Along The Musk Routes: Exchanges Between Tibet and The Islamic World

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Abstract
From as early as the ninth century onwards, Arabic literature praises the quality of a typical and highly desirable product of Tibet, musk. In Arabic and Persian as well as Tibetan and Hebrew texts musk is discussed in a variety of genres such as geographical, zoological, religious and medical literature as well as in travellers’ and merchants’ accounts. These sources reveal an active trade route, which existed between Tibet and the Islamic world from the eighth century onwards. After discussing this set of trade routes, the article focuses on a comparison between the medical uses of musk in Arabic and Tibetan medical sources. The great number of similarities between the uses of musk in these two medical traditions suggests that along with the substance, there were also exchanges of knowledge. Hence we propose that following the model of the ‘Silk Roads’ and its cultural aspects, similar cultural interactions took place along the ‘Musk Routes’, which linked Tibet and the Islamic world.

Keywords
Musk, Tibetan medicine, Islamic medicine, trade, musk route, ancient global trade

Introduction: musk in the Islamic world
The famous eleventh-century theologian, jurist, philosopher, and mystic Abū Ḥāmid al-Ghazālī, in his The Jewels of the Qurān compared the holy book of Islam to the seas with their hidden riches. He asked his reader:

Why do you not emulate those people who waded through their waves and thus gained red brimstone, dived into their depths and thus drew out red corundum, shining pearls and green chrysolite, travelled along their coasts and thus gathered grey ambergris and fresh blooming aloe-wood, and became attached to their islands and thus derived from their animals the greatest antidote and the strongest musk?1

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1 al-Ghazālī 1977, p. 20.
Musk appears as a highly desirable substance in a great variety of Arabic texts. In poetry and other literary sources it is typically the fragrance of the beloved woman and evokes paradisiacal images. The thirteenth-century author Ibn Abi 'l-Hadid, for example, quotes in his monumental commentary on the collection Nahj al-balagha a report of the prophet who describes how Gabriel placed him during a night-journey on a carpet and gave him a quince. The fruit burst and out came the most beautiful slave girl he ever beheld. She greeted him and described herself: 'My upper part is made of ambergris, my middle part of camphor, and my lower part of musk.'

In Arabic literature from the mid-ninth century onwards, Tibet is frequently described as the land of musk. In his Book of Curious and Entertaining Information, Latā'if al-ma'ārif, for example, the tenth-century author Tha'alibi recounts a disputation at the court in Shiraz. One contestant, the famous traveller Abū Dulaf, is reported to have wished to experience all the wonders of the world:

... and may [God] bring down on me... the silks of China,... the grey squirrel furs of the Kirghiz lands, the woven mats of Baghdad. May He appoint to serve me Greek eunuchs, Turkish military slaves, slave girls from Bukhāra and concubines from Samarqand;... May He let me eat the apples of Syria, the fresh dates of Iraq, the bananas of the Yemen, the nuts of India... the grapes of Baghdad... and the melons of Khwārazm; And may He let me breathe the musk of Tibet...

In historiography we find musk, alongside gold and armour, as a characteristic gift of Tibetan kings, for instance to the famous rulers Alexander the Great and Anushirwan. In Arabic texts on the geography and culture of other peoples, entries on Tibet usually begin with an appraisal of the quality of its musk.

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2 For an overview see Dietrich 2001. This article is limited to exemplary and representative uses of musk in Islamic medicine for comparative purposes. In addition to musk itself, the musk pod or 'musk mouse' (fa'rat al-misk) is used in Islamic medicine. An analysis of its uses is beyond the scope of this article, but will be part of Akasoy forthcoming b.


Pommaret mentions a Bhutanese example of musk as a royal gift, where Sherab Wangchuk, the thirteenth temporal ruler (sDe srid) of Bhutan (r. 1744–1763) regularly gave musk (and other precious items) to the Cooch Bihar royal family in order to nurture the trade relations between the two countries. See Pommaret 2000, p. 5. For an illuminating theoretical discussion of royal gifts see Appadurai 1986.

The value that medieval Muslims attributed to musk and its exotic image were certainly connected with its limited availability and the fact that it was imported from distant lands. In this respect, musk has much in common with ambergris and camphor, the two other ‘ingredients’ of the heavenly girl.\(^8\)

Like these substances, musk was more than a literary image. They were real objects and figured among the main trading goods between Central and East Asia and the Islamic world. Musk in particular was imported from the Himalayas. It was a tangible link between the two regions and a material mediator for ideas which travelled between the two cultures. But how exactly did these transmissions take place? Which ideas travelled and how did they change in the course of their journey?

References to musk are found in the Middle East from as early as the third century CE.\(^9\) Through the analysis of the material presented below, we are suggesting the addition of a set of ‘Musk Routes’ to the established ‘Silk Roads’. While the Silk Roads form a helpful model for examining trade and cultural relations between China and Europe,\(^10\) the ‘Musk Routes’ draw the attention to interactions between the Tibetan and Islamic cultures.\(^11\)

In what follows, we will highlight, by way of comparison, several aspects of musk as a vehicle for intercultural relations. We will focus on trading, scientific knowledge and practical uses of musk, in particular in the field of medicine, and raise questions which relate to the broader field of Islamic-Tibetan relations.

**Tibetan Musk in Arabic Literature**

When Tibetan musk is praised in Arabic sources the authors frequently stress that it is superior to Chinese musk. Three reasons are usually given: first of all, unlike the Chinese musk deer, the Tibetan deer was said to nourish itself on fragrant vegetation, in particular spikenard, as, for example, al-Mas'ūdi (before 280/893–345/956) states.\(^12\) A more detailed account from Muḥammad ibn

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\(^8\) Donkin 1999.

\(^9\) See discussion below on the mentions in the *Babylonian Talmud*. Other early sources are discussed by King. See King 2007, particularly pp. 117–41. We would like to thank Anya King for having made her thesis available to us.

\(^10\) For a more nuanced discussion see Whitfield in this issue.


\(^12\) Mas'ūdi 1965–1970, §391. Similarly Qalqashandi 1913–1918, ii, pp. 114–16. Nuwayri quotes a different version in which he says about the musk deer: ‘This gazelle lives in Tibet and in India. They say it moves from Tibet—after it has eaten there the non-aromatic grass—to India, and then it leaves the musk in India, and it is of bad quality because it has not used this pasture. Then it eats the aromatic grass of India, and the musk clots in it. It goes to Tibet and leaves the musk there, and it is better than the sort one finds in India.’ Nuwayri 1923–2002, ix, p. 333.
'Abbās's lost treatise on musk is preserved in Nuwayrī's (677/1279–732/1332) encyclopaedia:

The best musk is produced by gazelles which eat a herb which is called كدهسه (k.d.h.m.s) and which grows in Tibet and Kashmir. According to Ahmad ibn Ya'qūb, the name of this herb is كدهسه (k.n.d.h.sa). He said: Second best to this herb is the Indian spikenard, i.e. the aromatic nard. It grows a lot in India and Tibet. The musk produced by an animal which eats spikenard is of a middle quality, inferior to the first class. He said: The lowest quality is the musk produced by an animal which eats a herb called marwa. This herb smells like musk, except that the smell of musk is more intense and more delicious.

The second reason for the superiority of the Tibetan musk, according to Arabic sources, was that the Tibetans kept the musk inside its pod and sold the pods whole whereas the Chinese used to open the pods and add other substances, for example blood or lead (cf. below, for methods of extraction).

The third reason was that Tibetan musk travelled a much shorter path and, more significantly, that the trade route did not involve a long maritime segment which could spoil its fragrance because of the humidity and the smell as is the case for Chinese musk. The idea that musk is initially odourless and eventually assumes the aroma of the place where it is kept appears often in Arabic literature (for the smell of musk cf. also below).

**Traders and Trading Routes**

Apart from the emphasis on overland transport medieval Arabic literature does not give us more than a general idea of the trading routes. Qalqashandi,

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13 The editor discusses the possible meanings of this word.
15 When the Arab authors refer to 'Tibet', they usually have a place or region in mind which is not necessarily identical with what we currently know as 'Tibet'. For more on this issue, see Akasoy forthcoming a.
Evidence of the measures of quality control exercised by the king of Bhutan are supplied to us in the seventeenth-century travel account of Jean-Baptiste Tavernier: 'The King of Boutan fearing that the cheats and adulterations of Musk would spoil the Musk-Trade, order'd that none of the Bladders should be sow'd up, but that they should be all brought to Boutan, and there, after due inspection, be seal'd up with his Seal.' Tavernier 1678, *Travels in India*, Book II, p. 153.
16 Mas'ūdī mentions also that on the sea it is exposed to moisture and changes of climate, Mas'ūdī 1965–1970, §392.
17 Mas'ūdī 1965–1970, §392; Qazwīnī 1928, p. 20. Damīrī in his book on animals adds that the distance between the living animal and the sea is equally important (Damīrī 1906–1908, pp. 266–7); Ibn Sidah 1898–1903, s.v. m-s-k.
18 For some references on Tibetan trading routes see: Beckwith 1977; Van Spengen 2000, particularly chapter four, 'The Geohistory of Tibetan Trade', pp. 96–144. See also Boulnois 2003.
for example, a fourteenth-century Egyptian author, states that from the Himalayas, Tibetan musk was brought into Khorasan from where it was transported to places all over the Islamic world.\textsuperscript{19} An alternative route is mentioned by the same source which went via India.\textsuperscript{20} In these Arabic texts, Indian merchants are referred to as experts on the substance.\textsuperscript{21}

From India, Tibetan musk was brought to the port of Daybul, on the shores of the Gulf of Oman, in present-day Pakistan, from where, according to Nuwayri, it was shipped to Siraf in Persia, Oman in Bahrain (the southern shores of the Persian Gulf, not to be confused with modern Bahrain), Aden in Yemen and other ports.\textsuperscript{22}

One of the final stations on these Musk Routes was the port of al-Ubulla near Basra. Several Arabic sources include the following anecdote which gives a vivid picture of the arrival of the trading ships:

When the ships come close to al-Ubulla, the smell of the musk rises, and the merchants cannot hide it from the tax collectors. When it is taken from the ship, its smell improves, and the smell of the sea goes away.\textsuperscript{23}

Other genres within the vast body of medieval Arabic literature offer additional details. The famous Spanish traveller Ibn Jubayr (1145–1217), for example, mentions musk as one of the goods sold in the markets of Mecca, one of the centres of the Islamic world where people from its different parts met,\textsuperscript{24} thus further highlighting its place in a cosmopolitan environment.

Further information can be gleaned from the cartographical tradition, in particular from the lucky case of an Arabic map preserved in a manuscript in the possession of the Bodleian Library.\textsuperscript{25} The manuscript is an anonymous cosmography composed between 1020 and 1050 in Egypt, with the title The Book of Curiosities of the Sciences and Marvels for the Eyes.\textsuperscript{26} The manuscript includes a whole series of maps which reveal the author's knowledge of trading routes. One of these maps shows the way from Daybul to the 'Gate of China'. One of the stations along this route is Tibet. But although we are thus able to

\textsuperscript{19} Qalqashandi 1913–1918, ii, pp. 114–16; Nuwayri 1923–2002, xii, pp. 1–2, 4, 6–9, 10, 11–12.
\textsuperscript{20} Nuwayri 1923–2002, xii, pp. 6–9 and 11–12; Qalqashandi 1913–1918, ii, pp. 114–16.
\textsuperscript{21} Qalqashandi 1913–1918, ii, pp. 114–16.
\textsuperscript{22} Nuwayri, 1923–2002, xii, pp. 6–9.
\textsuperscript{23} Nuwayri, 1923–2002, xii, pp. 11–12.
\textsuperscript{24} Ibn Jubayr 1952, p. 117. See also Labib 1965, p. 193.
\textsuperscript{25} On the Book of Curiosities see: Johns and Savage-Smith 2003; Edson and Savage-Smith 2004; Rapoport and Savage-Smith 2004; Rapoport, forthcoming. See also: www.bodley.ox.ac.uk/bookofcuriosities (last accessed: 04/09/07).
\textsuperscript{26} Rapoport and Savage-Smith 2004.
reconstruct several stations which are mentioned for the musk trade, we can hardly reconstruct a complete trading route, or a whole road network.

Tibetans themselves seem to have been involved with musk trade only as far as neighbouring countries, i.e., Nepal, Ladakh, Bhutan and Bengal. The fifteenth-century Tibetan *Blue Annals*, for example, tells us about an accomplished practitioner of Mahāmudrā, Dam pa skor (b. 1062, also known as: sKor chung/Ni ru pa/ sKor ni ru pa), who was also a trader in musk. We are told that he began his trading career at the age of twelve by stealing a turquoise. Selling his turquoise, he received: “13 golden *srangs*, one roll of gold embroidered silk and musk worth one golden *zho*. Dam pa skor is then said to have visited Nepal with famous Tibetan teachers, to have studied the tantras and received Mahāmudrā initiations, before returning to Tibet.28

Over several centuries, Tibetan musk was traded not only by Arabs and Tibetans but also by Sogdian, Armenian, Jewish, European and other merchants. Evidence of the trade in musk is documented in letters of these merchants.

In the Sogdian letters dating to the fourth century (or possibly earlier) found in the region of Dunhuang by Stein and analysed by de la Vaissière,29 musk is mentioned as one of the goods. The letters mention that musk traded by the Sogdians was brought from the Tibetan borders of Gansu.30

Jewish merchants had a very significant role in the trade of musk. The Jerusalem and Babylonian Talmuds, of approximately the fourth and fifth centuries respectively, are among the earliest extant sources on musk.31 In both cases musk appears as a perfume, and the issue discussed is what is the appropriate blessing to be said over it. The sources conclude that, unlike other perfumes which originate from a plant and hence call for one particular type of blessing to be said when they are employed as a perfume, musk, being derived from an animal, calls for another sort of blessing.32

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27 *srang* and *zho* are both Tibetan weight measures used mainly for gold and silver. One *zho* is equal to approximately 5.5 grams.


29 The Sogdians were a people of Iranian origin who were engaged in commerce along the Silk Roads. The Sogdian letters refer to letters, written by Sogdians, which were found near Dunhuang, and which provide illuminating material about life and commerce of the time.

30 de la Vaissière 2005.

31 For an overview of other early sources and an extensive work on musk as a perfume see King 2007.

32 The *Babylonian Talmud*, in the section of *Berakhot* has:

כָּל הַמְּמֻטָּרִים מַבְּרִיכִים עָלַיָּה בָּרָא וְעַל בֵּשָּׁם וּמּוֹסֵק עָמָה הָוִידָה אוֹשֶׁן בַּמְּכַרְכֵּם עָלְיָה בָּרָא

מִי בֵּשָּׁם.
Evidence of the role of Jewish merchants in the musk trade is provided by the geographer Ibn Khurradadhbih who wrote his *Kitāb al-masālik wa-l-mamālīk* (*Book of Highways and Kingdoms*) in ca. 846. Binyamin of Tudela, who journeyed through the Middle East during the second half of the twelfth century, and whose Hebrew travelogue became widely known in Europe through its Latin translation, described the extent of the Persian kingdom as stretching:

...till the land of Tibet, in whose forests one finds animals from which musk is derived. And its government is four months walk from there.

Although Binyamin of Tudela himself did not travel as far as Tibet, he mentions Tibet in a few other instances. He describes, for example, one possible variation of the ‘Musk Routes’. Judging by the lengths of the different segments he is giving, he obviously did not embark on the route himself. Yet his information is still valuable, as he probably gathered it from traders he met in Baghdad. He begins in Baghdad, where he is situated. He then proceeds to describe the way to some cities in Persia:

And from there, it is four days to Shiraz, which is [in] the land of Persia and there, there are about ten thousand Jews. From there it is seven days to Ghazna, the large city, which is on the Gozan River. And there, there are eight thousand Jews. And that town is a land of trade and [merchants] come there with their goods in all the languages of the gentiles and it is a vast place. And from there it...

In Simon’s translation: ‘Over all incense-perfumes the blessing is ‘who createst fragrant woods’, except over musk, which comes from a living creature and the blessing is, ‘who createst various kinds of spices’.

Simon 1960, *Berakoth*, 43a. The question also arises in the *Jerusalem Talmud*, in the *Berakhot* section, where the text has:

In Adler’s edition: Adler 1907, p. 50. Binyamin of Tudela uses ‘mor’ (myrrh) for musk. On the identification of ‘mor’ (myrrh) with musk in Hebrew sources see Shapirah 1959. We would like to thank Efraim Lev for sharing these Hebrew sources with us.

Another manuscript says: eighty, but eight seems more probable.
is five days to Samarkand, which is the large city at the edge of the land of Persia. And there are about fifty thousand Israelites. And Rabbi Obadiah Ha’nasi is in charge of them and amongst them are many who are very wise and very rich. From there it is four days to Tibet, which is the land where musk is found in its forests.37

The collection of the Genizah of Cairo also contains highly valuable material on Jewish trade in musk. We are not able to deal with the whole range of this material as yet, but can merely offer a glimpse of the type of information one may discover in letters preserved in the collection.38 Merchants sometimes informed each other in such letters about the demands and prices at local markets. Such evidence is contained in a letter received by a Jewish merchant in eleventh-century Egypt, Joseph ibn ‘Awkal. His colleague Hārūn al-Ghazzāl informed him that musk was sold at 4 1/2 dinars (per flask) in Tunisia, but that it sold badly in Qayrawān and Mahdiyya.39 Western merchants in the Mediterranean supply further data. According to a Portuguese source of the late fifteenth century, before the sea route to India was discovered, the price for one mithqāl of musk in Alexandria was one cruzado.40

Hovaness Joughayetsi, an Armenian merchant who lived in Lhasa for almost five years in the late seventeenth century, provides additional information on the ‘Musk Routes’. His detailed accounts record his voyage from Isfahan to Tibet. He sailed to Surat, and after a number of trade transactions in Agra, he proceeded to Patna. From there, he continued via Nepal, to Lhasa. After a stay of nearly five years (1686–1691) he left Lhasa with 483 kg(!) of musk, along with some gold and tea.41 Considering that the rate for musk west of Tibet was significantly higher than its worth in gold, we can only imagine why his detailed accounts stop upon his successful return to India.

Economic perspectives

The Sogdian letters also supply us with further data concerning the price of musk. According to them it appears that in Turfan in the eighth century the going rate for one gram of musk was 8.4 silver coins. By comparison, in contemporary markets, musk remains one of the most expensive natural prod-
ucts, with end consumers in Europe or Japan paying between three and five times its weight in gold. From the Arabic anecdote about the arrival of the trading ships in al-Ubulla mentioned above, it is evident that musk trade was important for the economy of the lands that the merchants passed through. Musk was obviously also a very significant source of income for the country of origin and Himalayan rulers. This is confirmed by the following passage quoted by Nuwayri:

Ahmad ibn Abi Ya’qūb, a client of the Abbasids, said: Some scholars mentioned that it was well known that the origin of musk was in Tibet and elsewhere. The local traders there build something like a little tower which has the height of a forearm. The animal in whose navel the musk is produced, comes and scratches its navel on this tower so that the navel falls off. The traders go there at a certain time of the year which is known to them and gather the navels freely. When they bring it to Tibet, they have to pay tax on it.

That musk was a lucrative source of income for the Tibetan authorities is confirmed by Hovaness, the Armenian merchant. He reports in his ledger that every time one traded a litre of musk, the buyer had to pay one lak, equalling 37.79 grams, of silver to the state treasury in Lhasa.

The Production of musk: sources and methods

Musk is produced from a gland found on the male musk deer. The word ‘musk’ is probably derived from an old Iranian root *moska*, cognate with the Sanskrit, and meaning ‘testicles’. This probably alludes to the musk sac, which is located close to the genitals of the male musk deer. Apparently, this is also the source for its aphrodisiac reputation, which is so prominent in Arabic literature.

Traditionally, musk pods are harvested by killing the deer, although it is possible to obtain musk from a live deer. In modern times the extraction of musk from a live animal is performed using a spatula, which is inserted into the musk sac via the external orifice, while the animal is manually restrained. The procedure takes a few minutes, and the opening to the musk sac is visible.

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42 Homes 1999.
43 Nuwayri 1923–2002, xii, p. 4.
44 Khachikian 1966, p. 171.
45 Commonly found is the assertion that ‘musk’ is derived from Sanskrit. The problem with this, as pointed out by King is that in Sanskrit the common word for musk is *kasturi*. For the discussion on the source of the word and musk terminology see King 2007, pp. 20–34.
46 Cf. for example the article ‘Perfum’ in Chebel 1997.
sac is afterwards treated with antibiotic cream. The extracted musk is dried, weighed and sealed in an airtight container.\footnote{Homes 1999}

Descriptions of the musk deer (T: gla ba) are found in several Tibetan sources. An important Tibetan pharmacological treatise of the early eighteenth century, the Dri med shel phreng, mentions that musk is derived from the navel of the musk deer. It describes two kinds of musk deer, a black and a white one. The black deer (T: gla nag) lives in forests. It is small in size and bluish-black in colour. Its musk is very strong in smell and considered better in quality. The black musk deer lives at the upper limit of the pine forest. It is said to produce the greatest amount of musk.\footnote{Dil dmar dge bshes bstan ’dzin phun tshogs 1983, p. 125.} The other type is the white deer (T: gla skya), from which a musk of lesser quality is produced.

In another pharmacological treatise, by ’Jam dpal rdo rje, a nineteenth-century Mongolian physician, we find the following description:

\begin{quote}
The musk deer is called “good smell/smelling” \ldots{} It is as big as a goat, but dark-brown with long hair. The musk is manufactured in the testicles of the male and is formed in accordance with the lunar month. Females have none.\footnote{’Jam dpal rdo rje 1971, p. 233.}
\end{quote}

Medieval Arabic sources give rather confused answers to the question of which animal or animals produce musk and how it is extracted.\footnote{Akasoy forthcoming b.} The most important sources are zoological books. Most authors mention that the animal which produces musk resembles a small gazelle. Frequently appearing attributes of this animal in these descriptions are a horn in the middle of the head from which knife handles are made, and two fine white teeth which come out of the lower (\textit{l}) jaw. According to the Arabs, musk is produced in the navels of these animals. Nuwayri quotes an anonymous source on the process:

\begin{quote}
Musk is a surplus of blood in the animal's body which is concentrated in the navel every year at a determined time. This is like the substances which flow to certain body parts. If the blood has reached the navel, it swells and grows. The animal becomes ill and suffers pain until this process is completed. It scratches itself with its hooves and the navel falls off in the desert and in the steppe.\footnote{Nuwayri 1923–2002, xii, p. 4.}
\end{quote}

While Arabic sources agree more or less on the explanation of what musk is and how it is produced, they vary in their descriptions of how musk is extracted from the animal.

According to one tradition the musk gazelles go every year to one particular place where they rub their navels off, as mentioned before. Then the traders

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\begin{itemize}
\item\footnote{Homes 1999}
\item\footnote{Dil dmar dge bshes bstan ’dzin phun tshogs 1983, p. 125.}
\item\footnote{’Jam dpal rdo rje 1971, p. 233.}
\item\footnote{Akasoy forthcoming b.}
\item\footnote{Nuwayri 1923–2002, xii, p. 4.}
\end{itemize}
come and collect the navels. Damirî, the author of a zoological book in the fourteenth century, describes a rather elaborate method:

God has created the navel of the musk gazelle as a mine for musk, and it gives its fruit every year like a tree, which gives its fruit at every season by the permission of its Lord (Koran 14:30). When the navel becomes full, the gazelles sicken until the musk becomes mature. It is said that the people of Tibet fix pegs in the ground, so that the gazelles rub themselves against them and the musk falls near them.52

According to other authors the gazelles are hunted. Mas'ûdî describes the procedure as follows:

In Tibet the gazelles are hunted with ropes and nets. Sometimes they are also hunted with arrows. When they are caught and the musk bags are cut off, the blood in their navels flows, does not clot, and remains fresh. The smell is repugnant and disappears only after a while. Through substances from the air it changes and becomes musk. This is like fruit which are cut from the tree before they are judged to be ripe.53

Another interesting point to take notice of in the Islamic context is musk as a religious problem. As the quotation from al-Ghazâlî at the beginning of this article shows, musk was very much a standard component of descriptions of paradise. This, however, does not necessarily imply that it was recommended to use it in this world. After all, wine is equally described as being part of life in paradise, yet its consumption in this world is strictly forbidden. Potentially musk could be a problem for 'orthodox' Muslim scholars from at least three points of view, as a sexually stimulating perfume, as a luxurious product, and as a product of blood which is considered impure in Islam. It seems that it was only the last aspect which was controversial in Islamic law and that Sunni and Shiite scholars defended opposed views. Even though the subject clearly deserves full investigation, it may be reasonable to assume that this opposition reflects the different stances Sunni and Shiite legal scholars take vis-à-vis the lawful consumption of meat from animals slaughtered by non-Muslims. Sunni law reveals a more relaxed attitude which is also obvious in the views of Sunni jurists regarding the lawfulness of eating cheese produced by non-Muslims. The production of cheese requires rennet which implies problems very similar to those involved in musk.54 In some of our sources we can find a critique of the Shiite position. Damirî, for example quotes an opinion which explicitly condemns the harsh attitude of the Shiites.55

54 Cook 1984.
55 Damirî 1906–1908, pp. 266–7. Damirî also stipulates that musk has to be extracted from a living animal (Ibid., pp. 268–9).
authors also highlight the use of musk by Muhammad. Ibn Qayyim al-Jawziyya (691/1292–751/1350) mentioned in his book on prophetic medicine that Muhammad used a perfume based on musk and rāmīk, a pitch-like substance. The prophet is quoted as having said that musk is the best of all scents. Ibn Qayyim also mentions the benefits of its medical uses (cf. below). For Sunnis, musk is therefore the most honoured perfume. It is pure, and it is permissible to use it on the body and on clothes and also to sell it. Another case which deserves fuller investigation is the description of paradise in the Koran which contains the word for musk, misk. In this particular context it is usually interpreted as 'fragrant herb', but the notoriously controversial problems involved in establishing the time and place in which the Koran was written down make it almost impossible to use this reference as a historical source for musk trade and consumption in early seventh-century Arabia.

Types of musk

The Tibetan sources mention that from the two types of deer described above, three types of musk are produced: yellow musk, which is the superior type; reddish brown, which is medium and black, which is inferior. In the Arabic sources, as mentioned above, a distinction is made mainly between Tibetan and Chinese musk, Tibetan musk possessing a superior quality. Apart from this, Muslim authors hardly give a unanimous answer to questions of classes of musk, their characteristics and qualities. Unlike the discussion of the musk-gazelle, when types of musk are under discussion it is quite difficult to detect different textual traditions that were being repeated over centuries without major changes. This might indicate that some authors were better informed or tried to integrate information from local traders. A rather confusing feature of Arabic classifications of musk concerns the terminology of place-names and what qualifications such as 'Tibetan' or 'Chinese' actually refer to. Nuwayrī quotes for example a certain Muhammad ibn al-'Abbās al-Miskī. His name suggests that musk was his business—unfortunately no text by an author of his name has been preserved. In the quotation,

57 “The truly good will live in bliss, seated on couches, gazing around. You will recognize on their faces the radiance of bliss. They will be served a sealed nectar, its seal [perfumed with] a fragrant herb—let those who strive, strive for this—mixed with the water of Tāṣnim, a spring from which those brought near will drink.” (83:22–28) Translation: The Qur'ān, A new translation by M.A.S. Abdel Haleem (Oxford, 2004).
al-Miskī mentions Sogdian musk as having the best quality, followed by Indian musk. Both, he explains, are produced in Tibet, the Indian kind in the border region with India. One of the possible explanations for a certain lack of simplicity in the terminology might be found again in zoological texts which claim that musk-gazelles live and graze in one region but wander to another region to throw off their musk-bags. Authors also emphasise different elements which determine the kind and quality of musk. Some stress the role of the region where the animals graze, whereas others emphasise methods of extraction and preservation.

Apart from the regional attributes Arabic texts mention several criteria to determine the quality of musk, namely substance, colour and fragrance. These allow a comparison with the Tibetan distinctions. In a classification of musk quoted by Nuwayrī a lower quality of musk is brought from the lands of the Toghuzghuz Turks. It is described as heavy and blackish. The merchants use it for cheating. Another passage in Nuwayrī's text confirms the similarities between the Tibetan and the Arabic classifications:

The best musk with regard to fragrance and appearance is that which is apple-like. Its fragrance resembles that of the Lebanese apple. Its colour is predominantly yellow. It is between coarse and fine. The musk which follows it is more intense in black colour, but it has a similar fragrance and appearance, yet it is not the same. It is followed by a variety of musk of even more intense blackness. This is the weakest kind and has the least value.

Even though the Arabic sources we have consulted so far do not mention explicitly brown or red musk, the scale of colours and their implications for the quality of musk seem to be the same in both the Tibetan and Arabic traditions.

Arabic sources also discuss artificial musk and substances which are used by merchants to deceive their customers. It is hardly surprising that substitutes for musk are more frequently discussed in countries where the original is a highly priced trading good. Arabic books on market rules are an important source for this question. They frequently mention the substances merchants use to extend original musk and explain how to test the authenticity of the substance. In Shayzari's treatise, for example, we find the following description:

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Some of them fill musk bags with the bark of emblic myrobalan and Indian pepperwort, and also shādūrān. They knead it with diluted pine resin and for every four dirhams of this they add one dirham of musk. Then they fill the musk bags with it, seal them with resin and dry them on the top of the oven.

The way to recognise this and all other frauds regarding musk bags is for the muḥtasib⁶² to open them and put them to his lips like someone wanting to know what is inside a substance. If the musk is sharp like fire to his mouth then it is genuine and unadulterated, but if it is not, it is adulterated.⁶³

Other traders simply sold Chinese musk as Tibetan musk, as the author of the treatise Minhāj al-dukkan in thirteenth-century Egypt notes.⁶⁴

**Uses of musk in Islamic Medicine**

In the Islamic medical tradition musk is used for a great variety of diseases and bodily ailments. It appears almost as a universal remedy. But there are some distinctive features. In addition to its aphrodisiac effect, one of the properties of musk that is mentioned in many Islamic sources is that it strengthens the heart. The Spanish pharmacologist Ibn al-Bayţār (ca. 1197–1248), for example, quotes two ninth-century authors, Ibn Māssa⁶⁵ and Ishāq ibn ‘Imrān,⁶⁶ to this effect. Similar statements are made by the encyclopaedist al-Nuwayrī,⁶⁷ the zoographical writers Damīrī and Qazwīnī,⁶⁸ the pharmacologist Ibn al-Butlān,⁶⁹ and Ibn Qayyim al-Jawziyya in his book on the medicine of the prophet.⁷⁰

Another recurrent feature is the use of musk as an antidote in poisoning cases. In addition to Ibn Sīnā, Ibn al-Bayţār quotes Ishāq ibn ‘Imrān, according to whom musk stops the effect of poison.⁷¹ A similar statement is made by Ibn Qayyim al-Jawziyya.

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⁶² market inspector.
⁶³ Al-Shayzāri 1999, p. 70.
⁶⁴ Abū l-Munā al-‘Aṭṭār 1992, p. 282. We would like to thank Leigh Chipman for drawing our attention to this passage.
⁶⁸ Qazwīnī 1928, p. 20; Damīrī 1906–1908, pp. 266–7.
⁶⁹ Ibn al-Butlān 1990, p. 110.
⁷¹ Ibn al-Bayţār 1875, iv, pp. 156–7. See also the ‘great musk electuary’ in Levey 1966, p. 75. Apart from that, musk is not mentioned very often in Ibn Wāḥshiyya’s treatise.
by Qazwini and Damiri in their books on zoology, and by Ibn Qayyim al-Jawziyya. More precisely, musk can be used as an antidote for a poison called *bish*，an aconite, say Ibn al-Baytār and Ibn Sīnā. The theoretical background of this effect of musk is that, according to the Islamic medical tradition, poisons have a cooling effect which is countered by the warming effect of musk. Several authors mention, for example, that musk is useful for cold diseases.

**Uses of musk in Tibetan Medicine**

In the Dunhuang manuscripts, which represent the earliest extant Tibetan medical sources (eighth–tenth centuries), musk appears as a substance for treating wounds. When discussing wounds, Dunhuang ms. IOL Tib. 756 says:

> If the bleeding does not stop, break up musk [and] put it inside a bowl of water. If [the patient] drinks a bit at a time, it will get better.

Another reference is repeated further down along in the same manuscript:

> If the wound is dry and swollen, one can cover the wounded area with the skin from the chest of livestock...; administer musk and bear’s gall.

The notion of musk as a kind of ‘super-drug’ in a manner reminiscent of that of the Arabic sources, is found in the *rGyud bzhi*, the *locus classicus* of Tibetan medical writing, dated to the twelfth century. The mythical description which opens the *rGyud bzhi* and which sets the scene of the teaching of the text to come, focuses on an ideal medicine city (*ita na sdug, ‘Beautiful to Behold’*). The text describes the four medicinal mountains around the city, which grow superior *materia medica*: the southern mountain produces ‘ultimate’ heating substances; the northern mountain produces ‘ultimate’ cooling substances, the east and west produce various types of balanced substances. The description

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72 Qazwini 1928, p. 20; Damiri 1906–1908, pp. 266–7.
76 sman pa’i dpya’l khrag myi chod na| gla rtsi mnyes la| chu phor gang gi nang du blug ste khe’u sus la| phor bu re re’ thungs na| phan no| Dunhuang Tib. IOL Tib (S.t.) 756, Luo (ed.) 2002, p. 134, lines 44–45.
77 gla rtsi dang dom mkhris khong du gthang. Ibid., line 81.
goes on to include the area around this mythical city of medicine, where one finds other super-potent substances. It is here that we find musk, together with other general super-potent substances.\textsuperscript{78}

As in the Arabic tradition musk is described in the \textit{rGyud bzhi} primarily as a substance for treating poisons.\textsuperscript{79} Within the chapter dealing with the power of medicines in the \textit{rGyud bzhi}, musk is described in the following way:

Musk (\textit{gla rtsi}): It cures poisoning, parasite illnesses (\textit{srin}), disorders of the kidneys and liver and contagious diseases (\textit{gnyan nad}).\textsuperscript{80}

Musk is also described primarily as a poison antidote within the discussion of principles for compounding medicines in the \textit{rGyud bzhi}.\textsuperscript{81} Here we find the main categories of illnesses and a list of medicines for the treatment of each category. Musk is listed as the first substance on the list of that class of medicines which neutralise poisons.\textsuperscript{82}

Later sources confirm that the main use of musk in Tibetan medicine is for treating cases of poisoning. It is described as an antidote against venomous bites, primarily of snakes.\textsuperscript{83} This primary use is exemplified in the Tibetan language by some of musk's synonyms, eg. 'snake terrifier' (\textit{sbrul skrag byed}) or: 'snake venom antidote' (\textit{sbrul dug myos pa'i mtsan ma}).\textsuperscript{84}

Musk also appears in Tibetan medicine as a general restorer. In discussions of specific therapeutic techniques, musk is mentioned for treating dual and triple humoral disorders.\textsuperscript{85} The general instruction here is that there is a need

\textsuperscript{78} \textit{rGyud bzhi} 2000, p. 2. Similarly, the area surrounding \textit{lta na sdug} is also where Sangs rgyas rgya mtsho in his seventeenth-century commentary of the \textit{rGyud bzhi}, locates musk: Sangs rgyas rgya mtsho 1994, p. 19. It is interesting to note, however, that in the medical illustrations commissioned by Sangs rgyas rgya mtsho, the musk deer appears on the south mountain, which in this context implies it would be regarded as a heating substance. Could this represent a reflection of an adoption of the Islamic notion of musk as a heating substance? At this stage, we need to leave this an open question.

\textsuperscript{79} \textit{rGyud bzhi} 2000, p. 68. For Clarke's translation see: Clarke 1995, pp. 141–2. Clarke adds additional information (in square brackets), taken from the Sangs rgyas rgya mtsho's \textit{Blue Beryl}.

\textsuperscript{80} Chapter twenty of the second tantra. For the section on musk see: \textit{rGyud bzhi} 2000, p. 68. For Clarke's translation see: Clarke 1995, pp. 141–2. Clarke adds additional information (in square brackets), taken from the Sangs rgyas rgya mtsho's \textit{Blue Beryl}.

'Contagious disease' is but one possibility of translating \textit{gnyan nad}. Drungtso and Drungtso suggest: 'severe disease; viral and bacterial diseases'. Drungtso and Drungtso [1999] 2005, p. 158.

\textsuperscript{81} Second Tantra, chapter twenty-one.

\textsuperscript{82} \textit{rGyud bzhi} 2000, p. 76; Clarke 1995, p. 184.

\textsuperscript{83} See Jam dpal rdo rje. fols. 39v & 117r.

\textsuperscript{84} Yisun (ed) 1993, i, p. 419.

for a medicine, or combination of medicines, which have both cooling and heating qualities. Musk appears together with black gu gul, usually identified as frankincense, or Indian bdellium resin, as good for treating infections (gnyan nad) and spirit (gdon) disorders.\(^8^6\)

Musk is also described as effective in treating srin illnesses.\(^8^7\) Srin usually refers to worms or vermin.\(^8^8\) Srin illnesses, however, include much more generally, as put by Kletter and Kriechbaum:

...various disorders which occur due to an imbalance in the different srin of the body. The conditions for these diseases are the consumption of an unsuitable diet and wrong behaviour (which also implies underestimating any danger of contagion) and the influence of demons. Furthermore, any srin penetrating from outside may cause an imbalance in the internal srin.\(^8^9\)

In both the Tibetan and the Islamic traditions musk is also prescribed against diseases of the eye. 'Jam dpal rdo rje mentions that musk is good for diseases of the eye channel (mig rtsa). According to Ibn al-Baytār, Ishāq ibn 'Imrān mentions that it helps against 'winds' in the eye;\(^9^0\) also Ibn al-Jazzār says that it is useful for winds which enter the eye,\(^9^1\) equally Ibn Wahshiyya, quoted by Damīr,\(^9^2\) Ḥakīm ibn Ḥunayn, quoted by Ibn al-Baytār,\(^9^3\) and Ibn Qayyim al-Jawziyya in his book on prophetic medicine.\(^9^4\)

Yet, there are also uses for which we have not found any parallel in the Islamic medical tradition. One of these is the use of musk in Tibetan medicine for curing illnesses of the kidneys and liver.\(^9^5\)

\(^8^6\) Second tantra, chapter twenty-eight; rGyud bzhi 2000, p. 91. For the nature of gnyan illnesses see note 80 above. Illnesses caused by various types of 'spirits', sometimes also referred to as 'demons', such as gdon and others, is of major concern in Tibetan medical theory and practice. For an overview see Clifford 1984, particularly pp. 147–97.

\(^8^7\) Within the context of the discussion for compounding medicines, Second Tantra, chapter twenty-one. Clarke 1995, p. 185.

\(^8^8\) The Arabic tradition ascribes this quality particularly to the musk deer’s horn.

\(^8^9\) Kletter and Kriechbaum 2001, p. 364.

\(^9^0\) Ibn al-Baytār 1875, iv, 156.


\(^9^3\) Ibn al-Baytār 1875, iv, 156. For the mysterious author Ḥakīm ibn Ḥunayn and the parallels in Rāzī’s Ḥawī, cf. Sezgin 1967–2000, iii, p. 270.


\(^9^5\) rGyud bzhi 2000, p. 68; Clarke 1995, p. 141.
Musk and theriac

In Tibetan medicine musk also appears as one ingredient of dar ya kan. The Tibetan name dar yak an is a loan-word which seems to be derived from an Arabic or Persian form of the potion tiryāq (Greek: Theriakon), a very popular remedy originating from Greece, which became very widespread in the Arab world. It is typically made from a large number of exotic and expensive ingredients and used for a great variety of diseases, in particular as an antidote for the poison of snakes.

In the Tibetan contexts musk seems to be not just one ingredient of theriac, but the key one. In one Tibetan recipe for dar ya kan, musk is termed as the “the elixir of dar ya kan” (rtsi dar ya kan). dar ya kan appears in a list of works said to have been translated by Biji Tsanpashilaha, the yet unidentified Tibetan court physician, who is mentioned in Tibetan medical histories as belonging to the school of Galenos. A section on the dar ya kan also appears in the sMan dpyad zla ba’i rgyal po (Somaraja), a text which is considered to be one of the earliest texts on Tibetan medicine, dated to the eighth-ninth century and which contains other elements which may have come from the Graeco-Arabic medical tradition.

In the Arabic sources, the association of musk and theriac is evident from a short passage in Ibn Sinâ’s Canon in which he describes musk. According to Ibn Sinâ, it has the power of a theriac and is used as an antidote for bish. This statement is repeated by Ibn al-Quff (d. 685/1286) in his Kitāb al-‘umda and Ibn Hubal (c. 515/1122–610/1213) in his Mukhtārat fi l-šibb.

The idea that miraculous life-saving substances, even the ‘elixir of life,’ were difficult to come by and included priceless essences imported from exotic places in the far East, was not unusual in Greek antiquity and the medieval Islamic world. Recipes for theriaccs or powerful panaceas would typically include ingredients from India or East Asia. A similar notion is conveyed by the legend that Alexander the Great travelled to the East to search for the source of immortal life. In the passage from The Jewels of the Qurān quoted at the beginning of our article, al-Ghazâlî also associated musk with an antidote (tiryāq), which he understood in a spiritual sense. For the Tibetans,

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98 See Beckwith 1980.
the *dar ya kan* seems to have played a similar role, but as a cure-all imported from the exotic West rather than the exotic East.

**Transmissions; the Silk Roads; the Musk Routes**

A study of musk in Arabic and Tibetan historical sources and a comparative study of the uses of musk in Islamic and Tibetan medical literature suggest that the Musk Routes formed a link between Tibet and the Islamic world. These routes were relatively short and immensely easier to travel than the Silk Roads. But how far does the link indicated by the substance also point to a link or exchange of ideas? Can we learn from the Silk Roads model and assume that a trade route also implied cultural exchanges?

The case of musk is a particularly interesting one, as it involves aspects of long-distance, medicine and what Appadurai terms, 'cultural economics'. The last of these is concerned with how culture—in the present context: medicine, literature and religion—is to be seen as part of the process through which value is constructed. The cultural formulation of musk as a luxury good as well as a 'super-drug' is inter-twined and multi-faceted. As such it can serve as a model for the study of other 'exotic super-drugs'.

What we have described so far suggests that by and large the Islamic and the Tibetan medical traditions are quite in harmony with each other as far as the use of musk is concerned. Although there are some usages that are found only in one or the other tradition, we do, in general, find many common usages. Indeed, there is also other growing evidence to suggest contacts between the two medical traditions.

But while uses of the drug appear to have travelled along the Musk Routes together with the substance, the comparison between the two sets of sources also brings to light important differences, primarily regarding the classifications of musk. Arabic pharmacology uses the Greek classification of four primary qualities, namely: dry or moist, hot or cold, and grading each drug with respect to these qualities on a scale from one (weakest) to four (strongest). Within this context musk is classified as hot and dry in the second or third degree.

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102 A description of the exact geographical routes which were used would be desirable, but is beyond the scope of our present work.

103 Appadurai 1986, pp. 3–63.

104 On the links between Tibetan and Graeco-Arab medicine see Beckwith 1979; Martin forthcoming and Yoeli-Tlalim forthcoming.

105 Pormann and Savage-Smith 2007, p. 53.

106 Ibn Buttān 1990 (hot in the second and dry in the third degree, p. 110); Ibn al-Jazzār 1985 (hot in the second degree, p. 40); Qazwini 1928 (hot and dry in the third degree, p. 20).
In the Tibetan rGyud bzhi, materia medica are classified according to their six tastes\(^{107}\) (sweet, sour, salty, bitter, hot and astringent).\(^{108}\) Materia medica are further classified by their eight qualities (nus pa), namely: heavy, oily, cool, blunt, light, coarse, hot and sharp.\(^{109}\) A further classification is into the seventeen secondary qualities (smoothness, heaviness, warmth, oiliness, firmness, coldness, bluntness, coolness, pliability, fluidity, dryness, absorbency, heat, lightness, sharpness, coarseness and motility).\(^{110}\) Within this context, musk is classified as a medicine with a bitter taste. Medicines having a bitter taste are then discussed as curing loss of appetite, parasite illnesses (srin),\(^{111}\) thirst, poisoning, leprosy, fainting, infectious diseases, as well as overcoming cases of vomiting of fluid and bile. It dries necrosis (‘drul), fat, grease, marrow, stool and urine. The text tells us that bitter-tasting substances (musk being one of them) improve mental alertness, cure breast disorders and hoarseness of the voice. The text also warns against partaking of bitter things in excess, as they may consume the body’s constituents and increase wind and phlegm.\(^{112}\)

The variation of classification of the same drug between different medical systems is a fundamental issue to explore when discussing medical transmissions across cultures. A different primary classification of the same drug is found even in two medical traditions with very close links, whether geographical, or cultural such as Āyurveda and Tibetan medicine, where we find that materia medica is categorised in different, sometimes even opposing terms.\(^{113}\)

The lack of correlation between the Arabic and the Tibetan systems in terms of medical theory, on the one hand, and the correlation of the practical uses on the other hand, although not surprising, is an interesting point worth making. Practical uses transport easily across cultures, whilst medical theories remain far more static. Following the trails of trade in ‘exotic’ materia medica brings a whole array of questions dealing with the ways by which ‘imported’ practical uses are then ‘made to fit’ local medical theories. We believe that musk and the ‘Musk-Route’ can serve as useful models to explore these questions further.

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\(^{107}\) Tastes are further divided into tastes first felt by the tongue (ro) and post-digestive tastes (zhu rjes).

\(^{108}\) This topic is discussed in the second tantra, chapter nineteen. rGyud bzhi 2000, pp. 62–5.

\(^{109}\) This topic is discussed in the second tantra, chapter twenty. rGyud bzhi 2000, pp. 65–75.

\(^{110}\) In Clark’s translation. This topic is also discussed in the second tantra, chapter twenty.

\(^{111}\) See above.

\(^{112}\) rGyud bzhi 2000, p. 64; Clarke 1995, p. 127.

\(^{113}\) We would like to thank Dr. Tashigang for pointing this out.
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