking members of the same profession in governmental service, irrespective of their denomination.

Specimens of such books have survived in the Cairo Genizah, where they seem to have been deposited together with manuscripts in Hebrew script that would have formed the larger part of the collections documented in the lists (Figure 6.1.1.). Compositions of Christian Arabic provenance that were disseminated among Cairene Jews consist of works addressing a broader, general readership, such as medical science or philosophy (Szilágyi 2006). Among them one finds an early fragment of *Definitions of Logic* (*Kitāb ḥudūd al-mantiq*; Ferrario and Vollandt 2010) by Ibn Bihrīz (2nd half 2nd-early 3rd century/2nd half 8th-early 9th century), *Medical Problems* (*Masā'il fī al-ṭibb*) by Ḥunayn ibn Ishāq (d. 260/873), *The Introduction to the Art of Geometry* (*al-Madkhal ilā šinā'at al-handasa*) of Qustā ibn Lūqā (d. c. 299/912), *The Reminder of the Oculists* (*Tadhkirat al-kaḥḥālīn*) by 'Alī ibn 'Īsā (d. first half of the 5th/11th century), and *The Physicians' Dinner Party* (*Da'wat al-aṭibbā'*) of Ibn Buṭlān (d. 458/1066); many of these were considered standard reading for Jewish physicians. Arabic translations of the Aristotelian corpus (including commentaries thereon) can also be found (Khan 1986). A great many copies of works in Arabic by Hippocrates (particularly the *Aphorisms*) and Galen survive. Further attested are the *Diwān* of Abū 'Amr al-Bakrī al-Wā'ilī (6th /12th century) and that of al-Mutanabbī (d. 354/955), various Arabic grammars (Vidro and Kasher 2014) and books on rhetoric. Several disciplines stand out: Arabic language and

literature, studied by Jews and Christians in training for governmental service, as well as science and philosophy, as preparation for the medical profession.

Although no systematic survey has been undertaken of Jewish ownership of Arabic-script manuscripts (which could be done, for example, on the basis of owners' marks, marginalia in Hebrew letters, and colophons mentioning copyists with unambiguously Jewish names), van Koningsveld (1992) has been able to identify a number of medical manuscripts from al-Andalus that were in the possession of Jewish physicians. Jews even transmitted Christian and Muslim works on grammar, medicine (with Ibn Sīnā's [d. 428/1037] *Canon of Medicine* [*al-Qānūn fī l-ṭibb*] the most popular), astronomy and astrology, philosophy, geometry and meteorology, together with various almanacs transcribed into Hebrew letters (Langermann 1996a; 1996b; Steinschneider 1893; 1897).

We also find Jewish and Muslim texts in Christian Arabic collections, with medical and scientific texts appearing to have been the most widespread. Some of the books are biblical or post-biblical in their content, such as Sa'adia Ga'on's *Commentary* (*Tafsīr*) or an Arabic translation of *Sefer Josippon*, both originally composed in Judeo-Arabic for a Jewish readership. They were transcribed in Arabic letters in the course of transmission and disseminated among both Christians and Muslims (Vollandt 2014; 2018). As above, no systematic study exists, and indeed only a few collections are catalogued well enough to allow such an investigation, but a few examples will suffice to attest to the cross-communal circulation of such books. Representative of a monastic context, MS Sinai, Ar. NF Paper 11, at the Monastery of St. Catherine's, contains the *Complete Book of the Medical Art* (*Kitāb kāmīl al-ṣinā'a al-ṭibbiyya*; Ullmann 1970, 140-6) by 'Alī ibn al-'Abbās al-Majūsī (d. c. 384/994), copied by the

Christian scribe Khalīl ibn Hibbat Allāh ibn Abī Alūfā ([active late 7th/13th century?]; Meimaris 1985, 40/٤٢). Equally, the manuscript collection in the Coptic Orthodox Patriarchate (Simaika 1939, 2:486-7) contains a few Muslim medical works (MSS Varia 17, 18, 20, 21, and 22) – these include the *Medical Handbook (Tadhkira)* of Dāwūd al-Anṭākī ([d. 1007/1599]; MS Varia 20; see Ullmann 1970[CB], 181) and Ibn Sīnā's *Canon of Medicine* (MS Varia 21), as well as a work entitled the *Splendid Book (Kitāb al-fākhira)*; MS Varia 17), of Jewish provenance, which is attributed to a certain 'Abdallāh al-Isrā'īlī, the physician.

Similarly, albeit from much later times, medical treatises in Arabic were also transmitted in Syriac script (Garshuni) among Christian communities. Examples of this include MSS Jerusalem, St. Mark's Monastery, 236 (two medical treatises on diseases and on remedies) and 238 (*Complete Book of the Medical Art [Kitāb kāmil al-ṣinā'a al-ṭibbiyya]* by al-Majūsī); MSS Mardin, Church of the Forty Martyrs, 556 (medical treatise) and 555/2 (treatise on medical knowledge); MS Batnaya, Chaldean Church of Batnaya, 51 (recipes); and MS Mosul, Syrian Orthodox Archdiocese of Mosul, 206 (medical treatise).⁷

6.1.3. Teacher-student relationships and learning circles

Examples of cross-communal learning abound in medieval bibliographic and biographical works, such as Ibn al-Nadīm's (d. 380/990) *Catalogue (Fihrist)* and Ibn Abī Uṣaybi'a's 7th/13th-century *History of Physicians ('Uyūn al-anbā' fī ṭabaqāt al-aṭibbā'*, literally *Choice Accounts of the Classes of Physicians*). Some of these were formally acknowledged teacher-student relationships, while others were one-off consultations. Again, some examples must suffice in place of a systematic study, which is still needed.

In Baghdad and its environs, Christian scholars involved in translating classical Greek or Syriac works into Arabic would have been natural tutors for the works they translated, commented on and summarized. Biographers do not seem to have been surprised by intellectual lineages like that of the West Syriac Christian logician Yaḥyā ibn ‘Adī ([d. 363/974]; Endress 2002; Ibn al-Nadīm 1970, 2: 631; Ibn Abī Uṣaybi‘a 1884, 1: 235; 2020, 10.22), who studied under the Muslim philosopher al-Fārābī (d. 339/950-1), himself a student of the East Syriac Christian philosopher Yūḥannā ibn Ḥaylān ([active late 3rd-early 4th/late 9th-early 10th century]; Walzer 1991; Janos 2015; Ibn Abī Uṣaybi‘a 1884, 2: 135; 2020, 15.1.2).

On issues of scriptural exegesis, scholars are known to have consulted associates from other communities, and the same type of activity is likely in other fields. (Scriptural consultations are also attested indirectly through the reception by Muslim writers of biblical material from non-Arabic languages or scripts, such as Syriac and Judeo-Arabic [Adang 1996; Griffith 2004; Gibson 2017].) One well-known example stems from the academy of Pumbedita, the Geonic academy that had moved to Baghdad at the beginning of the 4th/10th century, where Hai Ga’on (327 or 8-429/939-1038) requested that the Sicilian Maṣliḥ ben al-Baṣāq inquire of the East Syriac Catholicos regarding Syriac commentary traditions for an enigmatic verse, Psalm 141:5 (Dubovick 2018). When Maṣliḥ objected, Hai Ga’on responded, “Our pious forefathers ... would inquire regarding languages and their explanations from members of different religions, even from shepherds and cow-hands,” (Dubovick 2018, 99). A more specific example of literary exchange that involved both philosophical and medical questions is the correspondence of two Jews from Mosul with the Christian scholar and translator

Yaḥyā ibn ‘Adī, mentioned above. The inquirers, Bishr ibn Sam‘ān and Ibn Abī Sa‘īd, show that they are familiar with the work of Thābit ibn Qurra (d. 288/901), a Sabian from Ḥarrān. Yaḥyā suggests they might receive a better answer from one of Bishr’s own acquaintances, the Christian physician and translator Ibn Bakkūsh (Sklare 1996, 115-6 and no. 52).

Cross-communal instruction seems to have been quite prevalent not only in Iraq, but also in Cairo throughout the Fatimid, Ayyubid and Mamluk periods. The Muslim physician al-Raḥbī (534-631/1139 or 40-1233) reportedly considered Jews and Christians unworthy to be his students (Ibn Abī Uṣaybi‘a 1884, 2: 193; 2020, 15.36.1.1). Yet the fact that a biographer would remark on his stance seems to reveal that it was rare. Moreover, al-Raḥbī made an exception for the Jew ‘Imrān al-Isrā’īlī ([560-637/1165 or 6-1239]; Ibn Abī Uṣaybi‘a 1884, 2: 213-4; 2020, 15.42) and for the Samaritan Ibrāhīm ibn Khalaf (late 6th-early 7th/12th-13th centuries), both of whom became prominent physicians according to Ibn Abī Uṣaybi‘a. Al-Raḥbī was himself a student of the famed Egyptian Jewish scholar Ibn Jumay‘ ([d. c. 594/1198]; Ibn Abī Uṣaybi‘a 1884, 2: 112-5; 2020, 14.32; Nicolae 2017), personal physician to Ṣalāḥ al-Dīn (r. 564-589/1169-1193), and of the eminent Christian medical scholar Ibn al-Tilmīdh ([d. 560/1165]; Meyerhof 1986). Thus al-Raḥbī’s own connections militate against any general inference that Muslim scholars were generally reticent to teach non-Muslims. Ibn Abī Uṣaybi‘a similarly comments that Sa‘īd ibn Hibat Allāh ibn al-Ḥusayn ([436-495/1045-1101]; Ibn Abī Uṣaybi‘a 1884, 1: 254-5; 2020, 10.58) refused to teach Jews but made an exception for Abū l-Barakāt al-Baghdādī ([d. 560/1164 or 5?]; Ibn Abī Uṣaybi‘a 1884, 1: 287; 2020, 10.66.1; Pines 1986).

In fact, the learning circles of Ibn Riḍwān ([388-453/998-1061 or later]; Schacht 1986b) in Cairo and later of Ibn Abī Uṣaybi‘a in Cairo and Damascus suggest the opposite. Ibn Riḍwān, a self-taught scholar and a Muslim (in some respects, anyway), became chief physician under the Fatimids and an intellectual ancestor to several Jewish physicians. He dedicated works to the doctor Yahūdā ibn Sa‘āda (presumably Jewish, otherwise unknown) and taught another Jewish physician in the Fatimids’ employ, Afrā‘īm ibn al-Zaffān (Schacht 1986b). The latter’s Jewish student Salāma ibn Raḥmūn was well known in intellectual circles and had a son Mubārak, who according to Ibn Abī Uṣaybi‘a (1884, 2: 106-7; 2020, 14.28) was “an eminent physician.” Ibn Riḍwān’s scholarship was thus disseminated throughout the Jewish community of 5th/11th century Cairo, and manuscripts from the Genizah in fact mention his writings.

Ibn Abī Uṣaybi‘a’s report of his own network is similarly diverse, showing learning in the other direction, from Jewish and Christian teachers to Muslim students.⁸ On the Jewish side, he mentions that his own father, Saḍīd al-Dīn al-Qāsim (575-649/1179 or 80-1251), studied under Moses Maimonides ([d. 600/1204]; Ibn Abī Uṣaybi‘a 1884, 2: 247; 2020, 15.51.1). Later, between 631/1233 and 632/1235, Ibn Abī Uṣaybi‘a met Maimonides’s son Abraham (581 or 2-635/1186-1237), a fellow physician, while working in a Cairo hospital (Ibn Abī Uṣaybi‘a 1884, 2: 118; 2020, 14.40.2). Ibn Abī Uṣaybi‘a also had the opportunity to witness the side-by-side labor of his teacher al-Dakhwār ([d. 628/1230], chief physician of Egypt and Syria under the Ayyubid Sultan al-‘Ādil I [r. 596-649/1200-1252]; Joosse 2018) with the Jewish physician ‘Imrān al-Isrā’īlī in the Nūrī Hospital of Damascus (*al-bīmāristān al-nūrī*): “Every benefit resulted from their collaboration, and they were prepared to offer to the patients

every good kind of treatment” (Ibn Abī Uṣaybi‘a 1884, 2: 214; 2020, 15.42, see also 15.50.3).

Christians and converts from Christianity were also significant in Ibn Abī Uṣaybi‘a’s circles in Ayyubid Damascus and Mamluk Cairo. His intellectual lineage went back to a Christian convert to Islam, Raḍī al-Dawla (6th/12th century), son of Ibn al-Tilmīdh (Ibn Abī Uṣaybi‘a 1884, 1: 264-5, 2: 203; 2020, 10.64.16, 15.40.3). Ibn Abī Uṣaybi‘a’s primary teacher, al-Dakhwār, was the “best student” of another Christian convert to Islam, As‘ad ibn al-Mutrān (d. 587/1191) and spent much time with him (Ibn Abī Uṣaybi‘a 1884, 2: 179, see also 2: 193, 239; 2020, 15.23.4.1, see also 15.36.1, 15.50.1). The Christian Ya‘qūb ibn Siqlāb (d. c. 626/1229) also met frequently with al-Dakhwār, and Ibn Abī Uṣaybi‘a (1884, 2: 215; 2020, 15.43.1) describes his therapeutic skills as unrivaled. By his own account, Ibn Abī Uṣaybi‘a himself met the Samaritan vizier Yūsuf ibn Abī Sa‘īd ([d. 624/1227]; Ibn Abī Uṣaybi‘a 1884, 2: 233-4; 2020, 15.48) and corresponded with a Samaritan convert to Islam, the vizier Amīn al-Dawla ([mid-7th/13th century]; Ibn Abī Uṣaybi‘a 1884, 2: 235-7; 2020, 15.49.6). Biographies such as those of Ibn Riḍwān and Ibn Abī Uṣaybi‘a give every indication that medical education exemplified the intertwining “whirlpool effect” of Stroumsa (2011) mentioned above.

6.1.4. Patronage and clientele

No doubt a factor in the pluralistic composition of medieval scholarship in the Islamicate world was the fact that caliphs, sultans and other high-ranking personalities employed experts from all communities (Fiey 1980; Yarbrough 2012, 364, 380; Cabrol 2000; Sirry 2011). The eminent place of non-Muslim (*dhimmi*) scholars in these retinues sometimes brought down the ire of leading Muslim thinkers such as the polemicist al-

Jāhiz (d. 255/869), who blamed the prestige of these intellectuals for the vacillation of Muslim believers (al-Jāhiz 1964-1979, 315-6; Gibson 2015). He argued, moreover, that Christians were not real scholars, but rather mere conveyors of Greek classical knowledge, which they had inherited by geographical accident. Muslim rulers who employed non-Muslims in high positions also faced a problem of public perception because of the Qur'ānic injunctions against seeking the help and friendship of nonbelievers. However, none of these arguments or principles seem to have much dampened the desire of Muslim rulers to recruit the best scholars and practitioners, wherever they might be found on the religious map. When Caliph al-Mutawakkil (r. 232-247/847-861) attempted to ban non-Muslims from positions of authority over Muslims (as other rulers both before and after him also tried to do), he exempted his personal staff from this prohibition (Yarbrough 2012, 364, 380). Indeed, the very fact that prohibitions against hiring *dhimmīs* continued to be repeated suggests that the issue remained salient for several centuries. In Iraq under the early Abbasids, it was Christian translators, secretaries and doctors who were especially visible recipients of the rulers' patronage, and it would take a few generations before Muslim or Jewish physicians would outshine the reputation of Christian ones.

Despite these perceptions, there were some prominent Jewish public intellectuals, for example in the sciences of the stars. The Jew Māshā'allāh ([d. c. 199/815]; Kennedy and Pingree 1971; Pingree 1975), whose Hebrew name was Misha according to Ibn al-Nadīm (1970, 2: 650), was among the astrologers whom the second Abbasid caliph, al-Manṣūr (r. 136-158/754-775), consulted regarding the date on which to found the city of Baghdad (Samsó 1991). Other prominent Jewish astrologers in the 3rd/9th century included Sahl ibn

Bishr (d. c. 235/850) and ‘Alī ibn Dāwūd (Goldstein 2001, 26).

In the following century, scholars would move to Qayrawan and Cairo and find support there from the Fatimid rulers, beginning several hundred years of rich, cross-communal collaboration. A picture of this emerges from comparing historiographical sources with Genizah documents, which sometimes mention the same figures and certainly depict many similar aspects of scholarship and medical practice. It is also under the Fatimids that the role of Jewish physicians would become vital in this exchange. One of the most influential of these, and a particularly notable example of cross-communal patronage, was Ishāq ibn Sulaymān al-Isrā’īlī ([d. after 320/932]; Ibn Abī Uṣaybi‘a 1884, 2: 36-7; 2020, 13.2; Šā‘id al-Andalusī 1985[CB]). He was a Neoplatonic philosopher and physician born in Egypt, who migrated to Raqqāda and Qayrawan to serve the last Aghlabid emir, Ziyādat Allāh III (r. 290-296/903-909). While there, he studied with Ishāq ibn ‘Imrān (d. around 295/908), a Muslim physician from Baghdad, who had also been recruited by Ziyādat Allāh III. Ishāq al-Isrā’īlī was subsequently appointed court physician by the Fatimid ruler ‘Ubayd Allāh al-Mahdī (r. 297-323/910-934). His books included both medical treatises and philosophical works (Guttmann 1911; Altmann 1979; Altmann and Stern 1958; Sezgin 1970, 3:295-7; Levin, Walker, and Sadik 2018), topics about which Sa‘adia Ga’on corresponded with him while the latter was still in Egypt (Fenton 2002, 3-4, 12; see also Altmann and Stern 1958; Hirschberg 1974, 271). Ishāq al-Isrā’īlī’s legacy in Qayrawan would live on through his pupils, Aḥmad ibn Ibrāhīm ibn Abī Khālid (Ibn al-Jazzār, [d. 395/1004 or 5]; Sezgin 1970, 304-7; Ibn Abī Uṣaybi‘a 1884, 2: 37-9; 2020, 13.3) and Dūnash ibn Tamīm (from *dhū nās*, “master of men,” translated from the Hebrew Adonim; [d. c. 349/960]; Vajda 2002; Sezgin 1970,

295-7). The latter served as a physician to the Fatimid Caliph al-Manṣūr (r. 334-341/946-953) in Qayrawan, and both men penned influential treatises.

Somewhat later, in 405/1015, Hai Ga'on at the academy of Pumbedita (mentioned above) appointed the physician Abraham ibn Nathan (Ibn 'Aṭā, first half of 5th/11th century) as "Nagid *ha-gola*" or "prince" of the diaspora, a duty which apparently overlapped with the medical services he provided to the Zirid rulers of Tunisia, Bādīs ibn al-Manṣūr ([r. 386-406/996-1016]; Idris 1986) and his son al-Mu'izz ibn Bādīs ([r. 406-454/1016-1062]; Talbi 1993; Goitein 1971, 24, 244; Ben-Sasson 1996; 1997). The title may have been, in part, a formal acknowledgment of Abraham's intercession on behalf of the Jewish community (Goitein 1971, 24). This kind of throne-room diplomacy was a role that numerous preeminent scholars, both Jewish and Christian, were called upon to play as de facto heads of their communities (Goitein 1971, 243-5 and no. 12). An example is the case of Samuel ben Hananya (Abū Manṣūr, in office 533 or 4-553 or 4/1140-1159), who was asked to intercede regarding the tax on sugar makers (MSS Cambridge, CUL, T-S 10J15.29 + T-S 10J15.32).

The Fatimids' move to Cairo in 362/972, with physicians in attendance and a program of support for medicine, may well have been one of the catalysts that spurred on the practice of medicine in the Egyptian Jewish community. Ibn Abī Uṣaybi'a (1884, 2: 88; 2020, 14.14.3) specifically mentions court physicians who came in the retinue of the Caliph al-Mu'izz (r. 341-365/953-975). Indeed, al-Mu'izz and his successors al-'Azīz (r. 365-386/975-996) and al-Ḥākīm (r. 386-411/996-1021) seem to have cultivated a large cadre of Muslim, Jewish and Christian medical experts in Cairo, according to the account of Ibn Abī Uṣaybi'a. The legacy of Christian scholarship from Baghdad was already circulating in

the region, in part through Ibrāhīm ibn ʿĪsā (d. c. 260/873 or 4), who studied with the famous physician Yūḥannā ibn Māsawayh and later migrated to Fustāṭ (near Cairo) with his employer Aḥmad ibn Ṭulūn ([r. 254-270/868-884]; Ibn Abī Uṣaybiʿa 1884, 2: 83; 2020, 14.2). Yūḥannā ibn Māsawayh's name appears frequently in Genizah medical fragments. It was under al-Muʿizz that one of the preeminent Jewish medical families became established, that of Moses ben Eleazar (d. after 363/973), who had come from Oria in southern Italy by way of Tunisia and was another student of Ishāq al-Isrāʾīlī (see above). Al-Muʿizz employed Moses together with his two sons Ishāq (d. 363/973 or 4) and Ismāʿīl and his grandson Yaʿqūb ibn Ishāq. A great-grandson, also named Moses, seems to have been serving the Fatimid court well into the next century (Ibn Abī Uṣaybiʿa 1884, 2: 86; 2020, 14.9; Goitein 1971, 2: 243 and nos. 9, 10).

Al-Muʿizz's son and heir, al-ʿAzīz, employed at least two Christian physicians: the Melkite Sahlān ibn ʿUthmān (d. 380/991) and Maṣṣūr ibn Sahlān ibn Muqashshir (d. before 411/1021). The latter served into the reign of al-Ḥākim and was reportedly a favorite of his. On his death, he was succeeded in al-Ḥākim's retinue by another Christian, Ishāq ibn Ibrāhīm ibn Naṣṭās ibn Jurayj, who also died during al-Ḥākim's reign and was replaced by the eminent Ibn Riḍwān (mentioned above), who became chief physician (Ibn Abī Uṣaybiʿa 1884, 2: 99-105; 2020, 14.25).⁹

During the reign of one of the later Fatimid caliphs, al-ʿĀmir (r. 495-525/1101-1130), two particularly distinguished scholars migrated from Andalusia. One was Yūsuf ibn Aḥmad ibn Ḥasday, from the Jewish Ḥasday family of Andalusia, who attached himself to the vizier al-Maʾmūn al-Baṭāʾihī (held office 515-519/1121-1125). Ibn Abī Uṣaybiʿa (Ibn Abī Uṣaybiʿa 1884, 2: 51; 2020, 13.51.1) calls him "eminent in the

medical profession” and says his reputation “became well known” during his time in Egypt. Yūsuf ibn Ḥasday’s own religious affiliation is unclear (Stroumsa 2015, 23, 27). The other was the Muslim Abū l-Ṣalt (460-529/1067-1134), who originated from Denia and was active first in Cairo and Alexandria around the turn of the 6th/12th century, and then in Mahdiyya (Tunisia), where he died in 529/1134 (Comes 2000; Millás and Stern 1986; Ibn Abī Uṣaybi‘a 1884, 2: 52-62; 2020, 13.58). His works were particularly popular among Jewish communities in Andalusia, with some of them being translated into Hebrew (Comes 2000; Millás and Stern 1986).

Some of these scholars were actively recruited by rulers while others came of their own initiative, but it is clear that intellectuals coming to Cairo and its environs during the Fatimid period could hope to find both patronage and a lively exchange of ideas with renowned experts, regardless of their religious background. This kind of official support is equally well attested in documents of the Cairo Genizah and in Ibn Abī Uṣaybi‘a’s history through the Ayyubid and into the early Mamluk periods. For some, the status of these non-Muslims as *dhimmi*s was less important than the profession they represented. It is reported that Ibn Abī l-Ḥawāfir (d. after 616/1220), chief physician under the Ayyubid al-Mālik al-‘Azīz (r. 589-595/1193-1198), once rebuked a Jewish oculist for standing rather than sitting down to attend to the eyes of a chickpea seller: “Although you yourself may be lowly, out of regard for the profession you should sit to his side and tend his eyes rather than remain standing in the presence of a common chickpea vendor” (Ibn Abī Uṣaybi‘a 1884, 2: 119; 2020, 14.44.3).

Rulers who surrounded themselves with physicians were not only the latter’s patrons, but also, of course, their patients (Figure 6.1.2.). However, thanks to Genizah documents we

have records of many ordinary patients. The role of women in these exchanges is particularly worthy of interest, since the patients mentioned are often female. Besides women who were patients, the Genizah also mentions female oculists (Goitein 1967, 127-8; 1971, 255). Doctor-patient interactions often had a cross-communal dimension. Genizah texts reveal that it was common for physicians from any community to treat patients from other communities, and this was true of Jewish doctors as of others, as we can see in the Genizah documents from the prescriptions in a variety of scripts, with different religious formulas, and varied names (Goitein 1971, 254; Chipman and Lev 2010, 78). For example, a Muslim doctor treated a Jewish girl with dropsy (Goitein 1967, 259); a Muslim family hired a Jewish doctor for a monthly fee (MS Cambridge, CUL, T-S 13J6.16; Goitein 1971, 256); payments were due to a Jewish physician for his daily visits to apparently Muslim patients (MS Cambridge, CUL, T-S Ar.4.10, in Judeo-Arabic); and a Christian doctor is said to have treated a Jewish patient for no fee (MS Cambridge, CUL, T-S 8J20.26; Goitein 1971, 252). It is important to note that there is one indication of a religious boundary affecting medical practice, which is the absence of any documentation of Jewish patients convalescing in hospitals, even though Jewish physicians labored in them. Goitein (1971, 251-2) suggests this was to avoid transgressing dietary laws, but it is hard to make an argument from silence. In any case, the general picture is that medical services went in every direction, and that these interactions were an opportunity to exchange more than just prescriptions or medical advice.

6.1.5. Shared workplaces

The fact that doctors from various communities worked at the court or in public hospitals provided an opportunity for them to engage with one another as colleagues, or sometimes as

rivals. Schwarb cautions: “Very few documents provide evidence for an intellectual exchange between Christians and Jews during the Fatimid and Ayyubid periods, apart from the fact that Jewish and Christian physicians worked for the same institutions, the Bīmaristān al-Nāṣirī for example, and served as officials in the various government ministries (*dawāwīn*)” (Schwarb 2014, 114; see no. 26 for references). Strictly speaking, it is true that most of the documentary evidence does not speak of the content of exchanges, but simply puts Christians, Jews and Muslims active in the same times and places. But this in itself is quite significant as a circumstance for exchange. It may also be the case that Genizah documents indicate more about Jewish-Muslim than Jewish-Christian exchange. Nevertheless, historiographical sources can usefully complement this picture. Even though documentary texts (other than book lists) seldom inform us what colleagues discussed, they often indicate the ways they met. Together with literary and historiographical texts, one can synthesize from them a rich picture of cross-communal interaction in the workplace.

Scholarly rivalries were common and a person’s religious affiliation sometimes formed the vector for an attack, but it is not clear that interreligious collegial disputes were necessarily more common than intra-religious ones. Among the religiously diverse group of physician-scholars working under the Fatimids in the early 5th/11th century, the earlier dominance of Christians in the field of medicine and in the Greek classical sciences generally was being rivaled or even slowly surpassed by Jewish and Muslim expertise, according to the portrayal given by Ibn Abī Usaybi‘a in his *History of Physicians*. This might have been the cause for – or a symptom of – certain rivalries. For example, Ibn Ridwān had public and vicious disputes with the Christian philosopher-physician Ibn Buṭlān of Baghdad (d. 458/1066), who visited

Fuṣṭāṭ for about three years beginning in 441/1049 (Ibn Abī Uṣaybi‘a 1884, 1: 241; 2020, 10.38.2-3). Yet their refutations of one another seem to have focused on scientific debate and some *ad hominem* attacks rather than religious wrangling (Ibn Buṭlān and ‘Alī ibn Riḍwān 1937; Schacht 1986a; 1986b), even though Ibn Riḍwān is known to have engaged in religious polemic elsewhere.¹⁰ Ibn Abī Uṣaybi‘a does not comment on any religious dimensions of the Ibn Riḍwān-Ibn Buṭlān dispute, nor does he do so when he mentions the envy of the convert As‘ad ibn al-Muṭrān for a certain Abū l-Faraj, a Christian in the service of Ṣalāḥ al-Dīn (Ibn Abī Uṣaybi‘a 1884, 2: 176; 2020, 15.23.1.2), or the success of the Jewish physician al-Ḥaḡīr al-Nāfi‘ ([late 4th-early 5th/10th-11th centuries]; Ibn Abī Uṣaybi‘a 1884, 2: 189; 2020, 14.18) in treating a leg wound that had thwarted the Christian Ibn Muḡashshir.¹¹ Workplace tensions could involve a religious dimension, but there does not seem to be evidence that religious differences ordinarily engendered conflict in medicine or related fields. While some of these scholars wrote religious polemics,¹² this fact alone should not be taken to indicate poor relationships among these communities – polemic writing could sometimes be an exercise of expressing intellectual disagreement with others without necessarily holding personal enmity toward them.

In contrast to scholarly rivalries, physicians sometimes furthered the careers of their associates from other communities. In one of the most significant documents to shed light on cross-communal scholarly interaction, a Jewish physician, Makārim ibn Ishāq (1st half 7th/13th century), asked the sultan for the remainder of the pay (probably a stipend or allowance) of a certain al-As‘ad (*al-bāqī min jāmakiyyat al-As‘ad al-ṭabīb*), who worked in “the Cairo hospital” (MS Cambridge, CUL, T-S Ar.40.16; Richards 1992). What exactly he means by “the remainder” has not

been conclusively settled, nor has the hospital to which he refers. But the references he provides – doctors known to the sultan – are a Christian physician (Abū Ḥulayqa [591-676/1195-1276 or 7]) and one who is either Christian or Muslim (al-Rashīd al-Dimashqī [1st half 7th/13th century]). Both of these, he says, “know the excellence of the humble servant’s knowledge of this art” (Richards 1992, 301). The communal ties of these experts apparently did not hinder them from putting in a good word for someone outside their community.¹³ Along similar lines, an aspiring Jewish medical student in Cairo who wanted a hospital position in Alexandria was advised by his Alexandrian cousin to get letters of recommendation from various prominent people, who happened to span the confessional spectrum (MS, Cambridge, CUL, T-S 24.67; cited in Goitein 1971, 249-50).¹⁴ Physicians and scholars were expected to know the work of their colleagues in other communities and be able to speak in their favor.

Physicians and apothecaries sometimes also physically shared workplaces with those of different confessions (Figure 6.1.3.). A Genizah document records a court case in which an apparently Jewish physician worked together with a Christian physician in a medical potions shop and thus had opportunity to witness the latter’s affair with a Jewish woman (MS Cambridge, CUL, Or.1080 J93; Goitein 1970, 106-7; 1971, 253). Moreover, real estate dealings for the medicinal trade attested in the Genizah frequently involve relationships across communal lines (Goitein 1971, 262-4). While it may not be possible to know what arrangements were or were not typical for medicine shops, the evidence does not suggest anything unusual about sharing or transferring spaces between communities.

6.1.6. Summary and future research directions

The differing sacred texts, observances, linguistic heritages and authority structures of Jews, Christians and Muslims in the medieval Islamic world seem to have provided little hindrance to cross-communal scholarship. One might even go so far as to say that it was the exception rather than the norm for these distinctions to play a decisive role in scholarly exchange. Scholars from all these communities could read and transmit scientific texts in the common language of Arabic, whether in Arabic or Hebrew script, as attested by book lists and bibliographic histories. They could openly debate ideas in the *majlis*, even though they remained aware that those ideas sometimes had sensitive religious implications. Non-Muslims could usually study with leading experts and reach the pinnacle of professional success, notwithstanding their formal status as members of *dhimmī* communities (groups which were simultaneously protected and restricted). In fact, by virtue of their attainments they could often advocate on behalf of their own communities. And they could work shoulder-to-shoulder with scholars from other communities for the same patron, in the same hospital, or from the same shop.

Although this general picture of cross-communal scholarly interaction emerges from both documentary and historiographical sources throughout the medieval period, much of it has yet to be confirmed by systematic studies. Future research should focus on discovering the concrete details of both interpersonal and textual exchanges. On the interpersonal level, this would include the occasions of scholars' engagement across communities and the specific networks to which they belonged, both of which are necessary to identify the dynamics which helped or hindered collaboration. On the textual level, large-scale study of book ownership could reveal a flow of ideas in much richer detail

than has previously been understood. Finally, future research must take into account the true complexity of these interactions: the slipperiness of affiliational labels and the “whirlpool effect” of multi-communal life and scholarship in Islamicate societies.

Bibliography

Sources

Ibn al-Nadīm. tr. Dodge, B. 1970. *The Fihrist of al-Nadīm: A Tenth-Century Survey of Muslim Culture*. 2 vols. New York: Columbia University Press.

Ibn Buṭlān and ‘Alī ibn Riḍwān. eds Schacht, J. and Meyerhof, M. 1937. *The Medico-Philosophical Controversy between Ibn Butlan of Baghdad and Ibn Ridwan of Cairo: A Contribution to the History of Greek Learning among the Arabs*. Cairo: Egyptian University, Faculty of Arts.

al-Jāhiz, Abū ‘Uthmān ‘Amr ibn Baḥr al-Fuḡaymī. ed. Hārūn, A. M. 1964-1979. *Rasā’il al-Jāhiz* [Epistles of al-Jāhiz]. 4 vols. Cairo: Maktabat al-Khanijī.

al-Mas‘ūdī, Abū al-Ḥasan ‘Alī ibn al-Ḥusain. ed. De Goeje, M. J. 1894. *Kitāb al-Tanbīh wa-l-ishrāf* [The Book of Admonition and Revision]. Leiden: Brill.

Research Literature

Adang, C. 1996. *Muslim Writers on Judaism and the Hebrew Bible: From Ibn Rabban to Ibn Hazm*. New York: Brill.

Allony, N. 2006. *The Jewish Library in the Middle Ages: Book Lists from the Cairo Genizah*. Frenkel, M. and Ben-Shammai, H., eds. Jerusalem: Ben-Zvi Institute

Altmann, A. 1979. “Creation and Emanation in Isaac Israeli: A Reappraisal,” in Twersky, I., ed. *Studies in*

Medieval Jewish History and Literature. Vol. 1.
Cambridge, MA: Harvard University Press, 1-15.

- Altmann, A. and Stern, S. M. 1958. *Isaac Israeli: A Neoplatonic Philosopher of the Early Tenth Century*. Oxford: Oxford University Press.
- Basal, N. 1988. "Part One of *al-Kitāb al-muštamil* by Abū l-Faraj Hārūn and Its Dependence on Ibn al-Sarrāj's *Kitāb al-Uṣūl fī l-naḥw*," [in Hebrew] *Leshonenu* 61: 191-209.
- Basal, N. 1999. "The Concept of *Hāl* in the *al-Kitāb al-muštamil* of Abū al-Faraj Hārūn in Comparison with Ibn al-Sarrāj," *Israel Oriental Studies* 19: 391-408.
- Becker, D. 1993. "The Dependence of R. Yona b. Ḡanah on the Arab Grammarians," [in Hebrew] *Leshonenu* 57: 137-45.
- Becker, D. 1995. "Concerning the Arabic Sources of R. Jonah ibn Janah," [in Hebrew] *Teuda* 9: 143-68.
- Ben-Sasson, M. 1996. *The Emergence of the Local Jewish Community in the Muslim World (Qayrawan 800–1057)*. [in Hebrew] Jerusalem: Magnes Press
- Ben-Sasson, M. 1997. "The Emergence of the *Qayrawan* Jewish Community and Its Importance as a Maghrebi Community," in Golb, N., ed. *Proceedings of the Founding Conference of the Society for Judaeo-Arabic Studies*. Amsterdam: Harwood, 1-13.

- Ben-Shammai, H. 1997. "Kalām in Medieval Jewish Philosophy," in Frank, D. H. and Leaman, O., eds. *History of Jewish Philosophy*. London: Routledge, 115-48.
- Ben-Shammai, H. 2003. "The Tension between Literal Interpretation and Exegetical Freedom: Comparative Observations on Saadia's Method," in McAuliffe, J. D., Walfish, B. and Goering, J. W., eds. *With Reverence for the Word: Medieval Scriptural Exegesis in Judaism, Christianity, and Islam*. Oxford: Oxford University Press, 33-50.
- Ben-Shammai, H., Shaked, S., and Stroumsa, S., eds. 2013. *Exchange and Transmission Across Cultural Boundaries: Philosophy and Science in the Mediterranean World*. Jerusalem: The Israel Academy of Sciences and Humanities.
- Bertaina, D. 2014. "Hadīth in the Christian Arabic Kalām of Būluṣ ibn Rajā' (c. 1000)," *Intellectual History of the Islamicate World* 2: 267-86.
- Bertaina, D. 2015. "Christian Kalām," in Touati, H., ed. *Encyclopedia of Mediterranean Humanism*. <http://www.encyclopedie-humanisme.com/?Christian-Kalam>.
- Cabrol, C. 2000. "Une étude sur les secrétaires nestoriens sous les Abbassides 762–1258 à Bagdad," in "Actes du 5e Congrès international d'études arabes chrétiennes, Lund, août 1996," special issue, *Parole de l'Orient* 25: 407-91.

- Chipman, L. and Lev, E. 2006. "Syrups from the Apothecary's Shop: A Genizah Fragment Containing One of the Earliest Manuscripts of *Minhāj al-Dukkān*," *Journal of Semitic Studies* 51.1: 137-68.
- Chipman, L. and Lev, E. 2010. "Arabic Prescriptions from the Cairo Genizah," *Asian Medicine* 6.1: 75-94.
- Cohen, M. R. 1986. "Islam and the Jews: Myth, Counter-Myth, History," *Jerusalem Quarterly* 38: 125-37.
- Cohen, M. R. 1991. "The Neo-Lachrymose Conception of Jewish-Arab History," *Tikkun* 6: 55-60.
- Comes, M. 2000. "Umayya b. 'Abd al-'Azīz, Abu 'l-Ṣalt," in *EI-2*[0.4.¹⁵], 10: 836-7.
- Dubovick, Y. M. 2018. "'Oil, Which Shall Not Quit My Head': Jewish-Christian Interaction in Eleventh-Century Baghdad," *Entangled Religions* 6: 95-123.
- Endress, G. 2002. "Yahyā b. 'Adī," in *EI-2*, 11: 245-6.
- Fenton, P. 2002. Introduction to *Le commentaire sur le Livre de la création de Dūnaš ben Tāmīm de Kairouan (X^e siècle)* by G. Vajda. Leuven: Peeters, 1-20.
- Ferrario, G. and Vollandt, R. 2010. "A Judaeo-Arabic Version of Ibn Bahrīz's Treatise on Logic, T-S K6.181," *Fragment of the Month* (blog), Genizah Research Unit, Cambridge University Library, September 2010, <https://www.lib.cam.ac.uk/collections/departments/t>

aylor-schechter-genizah-research-unit/fragment-month/fragment-month-13-2.

- Fiey, J. M. 1980. *Chrétiens syriaques sous les Abbassides, surtout à Bagdad (749–1258)*. Corpus Scriptorum Christianorum Orientalium 420. Louvain: Secrétariat du Corpus SCO.
- Freidenreich, D. M. 2014. “Walking Side by Side: Engagement with Islamic Law and Theology in Rabbinic Legal Literature,” *The Muslim World* 104: 413-7.
- Freidenreich, D. M. and Goldstein, M., eds. 2012. *Beyond Religious Borders: Interaction and Intellectual Exchange in the Medieval Islamic World*. Philadelphia: University of Pennsylvania Press.
- Frenkel, M. 2017. “Book Lists from the Cairo Genizah: A Window on the Production of Texts in the Middle Ages,” *Bulletin of the School of Oriental and African Studies* 80.2: 233-52.
<https://doi.org/10.1017/S0041977X17000519>.
- Gibson, N. P. 2015. “Closest in Friendship? Al-Jāhīz’ Profile of Christians in Abbasid Society in ‘The Refutation of Christians’ (*al-Radd ‘alā al-naṣārā*).” Washington, DC: Catholic University of America, PhD thesis.
<http://hdl.handle.net/1961/cuislandora:28277>.
- Gibson, N. P. 2017. “A Mid-Ninth-Century Arabic Translation of Isaiah? Glimpses from al-Jāhīz,” in Hjälms, M. L., ed., *Senses of Scripture, Treasures of Tradition: The Bible in Arabic among Jews*,

Christians and Muslims. Biblia Arabica 5. Leiden: Brill, 327-69.

Goitein, S. D. 1949. "Jewish-Arab Symbiosis," [in Hebrew] *Molad* 2: 259-66.

Goitein, S. D. 1955. *Jews and Arabs: Their Contacts Through the Ages*. New York: Schocken.

Goitein, S. D. 1967. *A Mediterranean Society*. Vol. 1: *Economic Foundations*. Berkeley: University of California Press.

Goitein, S. D. 1970. "Minority Selfrule and Government Control in Islam," *Studia Islamica*, 31: 101-6. <https://doi.org/10.2307/1595067>.

Goitein, S. D. 1971. *A Mediterranean Society*. Vol. 2: *The Community*. Berkeley: University of California Press.

Goldstein, B. R. 2001. "Astronomy and the Jewish Community in Early Islam," *Aleph: Historical Studies in Science and Judaism* 1: 17-57.

Goldstein, B. R. 2002. "Science as a 'Neutral Zone' for Interreligious Cooperation," *Early Science and Medicine* 7.3: 290-1. <https://doi.org/10.1163/157338202X00162>.

Goodman, L. E. 1995. "Crosspollinations—Philosophically Fruitful Exchanges between Jewish and Islamic Thought," *Medieval Encounters* 1: 323-57.

- Goodman, L. E. 1999. *Jewish and Islamic Philosophy: Crosspollinations in the Classical Age*. Edinburgh: Edinburgh University Press.
- Gottschalk, H. L. 1997³. “al-Kāmil,” in *EI-2*, 4: 520-1.
- Griffith, S. 1994. “Faith and Reason in Christian *Kalām*: Theodore Abū Qurrah on Discerning the True Religion,” in Samir, S. K. and Nielsen, J., eds. *Christian Arabic Apologetics during the Abbasid Period, 750–1258*. Leiden: Brill, 1-43.
- Griffith, S. H. 2004. “The Gospel, the Qur’ān, and the Presentation of Jesus in al-Ya‘qūbī’s *Ta’rīkh*,” in Reeves, J. C., ed., *Bible and Qur’ān: Essays in Scriptural Intertextuality*. Leiden: Brill, 133-60.
- Guttman, J. 1911. *Die philosophischen Lehren des Isaak b. Salomon Israeli*. Münster: Aschendorff.
- Hirschberg, H. Z. 1974². *History of the Jews in North Africa*. Vol. 1: *From Antiquity to the Sixteenth Century*. Bashan, E. and Attal, R., eds. Leiden: Brill.
- Hodgson, M. G. S. 1974. *The Venture of Islam*. Vol. 1: *The Classical Age of Islam*. Chicago: University of Chicago Press.
- Idris, H. R. 1986². “Bādīs,” in *EI-2*, 1: 860.
- Janos, D. 2015. “al-Fārābī, Philosophy,” in *EI-3*[0.4.], online. https://doi.org/10.1163/1573-3912_ei3_COM_26962.

- Joose, N. P. 2018. "al-Dakhwār," in *EI-3*, online.
https://doi.org/10.1163/1573-3912_ei3_COM_32131.
- Kennedy, E. S. and Pingree, D. 1971. *The Astrological History of Māshā'allah*. (Harvard Monographs in the History of Science 5) Cambridge, MA: Harvard University Press.
- Khan, G. 1986. "The Arabic Fragments in the Cambridge Genizah Collections," *Manuscripts of the Middle East* 1: 54-60.
- Koningsveld, P. S. van. 1992. "Andalusian-Arabic Manuscripts from Christian Spain," *Israel Oriental Studies* 12: 75-110.
- Langermann, Y. T. 1996a. "Arabic Writings in Hebrew Manuscripts: A Preliminary Relisting," *Arabic Sciences and Philosophy* 6: 137-60.
- Langermann, Y. T. 1996b. "Transcriptions of Arabic Treatises into the Hebrew Alphabet: An Underappreciated Mode of Transmission," in Ragep, F. J., Ragep, S. P. and Livesey, S., eds. *Tradition, Transmission, Transformation*. Leiden: Brill, 247-60.
- Lazarus-Yafeh, H. 1992. *Intertwined Worlds: Medieval Islam and Bible Criticism*. Princeton: Princeton University Press.
- Lazarus-Yafeh, H., et al., eds. 1999. *The Majlis: Interreligious Encounters in Medieval Islam*. Wiesbaden: Harrassowitz.

- Levin, L., Walker, R. D. and Sadik, S. 2018. "Isaac Israeli," in Zalta, E. N., ed. *The Stanford Encyclopedia of Philosophy (Summer 2018 Edition)*. Stanford: Metaphysics Research Lab, Stanford University. <https://plato.stanford.edu/archives/sum2018/entries/israeli/>.
- Lewis, B. *et al.* 1986². "Ibn Zur'a," in *EI-2*[0.4.], 3: 979-80.
- Libson, G. 2003. *Jewish and Islamic Law: A Comparative Study of Custom During the Geonic Period*. Harvard Series in Islamic Law. Cambridge, MA: Harvard University Press.
- Meimaris, Y. 1985. *Katalogos tōn neōn aravikōn cheirographōn tēs Hieras Monēs hagías Aikaterinēs tou Orous Sina*. Athens: Ethnikon Hidryma Ereunon.
- Meyerhof, M. 1986². "Ibn al-Tilmīdh," in *EI-2*, 3: 956-7.
- Millás, J. M. and Stern, S. M. 1986². "Abu 'l-Ṣalt Umayya," in *EI-2*, 1: 149.
- Monferrer-Sala, J. P. 2010. "Ibn Zur'a," in Thomas, D., ed. *Christian-Muslim Relations 600–1500*. Leiden: Brill. https://doi.org/10.1163/1877-8054_cmri_COM_23344.
- Montgomery, J. 2007. "Islamic Crosspollinations," in Akasoy, A., Montgomery, J. and Pormann, P., eds. *Islamic Crosspollinations: Interactions in the Medieval Middle East*. Oxford: Gibb Memorial Trust, 148-93.

- Nicolae, D. 2017. "Ibn Jumay'," in *EI-3*, online.
https://doi.org/10.1163/1573-3912_ei3_COM_30847.
- Outhwaite, B., Schmierer-Lee, M. and Burgess, C. 2017.
Discarded History: The Genizah of Medieval Cairo.
Cambridge: Cambridge University Library.
- Pines, S. 1986². "Abu 'l-Barakāt," *EI-2*, 1: 111-3.
- Pingree, D. 1975. "Mashā'allāh: Some Sasanian and Syriac Sources," in Hourani, G. F., ed. *Essays on Islamic Philosophy and Science*. Albany: State University of New York Press, 5-14.
- Polliack, M. 1997. *The Karaite Tradition of Arabic Bible Translation: A Linguistic and Exegetical Study of Karaite Translations of the Pentateuch from the Tenth and Eleventh Centuries C.E.* Leiden: Brill.
- Richards, D. S. 1992. "A Doctor's Petition for a Salaried Post in Saladin's Hospital," *Social History of Medicine* 5.2: 297-306. <https://doi.org/10.1093/shm/5.2.297>.
- Salaymeh, L. 2013. "Between Scholarship and Polemic in Judeo-Islamic Studies," *Islam and Christian-Muslim Relations* 24: 407-18.
- Salaymeh, L. 2015. "Comparing Jewish and Islamic Legal Traditions: Between Disciplinarity and Critical Historical Jurisprudence," *Critical Analysis of Law* 2: 153-72.
- Samir, Kh. 1991. "'Abd al-Masih al-Isra'ili al-Raqqi," in Atiya, A. S., Torjesen, K. J. and Gabra, G., eds.

- Claremont Coptic Encyclopedia*. Claremont: Claremont Graduate University, School of Religion, 5b-7a.
<http://ccdlibraries.claremont.edu/cdm/ref/collection/cce/id/16>.
- Samsó, J. 1991. "Māshā' Allāh," in *EI-2*, 6: 710-2.
- Schacht, J. 1986²a. "Ibn Buṭlān," in *EI-2*, 3: 740-2.
- Schacht, J. 1986²b. "Ibn Riḍwān," in *EI-2*, 3: 907-8.
- Schwarb, G. 2014. "The Reception of Maimonides in Christian-Arabic Literature," in Tobi, Y., ed. *Maimonides and His World: Proceedings of the Twelfth Conference of the Society for Judaeo-Arabic Studies*. Ben 'Ever La-'Arav: Contacts between Arabic Literature and Jewish Literature in the Middle Ages and Modern Times 7. Haifa: Faculty of Humanities, University of Haifa, 109-75.
- Sezgin, F. 1970. *Geschichte des arabischen Schrifttums*. Vol. 3. Leiden: Brill.
- Simaika, M. 1939. Catalogue of the Coptic and Arabic Manuscripts in the Coptic Museum, the Patriarchate, the Principal Churches of Cairo and Alexandria, and the Monasteries of Egypt. 2 vols. Cairo: Government Press, Būlāq.
- Sirry, M. 2011. "The Public Role of Dhimmīs during 'Abbāsīd Times," *Bulletin of the School of Oriental and African Studies* 74.2: 187-204.
<https://doi.org/10.1017/S0041977X11000024>.

Sklare, D. E. 1996. *Samuel Ben Hofni Gaon and His Cultural World: Texts and Studies*. Études sur le judaïsme médiéval 18. Leiden: Brill.

Steinschneider, M. 1893. "Schriften der Araber in hebräischen Handschriften, ein Beitrag zur arabischen Bibliographie," *Zeitschrift der deutschen morgenländischen Gesellschaft* 47.3: 335-84.

Steinschneider, M. 1897. "An Introduction to the Arabic Literature of the Jews: I," *The Jewish Quarterly Review* 9.2: 224-39.
<https://doi.org/10.2307/1450587>.

Stroumsa, S. 2011. "Whirlpool Effects and Religious Studies: A Response to Guy G. Stroumsa," in Krech, V. and Steinicke, M., eds. *Dynamics in the History of Religions between Asia and Europe: Encounters, Notions, and Comparative Perspectives*. Leiden: Brill, 159-62.

Stroumsa, S. 2015. "Between Acculturation and Conversion in Islamic Spain: The Case of the Banū Ḥasday," *Mediterranea: International Journal on the Transfer of Knowledge* 1: 9-36.
<https://doi.org/10.21071/mijtk.v0i1.5171>.

Swanson, M. N. 2010. "'Abd al-Masīḥ al-Isrā'īlī al-Raqqī," in Thomas, D., ed. *Christian-Muslim Relations 600–1500*. Leiden: Brill. https://doi.org/10.1163/1877-8054_cmri_COM_24989.

Szilágyi, K. 2006. "Christian Books in Jewish Libraries: Fragments of Christian Arabic Writings from the Cairo Geniza," *Ginzei Qedem* 2: 107-58.

- Talbi, M. 1993. "al-Mu'izz b. Bādīs," in *EI-2*, 7: 481-4.
- Thomas, D. 2000. "al-Ṭabarī," in *EI-2*, 10: 11-5.
- Vajda, G. 2002. *Le commentaire sur le Livre de la création de Dūnaš ben Tāmīm de Kairouan (X^e siècle)*. Leuven: Peeters.
- Vernet, J. 1986²a. "Ibn Abī Uṣaybi'a," in *EI-2*, 3: 693-4.
- Vernet, J. 1986²b. "Ibn al-Haytham," in *EI-2*, 3: 788-9.
- Vidro, N. and Kasher, A. 2014. "How Medieval Jews Studied Classical Arabic Grammar: A Kufan Primer from the Cairo Genizah," *Jerusalem Studies in Arabic and Islam* 41: 173-244.
- Vollandt, R. 2014. "Ancient Jewish Historiography in Arabic Garb: Sefer Josippon between South Italy and Coptic Cairo," *Zutot* 11: 70-80.
- Vollandt, R. 2018. "Flawed Biblical Translations into Arabic and How to Correct Them: A Copt and a Jew Study Saadia's Tafsīr," in Bertaina, D. *et al.*, eds. *Heirs of the Apostles: Studies on Arabic Christianity in Honor of Sidney H. Griffith*. Leiden: Brill, 56-92.
- Walzer, R. 1991⁴. "al-Fārābī," in *EI-2*, 2: 778-81.
- Yarbrough, L. B. 2012. "Islamizing the Islamic State: The Formulation and Assertion of Religious Criteria for State Employment in the First Millennium AH." Princeton, NJ: Princeton University, PhD thesis.

6.1 *Cross-communal scholarly interactions (preprint)*

Zucker, M. 1984. *Saadya's Commentary on Genesis*. New York: The Jewish Theological Seminary of America.

Endnotes

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² The lack of comprehensive studies in this area necessarily limits our scope in this chapter. We have concentrated here on Egypt, Mesopotamia and Syria prior to the 8th/14th century. For a discussion of al-Andalus, see chapter 5.2.

³ For the development of this term in Goitein’s thought, see his 1949, 1955, and 1967 publications.

⁴ 19th-century European scholars of the *Wissenschaft des Judentums* constructed a vision of a “Golden Age” in the history of Judaism, a myth of an interfaith utopia, as it were, mirroring their own struggle toward cultural, legal, and political inclusion. This was eventually replaced by a counter-myth stressing the inferior status and suffering of Jews under Islam (Cohen 1986; 1991).

⁵ For example, MS Cambridge, CUL, T-S 8.4, a Genizah fragment that is often quoted in discussions of shared ownership of properties, contains a letter about a house in Minya Zifta that was jointly owned by the Muslim judge ‘Alī ibn al-Qāsim and the son of a rabbi (Goitein 1971, 292; translated in Outhwaite, Schmierer-Lee, and Burgess 2017, 23).

⁶ Authors’ translation, here and elsewhere for citations of this source. Readers may also wish to consult the parallel English translation using the cited paragraph numbers.

⁷ We are indebted to Adam McCollum for pointing these out to us.

⁸ It should be remembered that medieval sources sometimes used intellectual genealogies to represent scholars' pedigrees rather than their social relationships. Nevertheless, Ibn Abī Uṣaybi'a would probably not have reason to exaggerate his own connections to Jews and Christians.

⁹ Schacht (1986b) thinks his promotion to chief physician could not have been during the reign of al-Ḥākim, which ended when Ibn Riḍwān was 23, but must have rather been during the reign of al-Mustanṣir (r. 1036-1094).

¹⁰ He is reported to have written a refutation against the Christian Ibn Zur'a (Abū 'Alī 'Isā ibn Ishāq ibn Zur'a, 331-308/943-1008; Lewis *et al.* 1986; Monferrer Sala 2010) and the Jewish Afrā'im (presumably b. al-Zaffān, Ibn Riḍwān's student, see section 6.1.3) about the differences among religions (Ibn Abī Uṣaybi'a 1884, 2: 104; 2020, 14.25.9).

¹¹ Al-Ḥaqīr al-Nāfi' is known among biographers only by this epithet, which means something like "the contemptible one who is beneficial."

¹² As well as the example of Ibn Ridwan already discussed, a slightly earlier example is that of the Jewish philosopher 'Abd al-Masīḥ al-Isrā'īlī al-Raqqī (active late 4th/10th or early 5th/11th century), who became a Christian under the influence of Abū l-Faṭḥ Maṣṣūr ibn Muqashshir (mentioned in section 6.1.4) and wrote polemical works against Judaism. He mentions Ibn Muqashshir in the inscription in his book *Dialectic* (Kitāb al-istidlāl; Swanson 2010, 538; Samir 1991). His works include such titles as *Refutation of the Jews* (*al-Radd 'alā al-yahūd*) and *The Triumph of the Cross over Judaism and Paganism* (*Intiṣār al-ṣalīb 'alā al-yahūdiyya wal-wathaniyya*).

¹³ Rashīd al-Dīn Abū Ḥulayqa (591-676/1195-1276 or 7) seems to have been active in Cairo from 599/1202 or 3 (Richards 1992, 302). Ibn Abī Uṣaybi‘a says that Abū Ḥulayqa’s son converted to Islam (1884, 2: 130; 2020, 14.55.1), that Abū Ḥulayqa’s grandfather was a Christian (1884, 2: 121; 2020, 14.49.1), and that he himself was “dedicated to the duties he undertook with much [religious] devotion” (1884, 2: 123; 2020, 14.54.1), all of which would suggest a Christian affiliation. Most of what Ibn Abī Uṣaybi‘a records about him relates to his service to al-Kāmil (r. 615-636/1218-1238), who became viceroy after coming to Egypt with his father al-‘Ādil in 596/1200 (Ibn Abī Uṣaybi‘a 1884, 2: 123-30; 2020, 14.54; Gottschalk 1997). As suggested by Richards (1992, 303), al-Rashīd al-Dimashqī could be identified with Rashīd al-Dīn Abū Sa‘īd ibn Muwaffaq al-Dīn Ya‘qūb (d. 646/1249), a Christian physician from Jerusalem who studied in Damascus, began in al-Kāmil’s service in 632/1234 or 5, and also served under al-Mālik al-Ṣāliḥ Ayyūb (r. 637-647/1240-1249). Ibn Abī Uṣaybi‘a (1884, 2: 131-2; 2020, 14.56.2) speaks of his interaction with Abū Ḥulayqa while treating al-Kāmil. Al-Rashīd al-Dimashqī could alternatively be the Muslim medical scholar and mathematician Rashīd al-Dīn ‘Alī ibn Khalīfa (579-617/1183 or 4-1219), the teacher of the abovementioned Abū Sa‘īd and uncle of Ibn Abī Uṣaybi‘a. His home was Damascus, but he spent one or more periods in Cairo. From 605/1209 he was known to the Ayyubids and was in the service of some of them until his death (Ibn Abī Uṣaybi‘a 1884, 2: 246-59; 2020, 15.51; see Richards 1992, 303). For our purposes, it is not necessary to establish with certainty the identity of the al-As‘ad whose salary Makārim wants the remainder of, only to note that he could be either Muslim or Jewish (or, perhaps, neither). We cannot rule out, as Richards does, the most famous al-As‘ad during this period, the (apparently) Muslim scientist, physician, legal

expert, and poet As‘ad al-Dīn ‘Abd al-‘Azīz ibn Abī l-Ḥasan ‘Alī (570-635/1174 or 5-1237 or 8), who joined al-Kāmil’s service in Egypt after 626/1229 (Ibn Abī Uṣaybi‘a 1884, 2: 125-6, 132; 2020, 14.54.6, 14.57; Richards 1992, 303-4). Richards cites the disparity between the three dinars requested by Makārim and the 100 dinars per month which Ibn Abī Uṣaybi‘a says As‘ad al-Dīn ‘Abd al-‘Azīz received in a previous post. However, if this As‘ad worked in the Cairo hospital, we do not know what his salary was there, how much of his total income it represented, or whether it may have later been redistributed (after his death?) in a way that its “remainder” would be three dinars. An alternative Jewish candidate for al-As‘ad is As‘ad al-Dīn Ya‘qūb ibn Ishāq al-Maḥallī, who was active in Cairo late 6th/12th-early 7th/13th centuries, but it is not clear whether he was in the sultan’s employ (Ibn Abī Uṣaybi‘a 1884, 2: 118; 2020, 14.42; Richards 1992, 303).

¹⁴ These are the *wālī* (chief of police), the *qādī* (judge), al-Muwaffaq, Ben Tammām, and Ben Ṣadaqa. As suggested by Goitein, al-Muwaffaq might be the eminent Ibn Jumay‘ (Jewish physician to Ṣalāḥ al-Dīn, mentioned in section 6.1.3), but the title al-Muwaffaq is too common to say for certain; Ibn Jumay‘ (Nicolae 2017) is associated with Alexandria in Genizah documents and wrote a treatise about the city (Ibn Abī Uṣaybi‘a 1884, 2: 115; 2020, 14.32.5). Ben Tammām is probably Abū l-Ma‘ālī ibn Tammām, another Jewish physician whom Ṣalāḥ al-Dīn employed (Chipman and Lev 2006, 156). Finally, Ben Ṣadaqa could be the Samaritan Ṣadaqa ben Mīkhā ben Ṣadaqa, as Goitein apparently thinks (1971, 250), but it is difficult to see how the latter, who served the Ayyubid ruler of Damascus al-Ashraf Mūsā (d. 635/1237) and died in Ḥarrān, would be a decision maker for an

Alexandrian hospital (Ibn Abī Uṣaybi‘a 1884, 2: 118, 230-3; 2020, 15.46.3, 15.47).

¹⁵ 0.4. = Abbreviations