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Of Jinn Theories and Germ Theories: Translating Microbes, Bacteriological Medicine, and Islamic Law in Algeria

by *Hannah-Louise Clark**

ABSTRACT

Focusing on colonial Algeria ca. 1890 to 1940, this article explores what Muslim intellectuals and ordinary people learned about microbes and how they responded to bacteriological medicine. Many Algerians feared invisible spirits (*jinn*) and sought the healing powers of saints and exorcists. Was it then permitted for Muslims to use French treatments and follow Pasteurian rules of hygiene? Specialists in Islamic law, other intellectuals, and unlettered villagers showed a persistent concern with these and other questions in the wake of colonial conquest and violence in Algeria, as novel techniques, therapeutics, and forms of epistemic authority were introduced, and new visions of religious orthodoxy and national revival were formulated. Examining writings across a range of genres and formats—including a treatise of independent juristic reasoning (*ijtihad*), questions and answers prepared by a mufti, popular petitions, newspaper articles, advertisements, poetry, and a cartoon—this article argues that Islamic tradition and law were integral to the emerging science and culture of microbes in early twentieth-century Algeria. While Islamic reformists sought to displace jinn theories of illness, other Algerian intellectuals and colonial officials found it convenient to explain germs in terms of jinn. Both French and Muslim elite men sought to combine religious law with hygienic advice to advance competing hegemonic projects targeted at the Muslim family, thereby attempting to displace women's jinn-based practices.

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All translations from Arabic and French are my own. I have adopted simplified transliterations for Arabic in the main text for ease of reading and have followed the *International Journal of Middle East Studies* system in the footnotes. Algerian proper names are given in Arabic transliteration and Gallicized form where possible, to aid the reader in finding them elsewhere in literature and archival documentation.

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In 1907, readers of *Revue Africaine*, the journal for Algeria's principal historical society, were asked to contemplate the following: What should a Muslim do if he or she has a fever? Or suffers from a migraine? The questioner was Abu Bakr 'Abd al-Salam bin Shu'ayb al-Tilimsani ("the Tlemcenite") (1876–1941).¹ Bin Shu'ayb taught Islamic law and theology at the Great Mosque of Tlemcen and its *madrassa* (*médersa* in the French spelling), established in 1850 as one of three official Islamic schools controlled by the French colonial state in Algeria. He served on Tlemcen's municipal council, wrote for its local French-language newspaper, and was involved in a host of publishing initiatives and other activities that aimed to build bridges between Algeria's Muslim majority and European settlers.² Bin Shu'ayb enthused in the *Revue Africaine*, "One can imagine that for the young generations who have received instruction, scientific medicine"—by which he meant the form of medicine taught by French professors at the Algiers School of Medicine—"will soon replace empirical medicine and talismans." These last were considered the kind of medical knowledge acquired from experience or through familiarity with Galenic theories of medicine presented by Arab writers, as well as so-called magical knowledge derived from popular Islam, especially Sufism. Otherwise, he worried, Muslim sufferers would continue to frame ailments in terms of possession by *jinn*, referred to colloquially as *jnun* (sing. *jinni*)—spirits born of fire, popularly believed to be responsible for human illness and other misfortunes. Those feeling ill would persist in turning to *talaba* (sing. *talib*, scholars or, in this context, diviners or exorcists) for advice and animal sacrifices. And they would maintain trust in protective amulets and undertake *ziyarat*, or ritualized visits to the shrines of saintly *murabit* (holy men, living or dead), much like Catholics who sought miracles at Lourdes, he noted.³

Across the nineteenth- and early twentieth-century Middle East and North Africa, and the Muslim world in general, Islamic modernists such as Bin Shu'ayb argued that Islam was entirely compatible with "progress" and "modern civilization." The main goal of these reformers was to reestablish Islamic orthodoxy and adapt to modern existence by returning to (what they saw as) pure Islam. This Islam was to be found in texts and the example of the earliest generations of Muslims (the *salaf*, whence the term *salafi*).⁴ Bin Shu'ayb's preoccupations reveal how much questions of religious orthodoxy had become entangled with French and Muslim approaches to health in Algeria. Most Algerian Muslims, however observant or not they might be, ascribed illness and accidents to God's will and sought spiritual as well as physical remediation. But according to Bin Shu'ayb, people who believed in the healing powers of saints were not orthodox Muslims. He considered their faith in magic and what he considered as "moral medicine" a mark of apostasy.⁵

Meanwhile, the French audience for Bin Shu'ayb's article, which included Orientalist scholars as well as colonial officials and medical doctors, considered it impossible for Muslims to believe in both a theological cosmology, however "reformed," and scientific

¹ Aboubekr Abdesselam ben Choaïb, "Les marabouts guérisseurs," *Revue Africaine* 51 (1907): 250–5, on 250. (Aboubekr Abdesselam ben Choaïb is the Gallicized form of Abu Bakr 'Abd al-Salam bin Shu'ayb used in his French-language writings.)

² Alain Messaoudi, "Aboubekr Abdesselam BEN CHOIAB [*sic*]," in *Dictionnaire des juristes ultramarins XVIIIe–Xxe*, ed. F. Renucci (Paris: Mission de recherche Droit et justice, 2012), 28–32.

³ Ben Choaïb, "Les marabouts guérisseurs" (cit. n. 1), 250, 255.

⁴ Samira Haj, *Reconfiguring Islamic Tradition: Reform, Rationality, and Modernity* (Stanford, CA: Stanford Univ. Press, 2008).

⁵ Ben Choaïb, "Les marabouts guérisseurs" (cit. n. 1), 250.

medicine.⁶ (The extent to which Catholicism went hand in hand with scientific medicine in Algeria, whether in “the proselytizing obsession of nuns in hospitals” or wards named after Catholic saints, was seldom acknowledged by this audience.)⁷ Some French Orientalists accepted the value of Muslim sciences in the deep past—producing, for instance, critical translations of medieval Arabic texts as a way of understanding the foundations of European science—but assumed Muslim theology was incapable of adapting to the present state of science.⁸ In this article, I depart from Bin Shu‘ayb’s and French Orientalists’ somewhat narrow formulations about health and faith to explore a wider variety of relationships that existed between medicine and Islamic law in colonial Algeria.

Historical and anthropological studies have helped reveal how people’s commitment to Islamic tradition could take many forms and give rise to a range of different positions toward modern science.⁹ For instance, historians of Islam have shown how, under the conditions of colonial modernity, reformers scrutinized the lawfulness of novel European imports ranging from consumer items such as self-igniting matches, wax candles, and toilet paper, to techniques and infrastructures of the state, including the telegraph and quarantine. To help the Muslim community navigate change, muftis or juriconsults issued legal opinions (*fatawa*, sing. *fatwa*), finding justification in the Islamic past for many technical and administrative aspects of modern science.¹⁰ Scholars of law and colonialism have shown how new forms of scientific expertise and techniques could represent a challenge to previously authoritative ways of giving testimony, and simultaneously empower litigants. This has become especially clear in studies of how non-elite Muslims, including women, engaged forensic medicine and laboratory tests in pursuit of justice or improved health.¹¹

Historians’ salutary focus on translations of new knowledge into Arabic, Ottoman Turkish, or Persian has revealed how “Western” science provided rival ‘ulama’ (Muslim scholars) with a strategic and rhetorical tool; served as cultural capital for new classes of

⁶ Ahmed Ragab, “Making History: Identity, Progress and the Modern-Science Archive,” *J. Early Mod. Hist.* 21 (2017): 433–4.

⁷ Quotation in letter from M. Nahon, Algiers, 27 September 1901, in Aron Rodrigues, *Jews and Muslims: Images of the Sephardi and Eastern Jewries in Modern Times* (Seattle: Univ. of Washington Press, 2003), 85. See Taïeb Morsly, *Contribution à l’étude du paludisme dans ses rapports avec le traumatisme* (Montpellier: Typographie et Lithographie Boehm et fils, 1881), for records of ward names at Mustapha Hospital, Algiers.

⁸ See, for example, Lucien Leclerc, *Histoire de la médecine arabe: Exposé complet des traductions du grec; Les sciences en Orient, leur transmission en Occident par les traductions latines*, 2 vols. (Paris: Librairie Ernest Leroux, 1876). Similar assumptions appear in early *Isis* articles on Islamic science and were slow to die; see, for example, Cyril Elgood, “Tibb-ul-Nabbi or Medicine of the Prophet,” *Osiris* 14 (1962): 33–192, on 38.

⁹ Alireza Doostdar, “Empirical Spirits: Islam, Spiritism, and the Virtues of Science in Iran,” *Comp. Stud. Soc. Hist.* 58 (2016): 322–49, on 323.

¹⁰ Etty Terem, *Old Texts, New Practices: Islamic Reform in Modern Morocco* (Stanford, CA: Stanford Univ. Press, 2014); Terem, “Consuming Anxieties: Mobility of Commodities across Religious Boundaries in Nineteenth-Century Morocco,” *Journal of the Economic and Social History of the Orient* 60 (2017): 115–41; Leor Halevi, *Modern Things on Trial: Islam’s Global and Material Reformation in the Age of Rida, 1865–1935* (New York, NY: Columbia Univ. Press, 2019).

¹¹ For examples, see Liat Kozma, *Policing Egyptian Women: Sex, Law, and Medicine in Khedival Egypt* (Syracuse, NY: Syracuse Univ. Press, 2011); Ellen Amster, *Medicine and the Saints: Science, Islam, and the Colonial Encounter in Morocco, 1877–1956* (Austin: Univ. of Texas Press, 2013); Sarah Ghabrial, “The Traumas and Truths of the Body: Medical Evidence and Divorce in Colonial Algerian Courts, 1870–1930,” *Journal of Middle East Women’s Studies* 11 (2015): 283–305; and Khaled Fahmy, *In Quest of Justice: Islamic Law and Forensic Medicine in Modern Egypt* (Oakland: Univ. of California Press, 2018).

people; and endowed nationalist elites with practical means to transform the situations of peasants and women whom they constructed as “backward” and “superstitious.”¹² Conversely, scholars have shown how religious rituals and magic retained their salience, such that individuals continued to participate in them while embracing positive science and European technologies such as quarantine.¹³ Across these bodies of literature, Islamic tradition is recognized as being plural and complex, comprising different disciplines (such as jurisprudence or *fiqh*, rulers’ law or *siyasa*, theology, philosophy, ethics, Sufism, and so on) and genres of practice (such as timekeeping).

Building on this work, I ask: How did specialists in Islamic law respond to momentous changes brought about in the realm of health and healing by the French occupation of Algeria? How did Muslims from different backgrounds learn about microbes and germ theories, and what difference did this make in their behavior toward the invisible world of jinn? Where law has been perceived as important in relation to the history of medicine in Algeria, it has mostly, so far, been considered French and colonial law. The enduring analytical framework is that of medicine and colonial power.¹⁴ Yet, this has been tempered with awareness that some Algerians were not simply content to continue with “traditional” forms of medicine but were often also eager to grasp the promise of better health offered by French medicine, and to exploit opportunities offered by state health care, either as patients or as medical professionals.¹⁵ Still, all too often the history of colonial medicine—its agents, institutions, policies, and their underpinning legal frameworks—is mistaken for the whole story of biomedicine, ignoring the history and wider context of debates internal to Algerian society.

This article plunges into these debates by following (mostly) Muslim male literati, including muftis, medical professionals, and journalists. It begins with a probing Islamic legal treatise published in 1896 and concludes with writings about jinn and germs in the 1930s. Examining a broad array of Arabic-language sources from Algerian, British, and French archives enables me to move beyond colonial and national narratives to resituate Algeria in cosmopolitan and global frameworks. This also importantly enhances

¹² For examples, see Omnia El Shakry, *The Great Social Laboratory: Subjects of Knowledge in Colonial and Postcolonial Egypt* (Stanford, CA: Stanford Univ. Press, 2007); Cyrus Schayegh, *Who Is Knowledgeable Is Strong: Science, Class, and the Formation of Modern Iranian Society, 1900–1950* (Berkeley and Los Angeles: Univ. of California Press, 2009); Marwa S. Elshakry, *Reading Darwin in Arabic, 1860–1950* (Chicago: Univ. of Chicago Press, 2013); On Barak, *On Time: Technology and Temporality in Modern Egypt* (Berkeley and Los Angeles: Univ. of California Press, 2013); Alper Yalçinkaya, *Learned Patriots: Debating Science, State, and Society in the Nineteenth-Century Ottoman Empire* (Chicago: Univ. of Chicago Press, 2015); and Daniel A. Stolz, *The Lighthouse and the Observatory: Islam, Science, and Empire in Late Ottoman Egypt* (Cambridge, UK: Cambridge Univ. Press, 2018).

¹³ For examples, see Birsan Bulmus, *Plague, Quarantines and Geopolitics in the Ottoman Empire* (Edinburgh: Edinburgh Univ. Press, 2005); and Alireza Doostdar, *The Iranian Metaphysicals: Explorations in Science, Islam, and the Uncanny* (Princeton, NJ: Princeton Univ. Press, 2018).

¹⁴ Frantz Fanon, “Medicine and Colonialism,” chap. 4 in *A Dying Colonialism*, trans. Haakon Chevalier (Paris, 1959; New York, NY: Grove, 1965), 121–45.

¹⁵ For examples, see Yvonne Turin, *Affrontements culturels dans l’Algérie coloniale: Écoles, médecines, religion, 1830–1880* (Paris: Maspero, 1971); Richard C. Keller, *Colonial Madness: Psychiatry in French North Africa* (Chicago: Univ. of Chicago Press, 2007); Larbi Abid, *La pratique médicale en Algérie de la période coloniale à nos jours* (Algiers: Éditions ANEP, 2008); Claire Fredj, “Retrouver le patient colonisé,” *Histoire, Médecine et Santé* 7 (2015): 37–50; Nina Salouâ Studer, *The Hidden Patients: North African Women in French Colonial Psychiatry* (Cologne: Böhlau Verlag, 2015); Hannah-Louise Clark, “Expressing Entitlement in Colonial Algeria: Villagers, Medical Doctors, and the State in the Early 20th Century,” *Int. J. Mid. East Stud.* 48 (2016): 445–72; and Yamīna Mujāhid, “Tarīkh al-Ṭibb fī al-Jazā’ir fī Zill al-Istīmār al-Faransī 1830–1962” (PhD diss., Université d’Oran 1, 2018).

my ability to show that interpretation of Islamic law in relation to microbes and other aspects of French medicine was not limited to Muslim jurists but could involve wider publics, including colonial officials as well as apparently secular figures of Algerian cultural nationalism. Both French and Muslim elite men sought to combine religious law and rules of hygiene to advance competing hegemonic projects targeted at the Muslim family and designed to displace women's jinn-related practices.

There is no question that, over the first half of the twentieth century, professional and biomedical disease categories became more fixed, and technologies such as vaccination and recordkeeping became standardized in Algeria.¹⁶ But this did not rule out people using bacteriological medicine alongside prayer and other forms of protective energy not considered part of science. Indeed, the persistence of moral medicine indicated the relative weakness of French approaches, particularly in areas such as mental illness.¹⁷ Presenting a complementary reading of the historical epistemology of microbes in Algeria to narratives that have focused exclusively on its European and colonial origins, I show that considerations of religious law have a much older and deeper claim to shaping public health world views than state laws; this should not be disregarded.¹⁸

HEALTH, HEALING, AND POWER IN ALGERIA

Jinn are invisible spiritual entities mentioned in the Qur'an and prophetic tradition. In strict terms, this suggests "one can't be Muslim if he/she doesn't have faith in their existence."¹⁹ Canonical status does not mean that beliefs about jinn have been static or universally accepted, but I bracket problems of ontology and interpretation here.²⁰ Instead, I want to use jinn as a vehicle to enter into dynamics of health, healing, and power in North African society as it was affected by French conquest and colonization.²¹

Eighteenth-century talib Sayyid Sa'id 'Abd al-Na'im claimed to have seen jinn with his own eyes. A loose-leaf book of geomancy (*ilm al-raml*) bearing 'Abd al-Na'im's name contains dramatic red and black ink illustrations of jinn, 'afarit (sing. 'ifrit, demons), and other supernatural beings. Scattered throughout the text are references to place-names and scholars from across North Africa, mostly in Morocco, indicating the compilation formed part of a cosmopolitan world view.²² "There are four types [of jinn]," stated 'Abd al-Na'im, "Muslim, unbeliever, Jew, and Zoroastrian [*majusiyya*]." He continued:

¹⁶ Hannah-Louise Clark, "Administering Vaccination in Interwar Algeria: Medical Auxiliaries, Smallpox, and the Colonial State in the Communes mixtes," *French Politics, Culture and Society* 32 (2016): 32–56.

¹⁷ Keller, *Colonial Madness*; and Studer, *The Hidden Patients* (both cit. n. 15).

¹⁸ For an example of a Eurocentric narrative (not specifically about Algeria), see Flavio D'Abramo and Sybille Neumeyer, "A Historical and Political Epistemology of Microbes," *Centauros* 62 (2020): 321–30.

¹⁹ Amira El-Zein, *Islam, Arabs, and the Intelligent World of the Jinn* (Syracuse, NY: Syracuse Univ. Press, 2009), x.

²⁰ Such problems are taken up by Alireza Doostdar, "Do Jinn Exist?," chap. 4 in *The Iranian Metaphysics* (cit. n. 13), 52–7.

²¹ Compare with Janice Boddy, *Wombs and Alien Spirits: Women, Men, and the Zār Cult in Northern Sudan* (Madison: Univ. of Wisconsin Press, 1989); Amal Hassan Fadlalla, *Embodying Honor: Fertility, Foreignness, and Regeneration in Eastern Sudan* (Madison: Univ. of Wisconsin Press, 2007); and Amster, *Medicine and the Saints* (cit. n. 11). Ali A. Olomi shares a wealth of knowledge about jinn in his Wednesday Twitter threads; see, for example, @aalom, "In Middle Eastern and Islamic cosmology, the djinn/jinn are a class of spirits that inhabit a hidden world, al ghayb," Twitter, 31 July 2019, <https://twitter.com/aalom/status/1156641988101332993>.

²² Paul Naylor, "An 18th Century North African Travelling Physician's Handbook," *Asian and African studies blog*, British Library, 31 May 2016, <https://blogs.bl.uk/asian-and-african/2016/05/an-18th-century-north-african-travelling-physicians-handbook.html>.

The Muslim treats his friends in Islam gently and binds his enemies among the unbelievers. The unbeliever attacks the Muslim and is merciful to the unbelievers, and the Jew attacks the Muslim and is merciful to the Christian and the Jew in the name of God the exalted, and the Zoroastrian attacks all of them and is merciful to none of them because he has no book [i.e., he is not among *ahl al-kitab*, “people of the Book,” the monotheistic faiths predating Islam].²³

For talaba such as ‘Abd al-Na‘im, it was critical to recognize the characteristics of jinn—which were not limited to religious confessional identity but extended to appearance, name, age, sex, geographic origin, and so on—to develop a prognosis or chase a jinni from a client (not every talib possessed both skills).²⁴

The social differentiation of the spirit world described by ‘Abd al-Na‘im bore at least some similarities to demographic divisions and social tensions in Algeria before and after colonial occupation. For instance, several folktales blamed the French capture of the Ottoman principality of Algiers in 1830 on stratagems wrought by indigenous Jews and Christian foreigners. One version of this myth overheard in early twentieth-century Blida, a town to the south of Algiers, accused the Ottoman governor of selling Algeria to the French. Storytellers recounted: “Husayn [governor of Algiers] was of Jewish origin, although he claimed to be Turkish. He was an unscrupulous tyrant, and one day he seized all the property of one of his subjects.” Through the story, we learn that jinn not only affected physical bodies but also intervened in the body politic “as a threat and limitation on those who wield power.”²⁵ The man dispossessed by Husayn sought help from a saint who lent him his horse, a jinni. Although the Muslim spirit-horse aided the victim of the story (and at one point in the tale, trampled the Ottoman governor under its magical hooves), the man was unable to retrieve his property, and ultimately Husayn fled Algiers.²⁶ Thus began the French occupation of Algeria.

In the years and decades following the conquest of Algiers, the French army used brutal methods in the so-called pacification of local populations. French officials replaced local political authorities, took control of the legal and administrative apparatus, changed land tenure rules, settled parts of the territory with Europeans, and forced the autochthonous population to resettle in newly designated areas, all of which relegated North African Jews and Muslims to subordinate status beneath European settlers. From 1848, Algeria formed part of France juridically, but officials also had to reckon with Ottoman, Islamic, Mosaic, and Berber customary legal precedents. Most of Algeria’s Jews (less than 2 percent of the population) were collectively naturalized as French citizens in 1870.²⁷ In 1871, disaffected hereditary leader Mohammad al-Hajj al-Muqrani mounted an insurrection that engulfed part of the eastern *département* of Constantine and lower Kabylia. In the aftermath of the revolt, French ministers ordered the execution and

²³ Sayyid Sa‘īd ‘Abd al-Nā‘im, *‘Ilm al-Raml* (1214–1305AH/1799–1882CE), British Library Oriental Manuscripts Collection, London, OR 6657, f. 65v, http://www.bl.uk/manuscripts/viewer.aspx?ref=or_6557_f065v.

²⁴ Ben Choaïb, “Les marabouts guérisseurs” (cit. n. 1).

²⁵ Lawrence Rosen, *Islam and the Rule of Justice: Image and Reality in Muslim Law and Culture* (Chicago: Univ. of Chicago Press, 2018), 72.

²⁶ Joseph Desparmet, “Les réactions nationalitaires en Algérie,” *Bulletin de la Société de Géographie d’Alger* 132 (1932): 437–56, on 446–7.

²⁷ In 1876, the closest date for which census data is available, the Jewish population of Algeria was estimated to be 33,000, compared with a Muslim population of 2,462,900 and a French population of 256,400; see Kamel Kateb, *Européens, “indigènes” et Juifs en Algérie (1830–1962): Représentations et réalités des populations* (Paris: Institut national d’études démographiques, 2001), 120.

deportation of its leaders, confiscated vast tracts of land, imposed excessive fines on peasantry in affected areas, and brought the colony of Algeria under metropolitan and civilian rule.²⁸ Algerian Muslims, most of whom followed the Maliki *madhhab* (community or school of shari'a interpretation), continued to be excluded from the body politic on the grounds of religion and were subjected to a repressive legal code, the *indigénat*.²⁹ As Judith Surkis explains, French colonial laws aimed consistently at the legal assimilation of Algerian land, not its people.³⁰

The violence of French conquest was so brutal that, in some regions of Algeria at least, it led people to collectively reimagine etiologies and the experience of illness. For instance, Shawiya/Chaoui peoples inhabiting the Awras/Aurès Mountain region of eastern Algeria spoke of jinn theories with British ethnographer Melville Hilton-Simpson shortly before the outbreak of the First World War. Hilton-Simpson learned that the Shawiya attributed minor illnesses to "Arab" jinn. Like "the old-time forays of Arab raiders," who used a similar kind of military technology to the Shawiya and sought to take tribute rather than kill excessively, Arab jinn did "little serious harm." One Shawiya interlocutor went on to discuss more serious illnesses, which Hilton-Simpson recorded:

Epidemics, such as cholera, typhus and smallpox, are caused by armies of jenoun [jnun, colloquial form of jinn] [. . .] known as "wakhs," who invade a village and strike down the inhabitants as proof of which theory he remarked that the victims in their delirium raved and shouted as if they were in battle. The armies of jenoun which cause the serious epidemics . . . are called "French" because the harm they do is considerable, the reasons for this doubtless being that at the time of various insurrections the French have been obliged to send punitive expeditions into the Aurès and certain villages in the Rassira [Ghassira] Valley have been made aware of the effect of artillery.³¹

Jinn produced physical illness and mental confusion in those they possessed. But according to jinn theories that stretched from eastern Algeria to Morocco (Hilton-Simpson annotated his notes of the conversation with a reference to Westermarck's article on Arab jinn in Morocco), the presence of jinn also diagnosed unequal power relations that threatened public order and collective well-being.³²

Those troubled by jinn possession could seek expert help in diverse places. There were the Sufi brotherhoods believed to be descended from enslaved Africans who gathered at *zawaya* (sing. *zawiya*, Sufi meeting lodges) or saints' shrines to practice healing through trance rites and music.³³ Or there were murabit (*marabout* in the French

²⁸ The reasons for the revolt and the French response are described in James McDougall, *A History of Algeria* (Cambridge, UK: Cambridge Univ. Press, 2017), 77–80.

²⁹ There are four legal schools in the Sunni tradition: Ḥanafī, Mālikī, Shāfi'ī, and Ḥanbalī; see s.v., "Madhhab," in *Encyclopaedia of Islam*, 2d ed., *Online*, ed. P. Bearman et al., accessed 24 December 2020, https://doi.org/10.1163/1573-3912_islam_SIM_8798. On the *indigénat*, see Isabelle Merle, "Retour sur le régime de l'indigénat: Genèse et contradictions des principes répressifs dans l'empire français," *French Politics, Culture and Society* 20 (2002): 77–97.

³⁰ Judith Surkis, *Sex, Law, and Sovereignty in French Algeria, 1830–1930* (Ithaca, NY: Cornell Univ. Press, 2019), 19.

³¹ Melville Hilton-Simpson, MS 74/6, "Medical-magical," 1–2, Archives and Manuscripts Collection, Royal Anthropological Institute, hereafter RAI, London.

³² Edward Westermarck, "The Nature of the Arab Ginn, Illustrated by the Present Beliefs of the People of Morocco," *Journal of the Anthropological Institute of Great Britain and Ireland* 29 (1899): 252–69.

³³ Sossie Andezian, *Expériences du divin dans l'Algérie contemporaine: Adeptes des saints dans la région de Tlemcen* (Paris: CNRS Éditions, 2001); Richard C. Jankowsky, *Music, Trance, and Alterity in Tunisia* (Chicago: Univ. of Chicago Press, 2010); Tamara D. Turner, "Algerian Dīwān of Sīdī Bilāl: Music, Trance, and Affect in Popular Islam" (PhD diss., King's College London, 2017).

spelling), the saintly healers who drew opprobrium from Bin Shu'ayb. Bin Shu'ayb's hometown Tlemcen overflowed with saints who channeled *baraka*, considered as divine energy or grace, through their descendants and burial places. He documented the "extravagant maraboutism" of his fellow Tlemcenites and the "limitless credulity" of peasants in the town's hinterlands. But were they so very foolish? To treat a fever, popular advice was to visit the murabit of Sidi al-Qaysi/Sidi el-Kissi on three consecutive days (making sure to travel only before dawn or after dusk), and gather leaves near the shrine to burn and fumigate your bedchamber.³⁴ Biomedically speaking, the cyclical fevers associated with the form of malaria most common across early twentieth-century Algeria abated after seventy-two hours, so the ritual did in fact bring relief. People throughout the region, even European settlers, swore by the rabies cure that could be obtained from saint Sayyid Mulay 'Ali ibn al-'Arabi ibn 'Umar/Sidi Moulay Ali ben Larbi Benamar in Nédroma. The guardian at the saint's domed tomb, Benamar's descendant, knew the secret writings that transmitted healing *baraka* if inked on a plate, dissolved in water, and swallowed.³⁵ The positivist convictions espoused by Bin Shu'ayb and the French elites he sought to inform did not allow them to appreciate what may have been obvious to people who did (and still do) seek such treatments: such medicine could be effective physically as well as morally.³⁶

Illness could also be treated at home. Muslims learned that God sent both illness and cure, thereby empowering individuals to manage their own treatment.³⁷ Much domestic medicine was empirical, relying on commercially available plants. Women had an essential role to play in deciding on treatment for their families and were said to be favorite targets for jinn; their bodies were particularly vulnerable to attack during pregnancy, birthing, and breastfeeding.³⁸ Jinn repellents employed by mothers included wearing amulets during pregnancy; suspending talismans made of iron above an infant's cradle; and employing written charms, upon which "should always be inscribed the name of the wearer's mother."³⁹ Older, experienced women known as *qablat* (sing. *qabla*) assisted with childbirth, and grandmothers transmitted practices of infant care and protection within their communities and families.⁴⁰

³⁴ Ben Choaïb, "Les marabouts guérisseurs" (cit. n. 1), 252.

³⁵ Yahya Boutemène, *La Zawiya des Ouled Sidi Benamar près de Nédroma* (Oran: Imprimerie de Heintz Frères, 1950).

³⁶ Compare with the observation that "ritually enacted cures do not typically resolve a physical malady" in Paul Christopher Johnson, "Translating Spirits: Medical-Ritual Healing and Law in Brazil and the Broader Afro-Atlantic World," in this volume.

³⁷ These learnings rested on two hadith reports (reports of the sayings of the Prophet). The first, from al-Bukhārī (d. 256/870), is narrated by Abū Huraira: "There is no malady that Allah has sent down, except that He has sent down its treatment" (book 76: chap. 1), in Aḥmad ibn 'Alī ibn Ḥajar al-'Asqalānī, *Fath al-Bārī: Sharḥ Ṣaḥīḥ al-Bukhārī* (Beirut: Dār al-Kutub al-'Ilmiyya, 1989), 10:166. The second, from Muslim (d. 261/875), is narrated by Jābir: "There is a remedy for every malady, and when the remedy is applied to the disease it is cured with the permission of God the Exalted" (book 39: chap. 26), in Abū Zakariyya Yaḥyā ibn Sharaf al-Nawawī, *Jamī' al-Ṣaḥīḥ* (Cairo: n.p, 1866–7), 5:34.

³⁸ This point is made in Fadlalla, *Embodying Honor* (cit. n. 21), for eastern Sudan, but its relevance to jinn theories in twentieth-century Algeria is suggested in Slimane Rahmani, "La grosseur et la naissance au Cap Aokas," *Revue Africaine* 81 (1937): 217–44; and Aboubekr Abdesselam ben Choaïb, "Note sur les amulettes chez les Indigènes algériens," *Revue Africaine* 81 (1937): 309–18.

³⁹ Melville Hilton-Simpson, MS 74/10, "Written charms," 1, RAI.

⁴⁰ For examples, see Claire Fredj, ed., *Femme médecin en Algérie: Journal de Dorothée Chellier (1895–1899)* (Paris: Belin, 2015); and Malek Chebel, "Médecines traditionnelles ou le pouvoir des taleb's" (PhD diss., Université Aïn El-Bey, Constantine, Algeria, 1977).

Belief in jinn did not stop the Shawiya in Ghassira (the location of some of Hilton-Simpson's interviews) from petitioning a local representative of French authority for "a doctor to come to the sick" during a serious epidemic in 1917. Official record keepers located the origins of the disease outbreak, which they described as typhus, to a prison where the region's administrator had detained hostages from local families refusing military conscription.⁴¹ Reading the Shawiya petitioners' request in light of the account of wakhs raises the intriguing possibility that villagers summoned a French doctor hoping that he would possess deeper understanding of how to expel the armies of French jinn they judged responsible for their malady. Most Muslims in Algeria (and Jews and Christians with whom they coexisted) never relinquished metaphysical understandings of health, even as the French colonial state encroached more visibly on their lives.

IS FRENCH MEDICINE LEGAL?

State public health was not the only, or even the most visible, form of French medicine in colonial Algeria; this field was also prominently occupied by the army and by Catholic and Jewish religious initiatives.⁴² Once the conquest turned into extended occupation, an imperial decree dated 12 July 1851 applied French medical licensing laws to Algeria, requiring doctors and surgeons to hold a French medical degree or health officer (*officier de Santé*) qualification. However, the eleventh article of the 1851 decree exempted from prosecution "natives, Muslims or Jews, who practice medicine, surgery and midwifery on behalf of their coreligionists."⁴³ Although the law was changed (on 7 August 1896, and again on 26 July 1935), the legacy of the 1851 decree on medical licensing was such that however much French-certified physicians and professional bodies complained about competition from empirics and religious healers, Algerians were aware of their right to practice, albeit with limitations.

This mixture of medical and professional categories posed administrative and political questions that would regularly resurface throughout the colonial period. It also placed Muslims in a state of moral peril. To elaborate one example, consider the consumption of alcohol, which is strictly forbidden by Islam. Alcohol and alcoholic tinctures were used in hospitals across the colony to clean and bandage wounds. Doctors of colonization (*médecins de colonisation*), whose primary role was to treat settlers, recommended the application of wine syrups to wounds because of their astringent and antiseptic qualities. French teachers in Algerian schools learned to make a tonic from wine and sugar to "render precious service to the native population and to gain in that way their esteem, sympathy, and . . . even their affection."⁴⁴ No consideration whatsoever was given to the thought that use of alcohol might be repugnant for Muslims. So, was it lawful to consume medicines prepared by non-Muslims? Or to seek treatment from

⁴¹ Clark, "Expressing Entitlement in Colonial Algeria" (cit. n. 15), 445–6.

⁴² For examples, see Osama Abi Mershed, *Apostles of Modernity: Saint-Simonians and the Civilizing Mission in Algeria* (Stanford, CA: Stanford Univ. Press, 2010); Karima Dirèche-Slimani, *Chrétiens de Kabylie, 1879–1954: Une action missionnaire dans l'Algérie coloniale* (Paris: Éditions Bouchène, 2004); and Joshua Schreier, *Arabs of the Jewish Faith: The Civilizing Mission in Colonial Algeria* (Rutgers, NJ: Rutgers Univ. Press, 2010).

⁴³ Décret du 12 juillet 1851, Article 11, quoted in letter from Charles Jeanmaire, Algiers, to governor general of Algeria, 22 October 1904, Territoires du Sud (TdS) 0531, Archives nationales de l'Algérie, hereafter ANA, Birkhadem, Algeria.

⁴⁴ S . . . Instituteur à Z . . . , "Un remède de bonne femme," *Bulletin de l'Enseignement des Indigènes de l'Académie d'Alger* 143 (1905): 39–41, on 40.

them? What about the legality of novel organizational techniques, such as quarantine, with which Algerians were now confronted?

From 1896, Muslims could seek answers to these vitally important questions in a treatise by imam Muhammad ibn Mustafa ibn al-Khawaja Kamal/Mohammed ben Mostefa ben El-Khodja Kamal (d. 1915), *Tanwir al-Adhhan fi al-Hathth 'ala al-Taharraz wa Hafz al-Abdan* (The enlightening of minds on the urgency of preserving and guarding the body, hereafter *The Enlightening of Minds*), and they took full advantage of the opportunity.⁴⁵ *The Enlightening of Minds* was a work of *ijtihad*, a method of legal reasoning and hermeneutics based on the Qur'an and Sunna (the normative example of the Prophet). The most senior French official in Algeria, Governor General Paul Cambon, commissioned the work to increase acceptance of medical and hygienic measures being introduced under the auspices of the colonial state, and financed a preliminary print run of approximately 2,200 copies in Arabic and 2,000 copies of a French translation.⁴⁶ The Arabic edition was quickly exhausted; staff at what was called the Service of Native Affairs and Military Personnel arranged a second print run of 1,500 copies to meet demand. Every *qa'id/caïd* (the so-called "native" administrator), *khawaja/khodja* (secretary), mufti, imam, qadi (jurist), and *bash 'adl/bachadel* (head juristic assistant) received a personal copy of *The Enlightening of Minds*, as did 180 doctors across Algeria, staff at 17 civil hospitals, other state employees, and all pupils at official madrasas and *écoles normales* (teacher training colleges) in Algiers, Constantine, and Tlemcen.⁴⁷

Kamal was committed to purifying Islam of what he perceived as popular superstitions, such as the cult of healing saints. So too were the mufti of the Maliki madhhab in Algiers, Muhammad ibn Zakur/Mohamed Ben Zakour; the Hanafi mufti of Algiers, Ahmad abu Qandura/Ahmed Boukandoura, representative of the official madhhab of the Ottoman Empire; and the prayer leaders of the Sidi Ramadan and Sidi 'Abd al-Rahman al-Tha'alibi mosques in Algiers, ex-Maliki mufti Muhammad Sa'id ibn Ahmad ibn Zakari/M'hammed Saïd ben Ahmed Ibn Zekri and 'Ali ibn al-Hajj Musa/Ali ben El-Hadj Moussa, respectively. The four men cosigned a preface to Kamal's treatise, and described it as a "prodigiously useful" text.⁴⁸ Historians have characterized these religious leaders as conservatives or "Old Turbans" in opposition to figures considered as progressive such as Kamal, but from the leaders' enthusiastic assent to the treatise, we see these were not necessarily clearly delineated or opposing identities.⁴⁹

The first chapter of *The Enlightening of Minds* began with a familiar issue, the lawfulness of medical treatment; here Kamal refuted the idea that Muslims should obediently submit to illness as a sign of God's will. It progressed to foreign and unknown

⁴⁵ Muḥammad ibn Muṣṭafā ibn al-Khawāja Kamāl, *Tanwīr al-Adhḥān fī al-Ḥathth 'alā al-Taḥarraz wa Hafz al-Abdān* (Algiers: Imprimerie Pierre Fontana et Compagnie, 1896).

⁴⁶ Mohammed ben Mostefa ben El-Khodja Kamal, *La médecine et les quarantaines dans leurs rapports avec la loi musulmane* (*Tanouir el Adhen*), trans. Joseph Chailley-Bert (Algiers: Imprimerie Orientale, Pierre Fontana et Compagnie, 1896).

⁴⁷ Letter from J. Dominique Luciani, Algiers, 15 May 1896, "Répartition de la brochure *La médecine et les quarantaines dans leurs rapports avec la loi musulmane*"; René Reibell, "Minute de la note écrite par le chef du service à M. le Gouverneur général," 30 June 1896, ALG GGA 10H/21, Centre des archives d'Outre-Mer, hereafter ANOM, Aix-en-Provence, France.

⁴⁸ Kamāl, *Tanwīr al-Adhḥān* (cit. n. 45), 1–2.

⁴⁹ Nabila Oulebsir, *Les Usages du patrimoine: Monuments, musées et politique colonial en Algérie (1830–1930)* (Paris: Éditions de la Maison des sciences de l'homme, 2004), 290. Biographical details for Ibn Zekri, Ben Zekour, and Boukandoura appear in James McDougall, "The Secular State's Islamic Empire: Muslim Spaces and Subjects of Jurisdiction in Paris and Algiers, 1905–1957," *Comp. Stud. Soc. Hist.* 52 (2010): 553–80.

topics, constructing a sequential argument in favor of quarantine (*al-karantina*). In seeking to illuminate readers' understanding of this "invention of the Franks" (*ikhtira 'al-afranj*)—Muslims had described Western Christians as "Franks" since at least the time of the Crusades—Kamal based his interpretation on carefully selected, trustworthy evidence, following the established conventions of *ijtihād*: first, knowledge of Qur'anic revelation; second, reports of the sayings of the Prophet (*ḥadīth*) from respectable collections such as *Sahih* Bukhari, *Sahih* Muslim, *Musnad* Ahmad Ibn Hanbal, *Sunan* Abu Dawud, and *Sunan* Ibn Maja; and third, consensus (*ijma'*) and reasoning (*qiyas*) of historical and contemporary scholars, especially Maliki and Hanafi scholars.⁵⁰ Since moral medicine of the type excoriated by Bin Shu'ayb had its basis in "popular" Islam rather than "official" textual sources, it was entirely excluded from consideration.

The bulk of the treatise discussed circumstances in which it was lawful to break with Islamic norms in pursuit of healing. For instance, chapter two dealt with prerogatives of the male physician under Islamic law (*fi dhikr ba'd ma yajuz li-l-tabib la li-ghayrihi*). The doctor was permitted to examine all parts of the male body that were usually covered. When treating a woman, it was permissible for him to view the part of the body affected by illness, while the rest remained covered. Kamal then cited, among other things, the Hanafi work *al-Jawhara* by al-Haddad (d. 1387), which postulated that a male doctor was permitted to treat a woman's body except for the pudendum (*sa'ir badnha ghayr al-faraj*). It was even permitted for him to examine and treat gynecological complaints if a female was unavailable to perform the task and if the sick woman's family "feared for her death or that she would suffer pain she cannot bear" (*khaf 'alaiha al-halak aw yusibha waja' la tahtamil-hu*).⁵¹

A second section of the chapter dealt with the question of non-Muslim physicians. There was longstanding precedent in this area; after all, the Prophet consulted al-Harith ibn Kalada, doctor of the Arabs, yet al-Harith was an unbeliever. Following the Prophet's example, Kamal insisted Muslims could and *should* turn to a qualified Jew, Christian, or even a polytheist in the absence of a skilled (*bari'*) Muslim physician (but not a charlatan, *dajjal*, who brought disrepute to the important science of medicine with his ignorance, Kamal clarified).⁵² Maliki jurists not only stipulated that Muslims were permitted to consult a non-Muslim doctor in case of illness but also allowed that, in case of necessity, the sick could follow a non-Muslim doctor's advice on observance of legally required Muslim practices, such as ablutions and fasting. However, in the absence of a competent Muslim physician, the Muslim community was obligated to train one.⁵³ Kamal's text therefore offered a subtle combination of acceptance and resistance to French-trained physicians, whether Christian or Jewish; it simultaneously tolerated them, urging that they be replaced by skilled Muslims preferentially (without specifying the nature of their medical qualifications), while also acknowledging that in many cases healing was administered by women.

Chapter three turned from the relationship between the Muslim and the physician, to consider the composition of drugs and remedies—"the great support of healing" (*al-rukn al-'azam fi al-mu'alaja*)—and their purity and impurity.⁵⁴ The Qur'an stipulated

⁵⁰ Kamāl, *Tanwīr al-Adhḥān* (cit. n. 45), 7.

⁵¹ *Ibid.*, 11.

⁵² *Ibid.*, 12.

⁵³ *Ibid.*, 12–13.

⁵⁴ *Ibid.*, 14.

that all animal, vegetable, and mineral substances were God given, but certain substances were nevertheless subject to prohibition. All four legal schools agreed, for instance, that pig's flesh was forbidden, but disagreed on other categories of ingestibles. However, Qur'anic revelation permitted the eating of outlawed substances in cases of extreme need or hunger. Views on the use of wine in specific cases of urgent need were more conflicted. Within the Hanafi school there were two systems of thought on the subject, the more lenient of which allowed wine to be swallowed to combat thirst or for medicinal purposes. The fourteenth-century Hanafi legal treatise *al-Dhakhira* explained: "Seeking a cure with the *haram* (substance) is only not permitted if it is not known whether there is healing in it, whereas if this is known and there is no other remedy, it is permitted." However, Maliki jurists forbade the use of fermented liquors, internally and externally, in the treatment either of thirst or illness. Key Maliki texts such as the *Mukhtasar* of Khalil (d. ca. 1365) and the commentary of al-Dardir (d. 1786) agreed that wine might be used under coercion or to clear a complete blockage of the throat, while the stricter Tunisian jurist Ibn 'Arafa al-Warghammi (d. 1401) declared it unlawful to drink fermented liquors in all circumstances.⁵⁵

Kamal offered two legal arguments in favor of using alcohol medicinally, one based on logic and the other on a technicality. In the first instance, he cleaved to the position in *al-Dhakhira* supporting the medicinal use of alcohol: "You may say that this is against what Bukhari states in the hadith of Ibn Mas'ud (May God be pleased with him) about the Prophet (Peace be upon him) that he said, 'Truly God has not placed your cure in that which is forbidden to you.'"⁵⁶ If a forbidden substance were effective as a cure, its consumption for medical reasons could not be forbidden, Kamal explained, because this would invalidate the claim affirmed in the *al-Dhakhira*. In such an instance, the interdiction was lifted (*idha tu 'ayyin fih al-shifa' yartafi 'anhu al-tahrim*). The second argument was a simple case of forum shopping between legal schools. Kamal suggested that Maliki Muslims should follow the more lenient Hanafi rite in this instance, since "it is established among jurists, in consideration of the divergence between the schools, the permissibility of following the model of a differing code."⁵⁷ Kamal's interpretation sought to relieve Algeria's Muslims of anxiety about ethical consumption so they could select remedies on the basis of effectiveness.

The final chapter of Kamal's treatise addressed appropriate responses to contagious diseases. Kamal reminded his readers that the Qur'an itself urged self-preservation in the face of harm. More specifically, a number of hadith reports from the highly respected collections of al-Bukhari and Muslim ibn al-Hajjaj offered sure advice on proper behavior in the face of epidemics (*al-waba'*) and plague (*al-ta'un*). Kamal quoted, for instance, a hadith narrated by Usama bin Zaid: "I heard the Messenger of Allah (peace be upon him) say 'The plague is [God's] punishment [*rujz*] sent to some of the tribes of Israel and to those who came before you.' So if you hear of it in a place, do not go there; and if it breaks out in a place and you are there, you should not leave it and run away from the plague."⁵⁸ Kamal's selection of evidence emphasized the congruency between instructions on avoiding and containing disease found in revelation and hadith, on the

⁵⁵ Ibid., 15.

⁵⁶ Ibid., 16–17.

⁵⁷ Ibid., 17.

⁵⁸ Ibid., 19.

one hand, and the system of sanitary lazarettos known as quarantine (*al-mahajar al-sihhiyya al-ma'rufa bi-l-karantina*) on the other.

In making the case for quarantine's lawfulness, Kamal relied on contemporary scholars across the Ottoman Mediterranean who had become reconciled to the practice. These included the work of Hamdan ben Othman Khodja (1773–1840), *Ithaf al-Munsifin wa-l-Udaba' fi al-Ihtiras 'an al-Waba'* (The gift of the righteous and moral in precaution against contagion); Rifa'a al-Tahtawi (1801–73) in his travelogue (*rihla*) to Paris, *Takhliṣ al-Ibriz fi Talkhis Bariz* (The extraction of pure gold in the abridgement of Paris); and Muhammad Bayram al-Thani, head mufti of the Hanafi madhhab, whose treatise *Husn al-Naba' fi Jawaz al-Tahaffuz min al-Waba'* (The excellence of tidings in the lawfulness of precautionary measures against epidemics) praised the efficacy of quarantine against cholera.⁵⁹ The evidence led Kamal to conclude:

Consequently, quarantine is lawful, as instructed above. Even if it is an invention of the Franks, there is no evil in using their ideas, if circumstances make it necessary, because they excel in the art of prophylaxis of epidemic disease [*al-waba'*] and stop its spread and they followed the basic teachings of medicine [*wa haqqaqu qawa'id al-tibb*].⁶⁰

Kamal signaled the intersection between Muslim and Frankish ideas—were not both inheritors of the Hippocratic and Galenic legacy?—and declined to recognize the superiority of Frankish medicine as a rule. Frankish innovations were complementary to, rather than substitutes for, existing intellectual and legal traditions. The basic teachings of medicine, however, contained nothing of jinn and the saints.

We find something like the arguments made in *The Enlightening of Minds* being applied in *shikayat* (complaints) by villagers from Ighil 'Ali in Kabylia, northern Algeria, in 1909. The men wrote directly in French to both Governor General Charles Jonnart and the prefect of Algiers to protest “fatal fumes” emanating from a poorly situated abattoir in their hamlet: “Our cemetery is profaned by the presence of [an] abattoir, and the blood flowing from it, carried away by rainwater, will mix with the water in our spring, and that will be the consequence of many evils that will decimate the population.”⁶¹ The petitioners understood collective health as something broader than sanitation, since they included ritual purity in their concerns. They may also have feared the abattoir would attract jinn, which were said to dwell preferentially in pools of blood.⁶² Nevertheless, they framed their request as a matter of “public health” (*santé publique*) and followed each signatory's name with his state registration number, pragmatically and resourcefully locating themselves within French administrative discourse, in hope of getting a favorable answer.⁶³ Adhering to the guidance of religious authorities on appropriate behavior (expressed so clearly by Kamal) did not rule out secular and

⁵⁹ Hamdān ibn 'Uthmān Khawāja, *Ithāf al-Munṣifin wa-l-Udabā' fi al-Ihtirās 'an al-Waba'* (Constantinople: n.p., 1838); Rifā'a Rāfi' Tahtāwī, *Takhliṣ al-Ibriz fi Talkhiṣ Bārīz* (Būlāq, Cairo: Maṭba'at Ṣāhib al-Sa'āda al-Abadiyya, 1839); Muḥammad Bayram al-Thānī, *Husn al-Naba' fi Jawāz al-Taḥaffūz min al-Waba'* (Cairo: n.p., 1885).

⁶⁰ Kamāl, *Tanwīr al-Adhḥān* (cit. n. 45), 23.

⁶¹ Petitioners of Ighil 'Ali to Gov. Gen. Charles Jonnart, petition, 9 January 1909, 60 Akbou, 1905–11, Archives de la Wilāya de Constantine, **hereafter** AWC, Constantine, Algeria.

⁶² Melville Hilton-Simpson, *Among the Hill-Folk of Algeria; Journeys among the Shawia of the Aurès Mountains* (London: T. Fisher Unwin, 1921), 146.

⁶³ Fourteen months later, the prefect ordered local authorities to study the possibility of constructing a new slaughterhouse to conform with “hygiene and public cleanliness.” I do not know if the project was ever realized. Edict, 24 March 1910, 60 Akbou, AWC.

materialistic approaches to health, and Islamic legal imperatives remained in place regardless of French edicts, demonstrating that for many decades of colonial rule, state medical laws operated alongside Islamic law for most Algerians.

PASTEUR AND THE PROPHET

Around the time that Bin Shu'ayb was inveighing against empirical and moral medicine, two dozen Muslim teenagers were busily engaged in study at the Algiers School of Medicine, where a training program for so-called "native" medical auxiliaries had operated since 1904. Each student in the cohort had graduated from a French school with the *Certificat d'études primaires*, a rare distinction considering the colonial government's lack of investment in school facilities for Algerians. Each had passed a competitive scholarship examination in French and Arabic to gain admission to their course.⁶⁴ For two years, the students studied a curriculum devised by Henri Soulié, cofounder of Algeria's first Pasteur Institute in 1894, who was actively involved in the delivery of teaching.⁶⁵ In short, this was Bin Shu'ayb's "young generation" *par excellence*. But what did they make of scientific medicine? Haïm Abel Lévi-Bram interviewed medical auxiliary students and reported: "One of these pupils, to prove that he had grasped well the role of microbes, told us that he would compare these invisible beings, when he spoke of them to his coreligionists, to jinn, considered by natives as the cause of illness. In this way, he showed us that he could use the specific knowledge he had acquired at the School to instruct his backward coreligionists."⁶⁶ Lévi-Bram's dissertation (*thèse*) identifies these men as some of the first, if not the first, North African medical students to make a jinn-germ connection and to seek to popularize Pasteurian germ theory in this fashion.⁶⁷

The Pasteurian visions of medical auxiliaries and other intellectuals open a fresh perspective on the history of biomedicine in North Africa and the reception history of germ theories beyond the West.⁶⁸ Colonialist literature heralded Pasteurian science in the Maghrib as the exclusive achievement of French "men of science." This view, which persists in popular accounts by *pieds-noirs*, settlers who returned to metropolitan France after Algerian independence in 1962, has long since come under challenge by historians for its close ties to the racial ideologies of the so-called civilizing mission and settler colonialism.⁶⁹ Still, most scholars have focused on French or settler actors, meaning

⁶⁴ Details taken from Hannah-Louise Clark, "Doctoring the *Bled*: Medical Auxiliaries and the Administration of Rural Life in Colonial Algeria, 1904–1954" (PhD diss., Princeton University, 2014).

⁶⁵ Henri Soulié, "Programme," 1904, TdS 0531, ANA.

⁶⁶ Abel Lévi-Bram, "De l'assistance médicale des indigènes d'Algérie: Particulièrement assistance médicale des femmes et des enfants" (PhD diss., Faculté de médecine de Paris, 1907), 55.

⁶⁷ Elshakry notes that Muḥammad 'Abduh and other contributors to the Islamic reformist journal *al-Manār* likened microbes to a species of jinn in 1906, but the first religious scholar to make the connection may have been Shaykh Taḥa al-Khalīlī in 1897; see Elshakry, *Reading Darwin in Arabic* (cit. n. 12), 177.

⁶⁸ See, for example, Nancy J. Tomes and John Harley Warner, eds., "Rethinking the Reception of the Germ Theory of Disease: Comparative Perspectives," special issue, *J. Hist. Med. Allied Sci.* 52 (1997): 7–157.

⁶⁹ For examples, see Anne-Marie Moulin, "Patriarchal Science: The Network of the Overseas Pasteur Institutes," in *Science and Empires*, ed. Patrick Petitjean, Catherine Jami, and Anne-Marie Moulin (Dordrecht: Kluwer Academic, 1992), 307–22; Moulin, "Les instituts Pasteur de la Méditerranée arabe: Une religion scientifique en pays d'Islam," in *Santé, médecine et société dans le monde arabe*, ed. Elizabeth

that our understanding of Pasteurian science has remained “strangely isolated from [. . .] local societies” until now.⁷⁰ Some of the figures discussed here, like medical auxiliaries, were employed by the colonial state. Others held a French accreditation; still others worked closely with settler officials. These affiliations did not prevent them from pursuing professional, commercial, and political agendas in competition with the colonial state and with each other. As they translated microbes and bacteriological medicine into vernacular languages and Islamic genres, Muslim and French literati attempted to actively negotiate and manage the effects of novel techniques, therapeutics, and forms of epistemic authority on Algerian society.

The first publication to describe a version of germ theory in Arabic was produced by military doctor Charles Dercle, Maliki mufti and intellectual Abu al-Qasim al-Hafnawi/Belkassem El-Hafnaoui (1850–1942), and “Native Affairs” officer and onetime military interpreter Jean Mirante under the title, *Kitab al-Khayr al-Muntashir fi Hafz Sihha al-Bashr* (The book of spreading goodness in the preservation of health of humankind, hereafter *The Book of Spreading Goodness*) in 1908.⁷¹ Dercle had already published an Arabic-French language lexicon to facilitate communication between French-trained doctors and practitioners of what he termed Arab medicine.⁷² *The Book of Spreading Goodness* purported to be the translation of another work by Dercle, *Précis d'Hygiène pratique à l'usage des Indigènes d'Algérie* (A summary of practical hygiene for the use of the natives of Algeria), rendered from French into Arabic by al-Hafnawi and Mirante.⁷³ Given the striking stylistic differences between the French and Arabic texts, described below, it is fair to say that al-Hafnawi was a cocreator. The involvement of Mirante, a man who spent his days policing Algerian Muslim life, clearly signaled colonial officials’ preoccupation with controlling the field of biomedical knowledge and its effects on public order (a concern already visible in the commissioning of Kamal’s treatise). Both the Arabic and the French versions, groundbreaking for their time, promoted a self-help message for individuals desiring to protect their health.

In preparing the French-language version, Dercle selected and included references to the Qur’an and prophetic tradition (actions, sayings, and description of the life of Muhammad and his companions) in imitation of a work of Prophetic medicine (*tibb al-nabbi*).⁷⁴ In contrast, the Arabic-language text employed a question-and-answer format, a basic pedagogical feature in giving a fatwa, which suggests al-Hafnawi took full responsibility for the translation. One of the questions considered was, “From where do

Longuenesse (Paris: L’Harmattan, 1995), 129–64; John Strachan, “The Pasteurization of Algeria?,” *French History* 20 (2006): 260–75; and Matthieu Fintz, “Épidémiologie de l’invasion et constitution de l’identité biosociale des fellahin dans l’Algérie coloniale (1910–1962): La lutte contre le paludisme au regard des recherches sur la production des savoirs,” in *Chantiers de la recherche sur le Maghreb contemporain*, ed. Pierre-Robert Baduel (Paris: Karthala, 2006), 117–33.

⁷⁰ Francisco Javier Martínez, “Translating Pasteur to the Maghreb,” *Dynamis* 36 (2016): 285–91, on 291.

⁷¹ Charles-Ursmar Dercle, *Kitāb al-Khayr al-Muntashir fī Ḥafz Ṣiḥḥa al-Bashr*, trans. Jean Mirante and Belkassem El-Hafnaoui (Algiers: Pierre Fontana et Compagnie, 1908).

⁷² Charles-Ursmar Dercle, *De la pratique de notre médecine chez les Arabes: Vocabulaire arabe-français d’expressions médicales* (Algiers: Typographie et Lithographie Adolphe Jourdan, 1904).

⁷³ Charles-Ursmar Dercle, *Précis d’Hygiène pratique à l’usage des Indigènes d’Algérie* (Algiers: Typographie Adolphe Jourdan, 1908).

⁷⁴ Ahmed Ragab, “Prophetic Traditions and Modern Medicine in the Middle East: Resurrection, Reinterpretation, and Reconstruction,” *Journal of the American Oriental Society* 132 (2012): 657–73.

we get diseases?” (*min ayna u ‘tiyana al-amrad*).⁷⁵ The response made no mention of intangible and inscrutable agents such as jinn. Instead, successive questions and answers described the workings of germs and how to take action against them, using the neologism *jarathim* (derived from the verb *tajarthama*, meaning to take root, come into existence, germinate) that originated in eastern Arab countries, as well as *mikrub*, the direct transliteration of “microbe.” While the novelty of both terms suggested the foreign origins of germ theory, the authors of *The Book of Spreading Goodness* presented microbes securely in relation to Islam. Both the French and Arabic versions advanced the Islamic reformist project, along with hygiene, by documenting Islamic textual precedents in support of Pasteurian principles.

A major vector for germ theories and germ-related practices was the movement of 300,000 Algerian Muslims in the service of France during the Great War of 1914–18, 175,000 of them in uniform. Soldiers underwent medical examinations and vaccination on their departure from Algeria’s ports.⁷⁶ Once deployed to the battlefield, they were shown slideshows about disease, and handed pamphlets on syphilis that were written in North African colloquial Arabic and euphemistically titled *Mudawīyya wa Ḥafḍ [sic] min al-Amrad* (Treatment and preservation from diseases).⁷⁷ Approximately 60,000 Algerians, almost all men, continued to live and work in France in the 1920s.⁷⁸ It can be no coincidence that soldiers and workers returning to Algeria encountered a wider range of germ-related information in Arabic-language newspapers alongside advertisements for cosmetic products, constipation remedies, virility pills, and syphilis treatments.

Public health messages in newspapers routinely targeted the home and family life. For instance, readers of *Wadi Mizab/Oued Mzab* (named for the Mzab Valley but published in Algiers) were instructed that the human body came into the world germ free.⁷⁹ Thus, this article insinuated, mothers and assisting qablat were to blame for neonatal infections. The bilingual newspaper *al-Nasih/Ennaciḥ* ran articles on the latest scientific developments, “Fi ‘Ilm al-Tibb” (In medical science); issued guidance on “Notions élémentaires d’hygiène” (Elementary notions of hygiene) in relation to the eyes, mouth, and teeth; explained “Ḥafz al-Sihha” (The preservation of health, or, hygiene); and gave housekeeping and cleaning tips.⁸⁰ It also reported on disease outbreaks and rural hygiene, described the work of state-run health offices, and announced the medical achievements of Muslims past and present.⁸¹ One article, “Madhkar min Ḥafz al-Sihha” (Remark on the preservation of health), employed similar textual strategies to *The Book of Spreading Goodness*. The anonymous author insisted that hygiene was a matter of personal responsibility, and while germ theory might be French in origin, it was fully anticipated in Qur’anic revelation.⁸²

⁷⁵ Dercele, *Kitāb al-Khayr al-Muntashir* (cit. n. 71), 15.

⁷⁶ “Hygiène publique—Décret relatif à l’application en Algérie de la loi sur la vaccination et la revaccination,” *Bulletin Médical de l’Algérie* 18 (1907): 458–62, on 459–61.

⁷⁷ “Dawā al-‘Askar” and “Mudawīyya wa Ḥafḍ [sic] min al-Amrad,” found in “Rapport du 9e région (Tours) Vénérologie et dermatologie. Année 1917,” Box 147, Archives du centre de documentation du Val-de-Grâce, Paris.

⁷⁸ Amelia L. Lyons, *The Civilizing Mission in the Metropole: Algerian Families and the French Welfare State during Decolonization* (Stanford, CA: Stanford Univ. Press, 2013), 25.

⁷⁹ “Al-Jarāthīm,” *Wādī Mīzāb*, 1 October 1926, 2–3.

⁸⁰ “Fi ‘Ilm al-Tibb,” *al-Naṣīḥ*, 22 July 1921; “Notions élémentaires d’hygiène,” *al-Naṣīḥ*, 18 November 1921; “Hygiène de la bouche,” *al-Naṣīḥ*, 10 February 1922; “Hygiène des dents,” *al-Naṣīḥ*, 28 January 1922; “Ḥafz al-Ṣiḥḥa,” *al-Naṣīḥ*, 2 June 1922.

⁸¹ “Maṣlaḥat al-Ṣiḥḥa,” *al-Naṣīḥ*, 15 July 1927; “al-Tamaddun al-Islāmī: Aḥdāth al-Muslimīn fī l-Tibb,” *al-Naṣīḥ*, 18 November 1921.

⁸² “Madhkar min Ḥafz al-Ṣiḥḥa,” *al-Naṣīḥ*, 27 January 1922.

Algeria's most widely read Arabic newspaper, *al-Najah/En-Nadjah*, engaged with a wide range of health topics in the 1920s. Readers were introduced to infectious diseases and their routes of transmission, the necessity of cleanliness of hotels, and health statistics.⁸³ They also encountered two poems, "Mard . . . !" (Disease . . . !) and "al-Mikrub . . . !" (The microbe . . . !), written in a mixture of classical Arabic and dialect. These were published under the Islamically resonant *nom de plume* "al-Rashid" (the rightly guided one).⁸⁴ In "The microbe . . . !," al-Rashid criticized jinn exorcism and moral medicine as unlawful women's nonsense. The poem is narrated from the viewpoint of a man out walking who is invited to join a gathering of people. The group quarrel heatedly, presumably about microbes. One man discusses his purchase of a fat chicken for slaughter in sacrifice to the jnun (colloquial form of jinn) "that we always see near the cooking fire [*kanun*]." Al-Rashid's choice of language to describe the man signaled the perceived association between women and jinn-based practices: he "was like the woman, displaying effeminate manners" (*ka-l-mar 'a yatakhanath*). The poem's narrator angrily breaks up the gathering, calling on God to fight the thoughts of those who hold onto "rejected superstitions."⁸⁵

The interwar period was a time of increasing rivalry among nationalist leaders and their respective organizations to represent the Algerian nation.⁸⁶ It is evident from the way pronouncements on microbes and bacteriological medicine aligned with different political projects that their struggle extended into the biomedical field. On the one hand, there were the Islamic modernists, whom we first encountered in the person of Bin Shu'ayb. Myriad newspapers that denounced the political influence of murabit, such as *al-Furqan*, *al-Haqq*, *al-Shihab*, and *al-Umma*, further contributed to marginalizing jinn theories by endorsing French-credentialed healers and pharmacists. For instance, pharmacist 'Abd al-Rahman bu Khidina/Abderrahmane Boukerdena shared a political platform with nationalist religious scholars ('ulama'), including Shaykh bin Badis. While Bin Badis urged the moral and social renewal of Muslims, Boukerdena's proprietary medicines (as advertised in *al-Umma*) promised to revive the Muslim national spirit (*al-nafs*) using "the methods of modern medicinal preparations" (*turuq al-istihdarat al-'asriyya*). A quarter-page advertisement for "al-Kawatin" assured potential purchasers that "it contains nothing that is forbidden in Islamic law" (*la tahtaw 'ala ma man'ahu al-shari'a al-islamiyya*), demonstrating that the ethical concerns motivating Kamal four decades earlier remained pressing.⁸⁷ (Alarming, French patent medicine companies also dressed advertisements in Islamic garb to lure customers and give the impression that their products were Islamically sound, when in fact the manufacturers were not religious.)⁸⁸

On the other hand, there were the "Young Algerians," nominally "secular men attached to Islamic traditions who nonetheless embraced political and, to some extent, cultural assimilation as a means to emancipate their people without nonetheless sacrificing

⁸³ "Al-Amrād al-Ma'idiyya wa Turuq al-Wuqāya minha"; "Hawl al-Ṣiḥḥa al-Ummūmiyya: Wujūb Tanzīf al-Fanādiq," both in *al-Najāh*, 16 February 1926, 1; "al-Iḥṣā al-Ṣiḥḥi," *al-Najāh*, 7 January 1927.

⁸⁴ "Al-Mikrūb . . . !" *al-Najāh*, 28 July 1926, 1; "Marḍ . . . !" *al-Najāh*, 2 September 1926, 1.

⁸⁵ "Al-Mikrūb . . . !" (cit. n. 84).

⁸⁶ James McDougall, *History and the Culture of Nationalism in Algeria* (Cambridge, UK: Cambridge Univ. Press, 2009).

⁸⁷ "Dawā' Nāfi'a [al-Kuwatīn]," *al-Umma*, 3 November 1936, 4. Al-Kuwatīn is likely a transliteration of "Kaotin," and the medicine may have contained kaolin and morphine.

⁸⁸ See, for example, "bi-Ḥarābish Fāldā" [With Valda pills], *al-Balāgh*, 2 February 1936, which were manufactured in Lille but sold as the remedy of a turbaned shaykh.

the core values of their culture.”⁸⁹ If Islamic modernists wanted to detach Algerians from moral medicine in the name of so-called orthodoxy, then Young Algerians wanted to do so in the name of modern science and an enlarged franchise. The French citizen, politician, doctor, and onetime medical auxiliary instructor Dr. Abu al-Qasim awlad Hamida bin al-Tuhami/Belkacem Bentami (1879–1937) was prominent in this group. The newspaper Bentami edited in Arabic and French, *al-Taḡaddum/Attakaddoum* (*Le progrès*) appeared irregularly in the 1920s. It advocated for political assimilation, discussed social issues such as women’s status and schooling for girls, and, for a time, featured a health advice column on the front page: “Ḥafz al-sihha li-‘amma muslimi shamal ifriqiyya li-ma‘had Bastur” (The preservation of health for the Muslim masses of North Africa from the Pasteur Institute).⁹⁰ Rather than leaning on his own clinical and teaching experience, Bentami lifted the text of the column verbatim from a bilingual colonial hygiene manual, *Kitāb fī Ḥafz al-Sihha li-‘amma Muslimi Shamāl Ifriqiyya* (Book of the preservation of health for the Muslim masses of North Africa, abbreviated by the author to *The Book of Health*).⁹¹ As we shall see, by repurposing excerpts from *The Book of Health* in his newspaper, Bentami subtly repositioned them so that a hegemonic project for achieving top-down state control became a vehicle of self-improvement.

The original of *The Book of Health* was a handbook, comprising a French text and its Arabic translation in the same binding, that represented an authoritarian and patriarchal approach to public health education. Its lead author, Louis Parrot, and translator into Arabic, Edmond Sergeant, both senior settler scientists at the Pasteur Institute of Algeria, took an instrumental approach to Islam and Islamic law. For instance, they quoted Qur’anic verses on the existence of unseen spirits in relation to infectious disease (“And He creates that which you do not know”), and employed Islamic vocabulary to compel obedience to state sanitary laws.⁹² In chapters addressed to husbands, fathers, and chiefs, Parrot and Sergeant urged the increasing dominance of male villagers over their womenfolk, indigenous officials over villagers, and the colonial state over officials.⁹³ (It is telling that Benito Mussolini admired the booklet so much that he ordered it to be translated into Italian for distribution in Libya.)⁹⁴

One of the first topics Bentami covered in the Arabic pages of *al-Taḡaddum/Attakaddoum* was breastfeeding, a choice that highlights the complex role of colonialism in reordering and reinforcing patriarchy in Algerian society.⁹⁵ Gone was women’s careful management of the health risks of breastfeeding using talismans. Instead, male readers learned they should instruct and supervise new mothers to give the breast on

⁸⁹ Saliha Belmessous, *Assimilation and Empire: Uniformity in French and British Colonies, 1541–1954* (Oxford: Oxford Univ. Press, 2013), 161.

⁹⁰ For examples of the articles that ran in the French-language pages of the paper, see “À propos de la femme indigène,” *Attakaddoum [Le progrès]*, 15 May 1924; and “L’Instruction des filles indigènes,” *Attakaddoum [Le progrès]*, 15 June 1924.

⁹¹ Louis Parrot, *Kitāb fī Ḥafz al-Ṣihha li-‘amma Muslimī Shamāl Ifriqiyya*, trans. Edmond Sergeant (Paris: Institut Pasteur, 1922).

⁹² For instance, what was healthy and hygienic was described as *ṣaḥīḥ*, in the sense of truthful and legally valid, and those who fell sick were described as having left “the straight path” (*al-ṣirāṭa al-mustaqīma*), a term lifted from the first verse of the Qur’an, known as the *fātiḥa*. Parrot, *Kitāb fī Ḥafz al-Ṣihha* (cit. n. 91), 6.

⁹³ Ibid., 13, 106.

⁹⁴ Governo della Tripolitania, *La difesa della salute: Libro per conservare la salute destinato ai musulmani dell’Africa settentrionale* (Tripoli, Libya: Istituto Italiano d’Igiene, Previdenza e Assistenza Sociale, 1925).

⁹⁵ “Ḥafz al-Ṣihha,” *Attakaddoum [Le progrès]*, 1 and 15 April, 15 May, 1 and 15 June, 1924.

a strict scientific schedule (twelve hours after the birth, and every two to three hours from the second day).⁹⁶ The Qur'anic injunction stipulating that a mother be allowed to breastfeed her child for two full years was mobilized to support the statement that a mother should breastfeed the child herself and not use a wet nurse—seen as a dangerous vector of disease—except in extreme cases of need.⁹⁷ Unfortunately, the creators of *The Book of Health*, and Bentami, in reprinting their ideas, paid little heed to what memorizers of the Qur'an would have known far better than they. The hygienic advice given was in fact diametrically opposed to divine revelation, since the same Qur'anic verse continued, “You commit no error by hiring nursing-mothers, as long as you pay them fairly.”⁹⁸ Still, Parrot's, Sergeant's, and Bentami's intention to promote Pasteurian medicine as a new pillar of Islam, and thereby make the advice (and those who bestowed it) appear trustworthy, is clear.

Ironically, efforts by French and Muslim elite men to transmit germ theories could simultaneously strengthen and weaken belief in jinn. Was not the European colonization of Algeria itself proof of the strength of French jinn? Medical auxiliary Muhammad bin Salah al-Jawwadi/Mohamed ben Salah Adjouati suggested this might be the case. Whoever beheld colonial settlements, “prosperous towns where modernism goes hand in hand with the most well-understood and developed hygiene,” he declared, could not help but “piously praise the jinn of France that seems to hover there.”⁹⁹ The colonial government was happy to imply that spirits were on its side. An anti-malaria morality tale distributed as a cartoon from 1931 featured Bu Sa'ad/Bou-Saâd, who wears a farm laborer's straw hat shaped like an inverted flowerpot, and Jallul/Djelloul, an elderly man sporting a fez and walking stick (fig. 1).¹⁰⁰ Returning from market at dusk, the pair unwisely choose to sleep on a riverbank. A spirit appears to Bou-Saâd in his sleep and declares: “Move away. If these mosquitos bite you, they will give you fever.” Bou-Saâd rouses Djelloul but is unable to convince him that “a tiny animal gives the fever to a huge beast like yourself!” A month later, Bou-Saâd is full of health whereas Djelloul is bedridden and green-tinged, his spleen enlarged. A Muslim doctor or medical auxiliary (his religious identity signaled by a *shashiyya* worn on his head) working alongside a colonial visiting nurse (*infirmière visiteuse coloniale*) brings about recovery with a bottle of quinine tablets.¹⁰¹ The tale of Bou-Saâd and Djelloul bypassed the otherworldly power of healing saints and the therapeutic work done by women to protect their families against maleficent jinn. Instead, it championed the earthly power of a French-accredited Muslim doctor and his European-manufactured pharmaceuticals.

⁹⁶ “Ḥafẓ al-Ṣiḥḥa,” *Attakaddoum [Le progrès]*, 15 April 1924.

⁹⁷ “Ḥafẓ al-Ṣiḥḥa,” *Attakaddoum [Le progrès]*, 15 May 1924.

⁹⁸ Parrot, *Kitāb fī Ḥafẓ al-Ṣiḥḥa* (cit. n. 91), 18; Qur'an 2:233.

⁹⁹ Mohamed ben Salah Adjouati, *Les Auxiliaires médicaux indigènes: Rapport présenté à la session des Délégations financières du mois de Décembre 1923* (Algiers: Imprimerie Administrative Emile Pfister, 1923), 10, located in DZ/AN/17E/2013, ANA.

¹⁰⁰ The tale of Bū Sa'ad and Jallūl was also recorded in Algerian dialect for radio broadcast by the colonial government. For the recording, see Dr. Pons Leychard et M. Charavin, *Lutte Antipaludique. Bou-Saad, Djelloul et les Moustiques*, with Muḥyi al-Dīn Bāsh Tārzi/Mahieddine Bachtarzi, Compagnie française du Gramophone, K-4349, date unknown, gramophone record, available at <https://soundcloud.com/ceints-de-bakelite/bou-saad-djelloul-et-les-moustiques>. My thanks to Christopher Silver for bringing the existence of the recording to my attention.

¹⁰¹ “Lutte antipaludique,” loose leaf poster folded inside *Bulletin Sanitaire de l'Algérie*, 400, March 1931, located in DZ/AN/17E/1396, ANA.



Figure 1. A spirit (top right frame) warns two travelers to move away from a riverbank where they will be bitten by mosquitoes. "Lutte antipaludique," Bulletin Sanitaire de l'Algérie, 400, March 1931 (cit. n. 101). With permission from the Algerian National Archives.

Public health popularizations in the interwar period made microbes a matter of public interest and encouraged Algerian people of all classes to reconsider belief in jinn. In writings by Islamic reformers, there was a systematic displacement of jinn and outright condemnation of murabit and women's "superstitions." Medical auxiliaries and

colonial officials also attacked the notion of murabit but found it pedagogically useful to use jinn ideas to promote germ theories, especially among unlettered rural women. In doing so, they took a diagnostic concept that had previously encompassed social and saintly healing, stripped it of power relations and morality, and focused it more narrowly on personal hygiene and public health.¹⁰² Despite differences in their political visions and relative social standing, both Muslim and French elites aspired for men to wrest control of domestic medicine and family health away from their wives, mothers, and grandmothers.

OTHER WORLDS AND OTHER LAWS ARE POSSIBLE

Toward the end of his life, in 1937, Bin Shu'ayb expressed disappointment in the young generations whose minds he had played a small part in molding: "However educated they may be, the Muslims of Algeria attribute considerable influence to the mysterious. They always believe that they are subject to attack by invisible and dangerous beings," the elusive jinn.¹⁰³ James McDougall explains that by the 1940s, the reformist 'ulama' had successfully established their claim to dominant cultural authority over Islam and Islamic pronouncements in Algeria.¹⁰⁴ Bin Shu'ayb's comment and archival evidence—children attending a smallpox vaccination session clutching squabs, chickens, or eggs (presumably to placate jinn), a murabit with 3,000 followers appealing to a colonial administrator for supplies of the anti-malarial drug Quinacrine—both suggest that the reformists had won the battle to define biomedicine in relation to Islamic law, but lost the war to banish moral medicine.¹⁰⁵ Algerians reworked their jinn theories in the wake of violence that followed the French conquest and continued to do so in the face of new social and technological realities.

This article has argued that Islamic tradition and law were integral to the emerging science and culture of microbes and bacteriological medicine in Algeria. It shows how Muslim intellectuals operating within hegemonic structures of colonialism mobilized Islamic law to open discursive space for difference of opinion around new professional categories, therapeutics, and sanitary techniques (Kamal); to sell commercial products (Boukerdena); and to promote visions of family life (Bentami); but also to build up each writer's vision of national community. Meanwhile, French military doctors and colonial officials and scientists promoted reconciliation between Islamic norms and new rules of hygiene in medical popularizations that ranged from sophisticated engagements with Islamic law and its specialists (Dercle) to glaringly instrumental use of the Qur'an and jinn (Parrot and Sergeant). Even villagers who wanted the colonial government to live up to its official rhetoric understood law to be fluid, negotiated, and plural, dismantling any idea we might have of a monolithic Algerian Muslim public health world view. These collective efforts do not diminish the facts that religious and racial discrimination

¹⁰² By way of comparison, see the discussion of the Chinese concept "weisheng" in Ruth Rogaski, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley and Los Angeles: Univ. of California Press, 2004).

¹⁰³ Ben Choaïb, "Note sur les amulettes" (cit. n. 38), 309, 318.

¹⁰⁴ McDougall, *History and the Culture of Nationalism in Algeria* (cit. n. 86), 136.

¹⁰⁵ Renée Hogarth, "Compte rendu de Mission en Algérie," *Journal de la Société des Africanistes* 12 (1942): 241–7, on 242; letter from administrator of La Sefia to doctor, 15 May 1948, 93502 25/1, ANOM.

were baked into the organizational culture, ideas, and practices of biomedicine in Algeria, and that religious law was invoked by officials to promote authoritarian and repressive public health policies. But they do demonstrate a wider scientific franchise and a more diverse set of relationships between law and biomedicine than existing scholarship has recognized. Meanwhile, North Africans continue to fall sick and recover from jinn-related disturbances, long after empire's end.¹⁰⁶

¹⁰⁶ Chebel, *Médecines traditionnelles* (cit. n. 40); Nefissa Zerdoumi, *Enfants d'hier: L'éducation de l'enfant en milieu traditionnel algérien* (Paris: François Maspero, 1979); Mohamed Mebtoul, *Une anthropologie de la proximité: Les professionnels de la santé en Algérie* (Paris: L'Harmattan, 1994); Andezian, *Expériences du divin dans l'Algérie* (cit. n. 33); Fatima Zohra Cherak, "La thérapeutique de la rouqiya entre Algérie, Égypte et France," in *Islam et révolutions médicales: Le labyrinthe du corps*, ed. Anne-Marie Moulin (Paris: Karthala, 2013), 297–328; Turner, "Algerian Dīwān of Sīdī Bilāl" (cit. n. 33).